

HITKARINI SCIENCE COMMERCE & ART'S COLLEGE DEOTAL GARHA JABALPUR (M.P.)

TENDER

- * Name of work : Construction of Hostel Building in Hitkarini Complex at Mouza Temar Jabalpur (M.P.)
 - * Probable amount of Contract : Rs. 68.0 Lacs
 - * Cost of tender documents : Rs. 2000/- (Non refundable)
 - * Amount of Earnest money : Rs. 50000/-
 - * Last date for issue of tender form : 19 March 2012 (upto 3.30 P.M)
 - * Due date of submission of tender : 19 March 2012 (4:00 P.M)
- i) Tender document and other particulars will be available for sale as per above schedule on all working days at the office of the undersigned or can be downloaded from our website www.hitkarini.com.
- ii) The Employer (HITKARINI SABHA / HITKARINI SCIENCE COMMERCE & ART'S COLLEGE) reserve the right to accept or reject any or all Tender without assigning any reason whatsoever.

PRINCIPAL

**HITKARINI SCIENCE COMMERCE & ART'S COLLEGE
DEOTAL GARHA JABALPUR (M.P.)**

**HITKARINI SCIENCE COMMERCE & ART'S COLLEGE DEOTAL
GARHA JABALPUR (M.P.)**

TENDER-DOCUMENT

- * Name of work : Construction of Hostel Building in Hitkarini Complex at Mouza Temar Jabalpur (M.P.)
- * Period of completion : 9 Month from the date indicated in the work order or letter of intent.
- * Cost of tender documents : Rs. 2000/- (Non refundable)
- * Amount of Earnest money : Rs. 50000/-
- * Probable amount of Contract : Rs. 68.0 Lacs
- * Last date for issue of tender form : 19 March 2012 (up to 3.30 PM)
- * Due date of submission of tender : 19 March 2012 (4.00 PM)

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DEOTAL GARHA JABALPUR (M.P.)**

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GARHA JABALPUR (M.P.)**

SALIENT DETAILS OF TENDER

*	Name of work	:	Construction of Hostel Building in Hitkarini Complex at Mouza Temar Jabalpur (M.P.)
*	Name and Class of Contractor	:	-
*	Money receipt No.	:	-
*	List of works Executed	:	-
*	Probable amount of Contract	:	Rs. 68.0 Lacs
*	Type of Tender Form	:	PROFORMA 'A' M.P. P.W.D. SOR 15 TH JUNE 2009
*	Period of completion	:	9 Month from the date indicated in the work order or letter of intent including rainy season
*	Cost of tender documents	:	Rs. 2000/- (Non refundable)
*	Amount of Earnest money	:	Rs. 50000/-
*	Last date for issue of tender form	:	19 March 2012 (up to 3.30 PM)
*	Due date of submission of tender	:	19 March 2012 (4.00 PM)

PRINCIPAL

**HITKARINI SCIENCE COMMERCE & ART'S COLLEGE
DEOTAL GARHA JABALPUR (M.P.)**

HITKARINI SCIENCE COMMERCE & ART'S COLLEGE DEOTAL GARHA JABALPUR (M.P.)

Percentage rate tenders are invited on behalf of the HITKARINI SABHA / HITKARINI LAW COLLEGE for the following Work in form 'A' M.P. P.W.D.SOR 15TH JUNE 2009" and will be received in the office of the HITKARINI SABHA JABALPUR up to 4 pm on 19/3/2012 from the reputed firms .

- * Name of work : Construction of Hostel Building in Hitkarini Complex at Mouza Temar Jabalpur (M.P.)
 - * Probable amount of Contract : Rs. 68.0 Lacs
 - * Type of Tender Form : PROFORMA 'A' M.P. P.W.D. SOR 15TH JUNE 2009
 - * Period of completion : 9 Month from the date indicated in the work order or letter of intent including rainy season
 - * Cost of tender documents : Rs. 2000/- (Non refundable)
 - * Amount of Earnest money : Rs. 50000/-
 - * Last date for issue of tender form : 19 March 2012 (up to 3.30 PM)
 - * Due date of submission of tender : 19 March 2012 (4.00 PM)
- i) Tender document and other particulars will be available for sale as per above schedule on all working days at the office of the undersigned or can be downloaded from our website www.hitkarini.com.
- ii) Tender Document are downloaded from hitkarini website, the cost of tender document Rs. 2000.0 (Rupees two thousands) is to be deposited separately by way Banker's Cheque / Demand Draft in favour of Hitkarini Sabha/Hitkarini Law College payable at Jabalpur.
- iii) The Employer ((HITKARINI SABHA / HITKARINI SCIENCE COMMERCE & ART'S COLLEGE) will not be responsible for reimbursement of any expense or losses Incurred in preparation and submission of tender.
- iv) The Employer ((HITKARINI SABHA / HITKARINI SCIENCE COMMERCE & ART'S COLLEGE) reserve the right to accept or reject any or all Tender without assigning any reason whatsoever.

PRINCIPAL

**HITKARINI SCIENCE COMMERCE & ART'S COLLEGE
DEOTAL GARHA JABALPUR (M.P.)**

AGREEMENT

This agreement is made on this ----- day of -----, 2010 between Secretary, Hitkarini Sabha, Jabalpur, where the term includes successors, nominee and legal representatives (here-in-after called as Party No. 1) on one part and Shri ----- Proprietor/Partner of M/s -----, Resident of -----, ----- Jabalpur (here-in- after called Party No.2)

Whereas, party No.1 is desirous of getting Construction of Hostel Building in Hitkarni Complex at Mouza Tamar Jabalpur (M.P.) Further whereas party No.2 quoted for the work vide his quotation dated ----- subject to the condition of the quotation attached herewith as part of this agreement and the quotation accepted by building committee Hitkarini Sabha vide resolution No. ---dated -----

And whereas the Party No. 2 has agreed to execute upon and subject to the conditions set forth (here in after referred to as “said conditions”) the work according to drawing and specification supplied by the Architect of Party No. 1

NOW IT IS HEREBY AGREED AS FOLLOWS-

1. The Party No. 2 shall execute the work of construction of building including electrical , water supply and sanitary fittings of Hostel Building as per plan specifications and estimates attached herewith and Contractor shall not claim any escalation in contract rate for rise in prices of materials/labour etc. during the completion of work and shall complete the work at contracted rate which shall be valid for project period of **9 Months** from the date of commencement of work.

2. Party No. 2 has agreed to obey all the orders of the building committee of Party NO. 1 of the Engineer/Architect in charge of Hitkarini Sabha Jabalpur .The work will be carried out in accordance with the M.P., P.W.D. specifications and to follow instructions in connection with specification and plans etc. and any special order as may be issued to party No.2 in connection with the work from time to time. However ,deviation orders involving financial aspects shall be subject to the approval of the Building Committee.

3. In case an item of work is required to be executed as site for which the labor/item rate as listed in Annexure “A”(SOR 2009 book) by the party No.2 is not readily available, then rate for the same will be mutually decided in consultation with the Consulting Architect&Engineer

The extra item rates shall generally be derived from the quoted/ tender rates of the Contractor for comparable items of similar nature/scope/description under Schedule of Quantities of the Tender, making allowance for variations only. However if no comparable items are available in the unit rates and the quantity of work is to be executed can conveniently be derived / measured; the same shall be arrived at based on the prevailing rates in the original tender. However, where the work is so disjointing the unit rates or the quantity of work done cannot be conveniently be derived/measured then it will be within the purview of the Architect/Employer to derive the rates either from Tender item or other extra items or by rate analysis showing clearly the fair market cost of material, cost of labour, plus 10% to cover overheads, profit etc. The actual cost shall be determined for the above purpose, as the cost of: -

i) Materials supplied or used at site on items forming part of completed item of work as determined by the Architect/ Engineer by inquiry of the prevailing market rate at the time of procurement.

ii) Materials (non-consumable) which are used temporarily and not forming a part of the completed item of main work, provided the same are solely meant for the particular and this cost would be determined by the Architect/ Engineer by inquiry of prevailing market rate.

4. Party No.2 undertakes to complete the work within nine month (including rainy season) from the date of work order (dated). He will at once begin the work and keep on working in a diligent manner to the satisfaction of the party No.1. In case party no.2 fails to carry out the work in time period ,the party No. 2 shall be responsible to pay penalty of RS 300/-per day. In case of abnormal and unreasonable delay, the Party No.1 shall have the right to terminate the Contract and forfeit the Security Deposit .

5. Security Deposit @3% will be deducted from every bill in favor of party No.2 and such deduction shall be paid to him only after finalization of the final bill and as per the provisions mentioned in the manual completion of the entire work, but if he fails to do the work for any reason what so-ever to the satisfaction of the party No.1 the amount of any loss to the Hitkarini Sabha Jabalpur along with the fine if any shall be recovered from deposits @ 3 percent (three percent) recovery made separately from the bill of party No.2.

6. Party No. 2 must show every courtesy to the Engineer. In-charge or his authorized agent appointed by the party No. 1 who will have the power and the right to inspect and examine his work. The party NO.2 Shall always have on the site of work ready for inspection, a copy of list of works done and an inspection book for the purposes.

7. That, the Party No. 2 will ensure all the necessary arrangement for effective curing of cement works through out the contract period.

8. That, the Party No. 2 shall submit his bills for payment based on the measurements and quantities as executed at site and in accordance with rates approved by Building Committee, Hitkarni Sabha. The bills submitted by the Party No.2 will be checked by the Party No.1 through his Authorized representative at site within fifteen days and there after the payment will be released after deducting necessary income tax and security deposit.

9. In case of defective work and of bad workmanship, the Party No.2 on the instruction of Party No.1 or his Consulting Engineers will dismantle the same and the Party No.2 will make good in all respect at risk and cost including the cost of materials etc.

10. The Party No.2 shall be solely responsible for the safety and security of his workman and shall indemnify the Party NO.1 from all such responsibilities in case of accidents or injury to his workman from any cause What-so-ever. The Party No.2 will take insurance policy of the workman working at the site at his own cost.

11. The water will be supplied by the Party No.1 at one point free of charge. The rates quoted by the Party NO.1 will be inclusive of all further necessary arrangements for carrying water at place of work.

12. All liabilities such as provident Fund and other provisions according to Labor Law in force shall be the liability of the Contractor (Party NO.2) as Employer.

13. In any dispute in the agreement in regard to the terms of contract and in regard to the amount to payable there under, the decision of the Building Committee Hitkarini Sabha shall be final and binding on both the parties of this agreement.

14. Service tax if and as applicable will be solely borne and paid by Party No.2 The rates Quoted are inclusive of all such taxes.

The said conditions shall be read and Constructed as forming the part of this Agreement and the Parties here to will respectively abide by and submit themselves to the conditions and stipulations and perform the Agreement on their part respective The parties hereby do agree to the conditions started above and attached herewith and in taken of their acceptance affix signatures here up to and execute this agreement.

Contractor

Secretary
Hitkarini Sabha Jabalpur

Witness

1.

2.

LETTER OF SUBMISSION FROM CONTRACTOR

To,

The Secretary
Hitkarni Sabha
Jabalpur

NAME OF WORK: - Construction of Hostel Building in Hitkarni Complex at Mouza Temar Jabalpur (M.P.)

Dear Sir,

We refer to the tender invited by you for the proposed **Construction of Hostel Building in Hitkarni Complex at Mouza Temar Jabalpur (M.P.)** for above job. Having visited the Site and examined the Drawings, Conditions of Contract, technical specifications and Bill of Quantities. We offer to carry out and complete the whole of the work in conformity with Specification, and bill of Quantities, for the sum stated in Bill of Quantities included in this Tender Documents.

We undertake to complete the job within the time stated in the appendix here to.

We agree to keep the offer open for a period of ----- days from the date fixed for receiving the same

We understand that you are not bound to accept the lowest or any tender you may receive.

We send your herewith tender duly filled and hereby agree to pay all charges of whatever nature connected with preparation, stamping and execution of the said contract.

We agree not to employ 'Sub-Contractors' as per tender condition.

Dated this day of 2012

Signature in the capacity of Partner / Proprietor / Director

Duly authorized to sign tenders for and on behalf of

(IN BLOCK CAPITALS)

Witness:

Signature _____ Address of _____

Name _____ Tenderer _____

Occupation _____

Names of the Partners of the
Firm or Directors of Contractors Company

1. NOTICE INVITING TENDER

NAME OF WORK: - - Construction of Hostel Building in Hitkarni Complex at Mouza Tamar Jabalpur (M.P.)

EMPLOYER: ((HITKARINI SABHA / HITKARINI SCIENCE COMMERCE & ART'S COLLEGE)

- 1.1 Sealed tenders are invited from reputed firm and short listed contractors on behalf of our Employers, for the said above job for - **Construction of Hostel Building in Hitkarni Complex at Mouza Tamar Jabalpur (M.P.)**
- 1.2 Sealed tender - envelopes should be addressed to officer incharge, Hitkarni Sabha Jabalpur & should be super scribed – “- **Construction of Hostel Building in Hitkarni Complex at Mouza Tamar Jabalpur (M.P.)**” And should be sent to the office of Secretary Hitkarni Sabha Jabalpur on or before 4 pm on 19/3/2012
- 1.3 The tenderer shall submit the tender in two parts consisting of Part –I (Techno Commercial) ,and part-II (price bid) each in separate envelope duly sealed and superscribed with the respective part number. Earnest Money Deposited in the shape of Bankers Cheque / Demand Draft / Pay order in favour of Hitkarin Sabha Payable at Jabalpur and the same is to be put in a separate envelope duly sealed and superscribed with the word ” Earnest Money Deposit”. All the three envelopes containing Part-I , Part-II and EMD shall be put in a fourth envelope duly sealed superscribed -**Construction of Hostel Building in Hitkarni Complex at Mouza Tamar Jabalpur (M.P.)** and addressed to officer incharge, Hitkarni Sabha Jabalpur. Tenders not submitted EMD,Part-I and Part-II in separate covers properly sealed as prescribed above shall be considered as invalid and rejected.
- 1.4 The Tenderer must obtain for himself on his own responsibility and at his own expenses all the information that may be necessary for the purpose of filling of this tender and before entering into a contract for execution of the same and must scrutinize the drawings and inspect the site of work and acquaint himself with all local conditions & matters pertaining thereto.
- 1.5 Conditional Tenders will be rejected.
- 1.6 Each page of the tender documents is required to be **signed** by the person/duly authorized persons submitting the tender in token of his/their having acquainted himself/themselves with the general conditions etc. as laid down. Any tender with any of the documents not so endorsed may is liable to be rejected.
- 1.7 The tender forms must be filled in English or Hindi and all entries must be made by hand and written in ink. If any of the documents is missing or unsigned, the tender may be considered invalid.
- 1.8 All erasures and alterations made while filling the tender must be attested by the initials of the tenderer. Overwriting of figures is not permitted. Failure to comply with either in any change in rates or conditions after submitting of the tender will not be entertained.
- 1.9 Earnest money deposit (EMD):-
 - 1.9.1 Tenderer shall deposit an amount of **Rs50,000/-(fifty thousands only)** in the form of Bank Demand Draft drawn on any Jabalpur Branch of any scheduled Bank, in favour of Hitkarni Sabha, payable at Jabalpur along with the Technical bid.
 - 1.9.2 Initial Security Deposit:-

The successful Tenderer to whom the contract is awarded shall deposit as Initial Security Deposit by bank demand draft a sum to make up 1% of the value of accepted tender after the appropriation of the Earnest Money deposited by him. The successful Tenderer shall pay Initial Security Deposit within 14 days after receiving the letter of acceptance of his Tender.
 - 1.9.3 **Retention Money:-**

Apart from the Initial Security Deposit to be made by the contractors as aforesaid, the Retention Money shall be deducted from Progressive Running Account Bills at **5 %** of the gross value of the work done and claimed in each Running Account bill. Provided that the total Security Deposit i.e. the Initial Security Deposit amount + the Retention amount shall both together not exceed 5% of the Contract price as determined after considering all variations as approved.

- 1.10 Within 10 (ten) days of the receipt of intimation from the Architect/ Employer of the acceptance of tender, the successful Tenderer shall be bound to implement the contract by signing agreement in accordance with the Terms & Conditions of the contract attached there with, on the written acceptance by the employer and the person so tendering, whether such formal contract is subsequently entered into/or not.
- 1.11 All the compensation of other sums of money payable by the contractor to the Employers under the terms of this contract may be deducted from the Security Deposit or from any sums that may become due to the contractor on any account whatsoever in the event of the Security Deposit being reduced by reason of any such deduction; the contractor shall within 15 days of being asked to do so make good by Demand Draft any such sums which may have been deducted from the security deposit.
- 1.12 Unless otherwise agreed or stipulated in this tender our Employers are not concerned with any rise or fall in the prices of any materials or labour. The rates quoted shall include all costs, allowances, excise, duties, sales tax, central taxes, Royalties, VAT or any other taxes, octroi or any other charges including any enhanced labour rates etc. which may be enacted from time to time by the State and/or the Central Government and shall remain valid till Virtual Completion of the work. Under no circumstances shall our Employer be held responsible for compensation or loss to the contractor due to any increase in the cost of labour and/or material etc.
- 1.13 The tenderer should thoroughly study works, conditions of contract, relevant specifications and rates quoted should cover cost of executing the items as per the relevant specification.
- 1.14 The tender drawings have been included in the tender document for general guidance of the contractor for basic reference and evaluation at our office. Detailed working drawings, details of construction features etc. shall be supplied from time to time for execution of works, which shall be deemed to be with provision of contract and scope of work.
- 1.15 The tender shall remain valid for acceptance for a period of **10 days** from date of opening the tender.
- 1.16 Our Employers do not bind themselves to accept the lowest or any tender and reserve to themselves the right to accept or reject any or all tenders, either in whole or in part, without assigning any reasons whatsoever for doing so.
- 1.17 Tender document in which tender is submitted by a Tenderer shall become the property of the Employer and the Employer shall have no obligation to return the same to the Tenderer.
- 1.18 Tenders not giving the full particulars as mentioned above or as called for in the Special Conditions or not complying with any of the conditions set forth above or therein are liable to summary rejection. For any clarification of technical details you may contact M/s DESIGN ZONERAM at Jabalpur.

Regarding location and inspection of the project site the Tenderers / Bidder may contact Mr. Satish Racka However the site address **Hitkarni Complex at Mouza Tamar Jabalpur (M.P.)**

**FOR & ON BEHALF OF HITKARNI SABHA
DESIGN ZONE**

2. INSTRUCTIONS TO TENDERER

- 2.1 The tenderer shall submit the tender in two parts consisting of Part –I (Techno Commercial) ,and part-II (price bid) each in separate envelope duly sealed and superscribed with the respective part number. Earnest Money Deposited in the shape of Bankers Cheque / Demand Draft / Pay order in favour of Hitkarin Sabha Payable at Jabalpur and the same is to be put in a separate envelope duly sealed and superscribed with the word " Earnest Money deposit". All the three envelopes containing Part-I , Part-II and EMD shall be put in a fourth envelope duly sealed superscribed **-Construction of Hostel Building in Hitkarni Complex at Mouza Temar Jabalpur (M.P.)** and addressed to officer incharge, Hitkarni Sabha Jabalpur. On or before 4 pm on 19/3/2012.
- 2.1(i) The main sealed envelope containing all the three sealed envelopes (Part-I, Part-II and EMD) will be opened at 4.15 pm on 19/3/2012 in the presence of the Tenderers or their authorized representatives who wish to be present. Immediately thereafter, on the same day, the envelope containing " Earnest Money Deposit" will be opened. The Part –I offer of those tenderers, whose " Earnest Money" will be found in order and submitted as prescribed above, will be opened immediately thereafter. Otherwise offer will be considered as invalid and hence the Part-I will not be opened.
- 2.2. Any tender delivered or sent otherwise will be at the risk of the Tenderers.
- 2.3. The Employer reserves the right to postpone the date for presentation of tenders and will give timely notice of any such postponement to the prospective Tender.
- 2.4. The following tenders are liable to rejection:-
- Tender forms containing "over written" or "erased" rate or rates and amount shown in "figures and "words" not in English or Hindi
 - Tender quoting rates on units different from those prescribed in the schedules.
 - Tender which omits a quotation on one or more of the items in the schedule.
 - Tender which is incomplete, obscure or irregular
 - Tender with rates which are obviously unbalanced.
 - Tender in respect of which any request from the Tenderer is received in of additions, alterations, modifications, corrections, etc., of the term conditions or rates after opening of tenders.
 - Tender in respect of which canvassing in any form is resorted to by the Tenderer
 - Tender received after the time and date specified above even if due to post or other Delays.
- 2.5. If the Tenderer deliberately gives wrong information in his tender or circumstances for the acceptance of his tender the Employer reserves the right to reject such tender at any stage.
- 2.6. If a Tenderer seeks to clarify his quotations or rates, this should only be done in a separate covering letter.No material modifications to the specifications, item descriptions, contract clause etc. will, however, be entertained. Other clarifications may be considered. The contents of a covering letter sent along with the tender will be considered as part of the quotation. If any of these conditions admitted for consideration has a financial bearing on the cost quoted, the additional cost arising out of this condition will be added for comparative evaluation of tenders.
- 2.7. By submitting a tender for the work, a Tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the work, that the rates quoted by him in the tender will be adequate to complete such work according to the specifications and conditions attached thereto and he has taken into account all conditions and difficulties that may be encountered during its progress and to have quoted labour and material rates, which shall include cost of materials with taxes, Octroi, Royalties, VAT and other duties, lead, lift, loading and unloading freight for materials, and all other charges including the furnishing of all plant, equipment, tools, scaffolding and other facilities and services necessary or proper for the completion and maintenance of the work, except such as may be otherwise expressly provided in the contract documents for the completion and maintenance of the work to the entire satisfaction of the Architect/ employer. The TDS amount on prevailing rate and work contract tax /VAT /Service Tax etc. shall be deducted by the Employer from Contractor's Running Account / Final bills and paid to the Government. Necessary Certificates shall be issued to the Tenderers by the Employer.
- 2.8. The successful Tenderer shall make his own arrangements for all materials except as specified in the contract .

- 2.9. The quantities shown if any in the attached schedule are given as a guide and are approximate only and are subject to variation according to the needs of the Employer. The Employer accepts no liability for their accuracy. The Employer does not guarantee work under each item of the schedule.
- 2.10 Each tender shall be signed by the Tenderer with his usual signature. Tender by partnership or Hindu joint family firm may be signed in the firm's name by one of the partners or the Karta or Manager as the case may be or any other duly authorized representative followed by the name and designation of the persons so signing. Attested copy of the Partnership Deed must accompany the tender of any Partnership firm. Tenders by a Company shall be signed with the name of the Company by a person authorized on this behalf and a Power of Attorney or other satisfactory proof showing that the person signing the tender document on behalf of the Company is duly authorized to do so, shall accompany the tender. The Employer will not be bound by any Power of Attorney granted by the Tenderer. It may, however recognize such Power of Attorney and changes after obtaining proper legal advice, the cost of which may be chargeable to the Contractor.
- 2.11 Tenderer should note**
- 2.11.1. With their quotations the Tenderers shall sign all schedules, specifications, special conditions, etc, in token of acceptance thereof. The signature on the tender schedule alone shall also be deemed to be taken as acceptance of all these.
- 2.11.2. Signature of the Tenderer shall be attested by two responsible individuals who shall be persons of status, and their address, names, occupations shall be stated below their signatures.
- 2.12. If a Tenderer expires after the submission of his tender or after the acceptance of his tender the Employer may deem such tender as cancelled. If a partner of a firm expires after the submission of their tender, the Employer may deem such tender as cancelled if the firm does not retain its character
- 2.14. No contract work, however petty, may be carried out except under or in accordance with a duly executed agreement or on a special written authority from authorized officer of the Employer.
- 2.15. No agreement is valid unless signed by the Contractor or his duly authorized agent and by a competent person on behalf of the Employer.
- 2.16 Further Details of drawings if not supplied with the Tender documents for the work may be seen in the office of M/s. DESIGN ZONE during office hours, by prior appointment.
- 2.17. The Form of Agreement, Form of Tender, Invitation to Tender, Instruction to Tender, General Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, Time Schedule and the rates and amounts accepted against the items of the Tender Schedule together with the Tender covering letter, and all correspondence entered into between the Employer and the Tenderer prior to the issue of the Letter of intent and the Letter of Intent awarding the work and acceptance by tenderer shall form the contract.
- 2.18. If there is any conflict between any of the provisions in the Special Conditions and those in any of the other documents condition including GCC etc., referred, the provisions in the Special Conditions shall prevail.
- 2.19. If there be any difference between the description in the Specification, drawings and the works items in the Tender Schedule, the order of precedence shall be as under: a) B.O.Q. b) Tender Drawings issued 'Valid for Construction' c) Technical Specifications. Relevant I S Code/ NBC shall be followed wherever not specified /covered in this tender.
- 2.20. Opening of Tender**
- 2.20.1. Acceptance of the tender will be intimated to the successful Tenderer through a letter of acceptance. The Contractor shall then be required to execute an Agreement within the time specified in the letter of acceptance. In the event of failure on the part of the Contractor to sign the Agreement within the specified time, the amount of Earnest Money shall be forfeited and the acceptance of his tender shall be considered as withdrawn.
- 2.20.2. The forfeiture of Earnest Money is to be considered as covering all losses, and liquidated damages notwithstanding any other provisions envisaged for losses, or penalties implied in the provisions of the contract.

4. FORM OF OFFER(ANNEXURE-1)

To,

The Secretary
Hitkarni Sabha
Jabalpur

NAME OF WORK: - - Construction of Hostel Building in Hitkarni Complex at Mouza Tamar Jabalpur (M.P.)

EMPLOYER: ((HITKARINI SABHA / HITKARINI SCIENCE COMMERCE & ART’S COLLEGE)

- 4.1 Having visited the site and examined the Drawings, technical specifications, bill of quantities / schedule of rates, for the construction of the above named works, we offer to construct, complete and maintain the whole of the said works in conformity with the above tender Document/ drawings to be issued 'Valid for Construction' or such other sum as may be ascertained in accordance with the said Conditions of Contract.
- 4.2 We undertake to complete and deliver all the works comprised in the contract within the time stated in the Appendix and Annexure1 here to.
- 4.3 We have independently considered the amount of liquidated damages shown in the Appendix 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.
- 4.4 If our Tender is accepted, we will, when required, obtain the guarantees in approved format from a Sabha (to be approved by you) to be jointly and severally bound with us in the sum named in the Appendix hereto for the due performance of the Contract under the terms of a Bond to be approved by you.
- 4.5 We agree to abide by this Tender for the period of one months 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 the period or any extended period thereof.
- 4.6 Unless and until a formal Agreement is prepared and executed this Tender together with your written Acceptance thereof shall constitute a binding Contract between us.
- 4.7 We agree and that if our Tender is accepted, we are to be jointly and severally responsible for the due performance of the Contract.
- 4.8 We accept your stand that you are not bound to accept the lowest or any tender you may receive, or you may reject all the tenders without assigning any reason whatsoever therefore any terms.

Datedday of2012

Signature.....in the capacity ofduly authorized to sign tenders for an on behalf

of.....

(IN BLOCK CAPITALS)

WITNESS:

Signature.....Address of.....

Tender

Name.....

Occupation.....

6. SPECIAL NOTES & CONDITIONS OF CONTRACT-ANNEXURE-2

NAME OF WORK:- Construction of Hostel Building in Hitkarni Complex at Mouza Temar Jabalpur (M.P.)

EMPLOYER: ((HITKARINI SABHA / HITKARINI SCIENCE COMMERCE & ART'S COLLEGE)

6.1 General:

- 6.1.1. The proposed work is located in Jabalpur.
 - 6.1.2. The payment shall be made as per actual execution of works.
 - 6.1.3. All works are to be completed in **9(nine) months** time.
 - 6.1.4. All or any extra work involved shall be got approved in writing from the Architect/EMPLOYER before executing the same.
 - 6.1.5. The contracted rate shall be inclusive of State/Central Sales Tax, Turnover Tax, Works Contract Tax, VAT, Service Tax, Royalties and other Taxes, levies applicable during construction period and completion of the work.
 - 6.1.6. Contractor shall extend all sort of help within his purview including scaffolding materials and labourers (chargeable basis) to other agencies working simultaneously in the same project, as per mutual agreement.
 - 6.1.7. The contractor shall at his own cost arrange to obtain temporary electric supply from local electricity board authorities and shall bear all cost (deposit for temporary supply) Miscellaneous charges & consumption charges during the construction period and up to the stage of handing over the site shall be borne by the contractor. (The payments to statutory agencies against demand in employer's name (such as non-refundable deposits, charges & fees) shall be made by the employer. Employer shall facilitate in making necessary applications for the purpose.)
 - 6.1.8. Water connection shall be arranged by contractor at his own cost. Consumption charges during the construction and up to the stage of handing over of the site shall be borne by the contractor.
 - 6.1.9. Statutory payments against demand in employer's name shall be paid by employer for permanent water supply, storm water drain connection, permanent Power connection, extra sewerage charges, extra water charges, land under construction charges. etc Any charges for and during the construction period shall be born and paid by the contractor .
 - 6.1.10. Contractor shall at his own cost construct temporary cement and material storage godown, site office and temporary separate bath/WC for Architect's/PMC'S staff and for his site labourers' use at his cost, including demolition and clearance refundable deposits fees etc after completion of work. Contractor shall restrict his facilities within the said area. The Contractor shall get the design for the same approved by the Architects.
- 6.2. **Insurance:** - On commencement for the work.
- a) The contractor shall take out a suitable C.A.R. Insurance policy covering entire scope of the works under this contract for the value of work as per contract tender conditions and arrange to keep the policy valid till the defect liability period is over.
 - b) The contractor shall take out and submit to the Architect and EMPLOYER, a suitable insurance policy against third party risks. The limit of liability of this insurance shall be limited to Rs.15 Lakh in respect of any one accident or series of accidents arising out of one event or Rs.5 Lakh in respect of any passer-by. (The policy shall be kept valid, till completion/handing over to the Employers.
 - c) The contractor shall take out and submit to Employer a suitable Insurance Policy against Workmen's compensation / Janata Policy as per requirements. The policy shall be kept valid till the end of defect liability period.
 - d) Necessary PF & ESI contribution of contractor's labourers will have to be paid by contractor as per statutory authority's regulations and EMPLOYER shall be absolved of all the risk. (Also refer clause no.23 of GCC INSURANCE□□)
- 6.3. The defect liability period shall be as mentioned in appendix to condition of contract, annexed to this document

- 6.4. Contractor shall appoint technically qualified personnel as approved by PMC / Bank's Engineer and maintain a full time, qualified and experienced staff on site. Engineer shall be approved registered Site Engineer as per Local Regulation.
- 6.5. EMPLOYER and Architect have got right to appoint separate contracting agencies for work other than the cope of the tender except otherwise instructed.
- 6.6. In the event of work being split between the agencies like Civil/Plumbing/ Works etc. The Contractor for civil work shall provide all co-operation, liaison / coordination and relevant scaffolding etc. to the other sub agencies appointed like lift,
- 6.7. Installation, by the Employers and the rate of the civil contractor shall be considered to be inclusive of such coordination, assistance etc. to be provided to the other agencies.
- 6.8. Total security deposit
The total Security Deposit shall comprise of:
 - a) Earnest Money Deposit.
 - b) Initial Security Deposit.
 - c) Retention Money

Earnest money deposit (EMD):-

Tenderer shall deposit an amount of **Rs. 50000/- (Rupees fifty thousands Only)** in the form of Bank Demand Draft drawn on any Jabalpur Branch of any scheduled Bank, in favour of HITKARINI SABHA along with the Technical bid. No interest on Earnest Money Deposited by the tenderer shall be paid. Tenders submitted without Earnest Money Deposit along with the technical bid shall not be considered. The EMD of the unsuccessful Tenderers Will be refunded within a reasonable period of time after the decision to award the work is taken. The EMD shall stand absolutely forfeited if the tenderer revokes his tender at any time during the period when he is required to keep his tender open for acceptance by the Employer, or if, the tender is accepted, the Contractor fails to pay the security deposit as stipulated/or if he fails to commence the work within stipulated time.

Initial Security Deposit

The successful tenderer to whom the contract is awarded shall deposit as Initial Security Deposit by bank demand draft a sum to make up 1% of the value of accepted tender after the appropriation of the Earnest Money deposited by him. The successful Tenderer shall pay Initial Security Deposit within 15 days after receiving the letter of acceptance o his Tender. The same to be invested in fixed deposit account for the duration of the contract period and shall be refunded to the contractor along with accrued interest ,after the issue of the certificate of virtual completion .such fixed deposit, which shall be in joint name with the employer shall remain in the custody of the employer till such time the security deposit, either in whole or in part thereof ,shall be forfeited in the event of contractors failure to observe any terms of this contract/or non compliance with the condition of contract. The security deposit amount will be adjusted or included in the retention money as per contract clause mentioned elsewhere in this tender.

Retention Money

Apart from the Initial Security Deposit to be made by the contractors as aforesaid, the Retention Money shall be deducted from Progressive **Running Account Bills at 8%** of the gross value of the work done and claimed in each Running Account bill. Provided that the total Security Deposit i.e. the Initial Security Deposit (Excluding interest component) amount + the Retention amount shall both together not exceed 5% of the Contract price as determined after considering all variations as approved. On Virtual Completion of the job and on the contractors submitting to the PMC, the as- built drawings, the PMC shall declare the job to be virtually complete, endorsed by the Project Architects and accepted by the Employer and upon this an amount equivalent to 50% of the total security deposit will be refunded to the contractors and balance shall be retained by the Employers till the end of the Defects Liability Period and the contractors shall have option to have the balance Retention Money replaced by Bank Guarantee which shall be valid till the end of Defects Liability Period and the same shall be released only upon successful completion of the Defects Liability Period and on finalizing the Final bill. If the Contractors do not carry out the rectification work during the Defects Liability Period, the Employer shall have the right to get such defective work rectified after giving due notice in writing to the Contractors and recover the cost of repairs from the money so retained.

- 6.10. The Architect/ Engineer shall have power to withhold any certificate, if the works or any parts thereof are not carried out to the satisfaction. The Architect / Engineer may revise any certificate; make any correction in any previous certificates, which have been issued by him.
- 6.11. All respective contract rates under various works include rents, deposits, premiums and other cost of transport, hiring loading and unloading, of all material including all type of taxes, royalties ,levies, testing charges, Octroi charges, wastages and damages etc and the same shall be borne by the contractors only.
- 6.12. The contractor shall appoint/retain at their own cost, licensed plumbers who shall work out and prepare and submit to Architect through Architect / Engineer necessary shop drawing details for all plumbing, sanitation, drainage, works and shall take approval of the architect/ Engineer before execution of all such works.
- 6.13. The Employers reserve their right of adding, altering or deleting any items from the scope of the contractor works for which no compensation of whatsoever type will be paid to the contractor. This shall also include the profits and over heads or any other claims by the contractors.
- 6.14. Time shall be the essence of the contract and the decision of the architect/Engineer and/or the employer in the matter of date of start, suspension and completion of the work shall be final and binding upon the contractor.
- 6.15. Security/Watchman:-The Contractor shall maintain at his cost, 24 hours / watchman / security system or watch and ward of materials/property works.
- 6.16. Any unauthorized persons to enter the premises/building and on failure of the same, the contractor shall be held liable for all costs & damages.
- 6.17. Basic Rates of Materials Brought at Site for Reference in this Contract -Deleted
- 6.18. **Addenda**

Addenda to the tender document may be issued if required to clarify documents or to reflect modifications to the design or contract terms. Each addendum issued by the Architect / Hitkarni Sabha will be distributed to the bidders who have been issued the tender documents for bidding. Each bidder shall submit the same along with his tender. All addenda issued by the Architects / Bank shall become part of Tender Document.

7. TERMINATION OF CONTRACT BY THE (HITKARINI SABHA / HITKARINI SCIENCE COMMERCE & ART'S COLLEGE.

If the Contractor being an individual or a firm, commits any "Act of insolvency" or shall be adjudged as insolvent or being an incorporated Company shall have an order for compulsory winding up or applies for voluntary winding up or subject to the supervision of the court and of the official Assignee or the Liquidator in such acts of nsolvency or winding up shall be unable within seven days after notice to him requiring him to do so, to show to the reasonable satisfaction of the Architect that he is able to carry out and fulfil the Contract, and to give security therefore, if so required by the Architect. Or if the contractor (whether an individual; firm or incorporated company) shall suffer execution to be issued, or shall suffer any payment under this contract. To be attached by or on behalf of any of the creditors of the Contract. Or shall assign or sub-let the Contract without the consent in writing of the Architect / Employer first obtained. Or shall charge or encumber this Contract or any payments due or which might become due to the Contract or any payments due or which might become due to the Contractor there under. Or if the Architect shall certify in writing to the Employer that the Contractor :

i. has abandoned the Contract, or has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for seven days after receiving from the Architects written notice to proceed, or has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be complete with the time agreed upon , or has failed to remove materials from the site or to pull down and replace work for seven days after receiving from the Architects written notice that the said materials or work were condemned and rejected by the Architects under theses conditions, or has neglected or failed persistently to observe and perform all or any of the acts, matters or things by this Contract to be observe d and performed. By the Contractor for seven days after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same or Has to the detriment of good workmanship or in defiance of the Architects instruction to the contrary sublet any part of the Contract. Then in any of the said cases the Employer may not withstanding any previous waiver, after giving seven days notice in writing to the Contractor, determine the Contract but without thereby affecting the powers of the Architect, or the obligations and liabilities of the Contractor, the whole of which shall continue in force as

fully as if Contract has not been determined and as if the works subsequently executed had been executed by or on behalf of the Contractor. And further, the Employer, may enter upon and take possession of the work and all plant, tools, scaffoldings, sheds, machinery, seam and other power utensils and material lying upon the premises or the adjoining lands or roads and use the same as his own property or may employ the same by means if his own servants and workmen carrying on and completing the works and the Contractor shall not in any way interrupt or to do any act, matter or things to prevent or hinder such other contractor or other person or persons employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or as soon thereafter as convenient, the Architect shall give a notice in writing to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so within a period of 14 days after receipt thereof by him the employer shall sell the same by public auction and shall give credit to the Contractor for the amount realized after deducting there from the costs of removal and sales by the Employer for the values of the said and the expenses or loss which the Employer shall have been put to in procuring the works to be completed and the amount , it any, owing to the Contractor and the amount which shall be so certified shall thereupon be paid by the Employer, to the Contractor, or, by the Contractor to the Employer, as the case may be, and the certificate of the Architect / Employer shall be final and conclusive between the parties. On termination of the contract, the contractor shall forthwith remove himself and his workmen from the works site.

TERMINATION OF THE CONTRACT BY THE CONTRACTOR:

If payment of the amount payable by the Employer under the Certificates of the Architect shall be in arrears and unpaid for 60 (sixty) days after notice in writing requiring payment of the amount shall have been given by the Contractor to the Employer, or the Employer commits any 'Act of Insolvency' , or if the Employer being an individual or firm shall be adjudged insolvent or (being an incorporated company) shall have an order made against it or pass an effective resolution for winding up either compulsorily or subject to the supervision of the court or voluntarily, or if the official assignee of the Employer shall repudiate the contract, or if the official assignee or the liquidator in any such winding up fails within 15 (fifteen) days after notice to him requiring him to do so, to show to the reasonable satisfaction of the Contractor that he is able to carry out and fulfil the Contract and to make all payments due, and to become due hereunder and if required by the Contractor, to give security for the same, or if the works be stopped for **15 days** under an order of the Architects or the Employer or by any injunction or other orders of any court of law, then and in any of the said cases the Contractor shall be at liberty to determine the Contract by notice in writing to the Employer, through the Architects, and he shall be entitled to recover from the employer payment for all works executed and for any loss he may sustain upon any plant or material supplied or purchased or prepared for the purpose of the Contract. In arriving at the amount of such payment, the net rates or prices quoted for lump sum work contained in the Contractor's original tender shall be followed or where the same may not apply, valuation shall be followed, or where the same may not apply, valuation shall be made in accordance with clauses 42b--- (PRICES FOR EXTRA □..)

GENERAL CONDITION OF CONTRACT-ANNEXURE-3)

NAME OF WORK:- Construction of Hostel Building in Hitkarni Complex at Mouza Tamar Jabalpur (M.P.)

Employer: (HITKARINI SABHA / HITKARINI LAW COLLEGE)

1. Definitions and Interpretations:

In the contract (as hereinafter defined) the following words and expressions shall have the meanings hereby assigned to them, except where the context otherwise required: -

- A. "EMPLOYER/CLIENT" means Hitkarini Sabha (having their office at Civic Centre Jabalpur and shall include his/their heirs, legal representatives, assignees and successors.
- B. "CONTRACTOR" shall mean the individual or firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative or such individual or the persons, comprising such firm or company or the successors of such firm or company and the permitted assigns of such individual or firm or company.
- C. "ARCHITECT" shall mean M/s Design Zone (having their office at B-1 Deshbandhu Complex Naudra Bridge Jabalpur.) engaged by the Hitkarini Sabha to act as Architect for the purpose of the contract and shall include his/their heirs, legal representatives, assignees and successors.
- D. "PROJECT MANAGEMENT CONSULTANTS" shall mean any Consultant so appointed by the Hitkarni Sabha/ engaged as a PMC by Hitkarini Sabha to supervise the execution of the work and shall include his/their heirs, legal representatives, assignees and successors.
- E. "CONSULTING ENGINEER" means Sub-Consultant retained by the Architect or Employer for designing of Structural /ELECTRICAL/MECHANICAL /Sanitary and Plumbing works includes his/their heirs, legal representatives, assignees and successors.
- F. "CONTRACT" means the documents forming the tender and acceptance thereof together with documents referred to therein or individual works orders in the case of terms of contracts including the General Conditions of Contract, Special Conditions, the Appendix, Bill of Quantities, Schedule of rates and prices or the rates quoted, scope of work, Specifications, Drawings and the Contract Agreement if completed and all these documents correspondence prior to letter of intent awarding ----- another work as applicable taken together shall be deemed to form to Contract and shall be complementary to one another.
- G. "CONTRACT PRICE" means the sum named in the letter of acceptance or the contract subject to such additions thereto or deductions there from as may be made under the provisions hereinafter contained in the contract.
- H. i) "WORK" Works means all the works specified or set forth and required in and by the said specifications, drawings and schedule hereto annexed or to be implied there from and shall include both permanent works and temporary works, whether original, altered, substituted or additional, to be executed in accordance with the contract.
- ii) "PERMANENT WORKS" means the permanent works to be executed and maintained in accordance with the contract.
- (iii) "TEMPORARY WORKS" means all temporary works of every kind (other than Contractor's Equipment) required in or about the execution and completion of the Works and the remedying of any defects therein.
- I. "SPECIFICATION" means the specification referred to the tender and any modification thereof or addition thereto as may from time to time be furnished or approved in writing by the Architect.
- J. "DRAWINGS" means the drawings, maps, plans & tracings or prints there of or referred in the contract, any modification of such drawings approved in writing by the Architect and such other drawings as may from time to time be furnished or approved in writing by the Architect.

- K. "SITE" shall mean the land and/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
- L. "NOTICE" in writing or written notice means a notice in writing typed or printed characters sent (unless delivered personally or otherwise proved to have been received) by registered post to the last known private or business address or registered office of the addresses and shall be deemed to have been received when in the ordinary course of post it would have been delivered.
- M. "APPROVED" means approved in writing including subsequent written confirmation of previous verbal approval and "Approval" means approved in writing including as aforesaid.
- N. "MONTH" means month according to Gregorian calendar.
- O. "SCHEDULED BANK" means bank included in the second schedule to the Reserve Bank of India Act, 1934.
- P. "SUB CONTRACTOR" means any person, firm or corporation having a contract for the execution of a part or parts of the work included in the contract and a person, firm or corporation furnishing materials called for in the contract and worked to a special design according to the specifications.
- Q. "VIRTUAL COMPLETION" means that the constructions of works specified are of the works is sufficiently completed in accordance with the contract, as modified by any changed or variation orders agreed to by the parties so that the Employer can occupy the same for the use it was intended.
- R. "CONTRACT PERIOD" means the accepted period of consecutive days stated on the Form of Tender starting from the Architect or Employer's order to commence the work.
- S. "ACT OF INSOLVENCY" means any act of Insolvency defined by the Presidency Towns Insolvency Act, or the Provincial Insolvency Act or any Act amending such original act/s.
- T. "THE DATE OF COMPLETION" is the date or dates for completion of the work or works or any part of the works set out or ascertained in accordance with the individual works orders and the tender documents or any subsequent amendments thereto
- U. "SINGULAR AND PLURAL" words importing persons include firms and corporations, words importing the singular party only also include the plural and vice versa where the context requires.

2. Project Management Consultant (PMC): -

The Project Management Consultant, if engaged by the Employer shall supervise the works and to test any materials to be used in the works. The contractor shall afford the Project Management Consultants every facility and assistance for examining the works and materials and checking and measuring works and materials.

3. Duties and Powers of Project Management consultant: -

PMC duties are to watch and supervise the works of and to test any materials to be used or workmanship employed in connection with the works, quality control, Project Scheduling and monitoring and co-coordinating with all other Agencies and Civil Contractor, recording of measurements, certification of bills, preparing extra/deviation items, excess/ scoring statement, preparing Minutes of Meeting etc. They shall have no authority either to relieve them Contractor of any of his duties or obligations under the contract or except those expressly provided hereunder, to order any work involving delay or any extra payment by the Employer or any variation of or in the works. Wherever it is mandatory by law, that the PMC appointed by the Employers shall be registered with the Local Municipal Corporation as Supervisor, the incumbent so selected shall so forthwith show his registration with Municipal Corporation. The Contractor shall afford the PMC every facility and assistance for examining the works and materials and checking and measuring time and materials. The PMC shall have no power to revoke, alter, enlarge or relax any requirements of this contract or to sanction any day work, additions, alterations, deviations or omissions unless such an authority may be confirmed by written order of the employer. The PMC shall act in consultation with the Structural Consultant in regard to the quality of all structural aspects of work and in consultation with the Architect, will finalise the selection of finishing materials. The PMC shall jointly record the measurements with Contractor's representative for all items of works and on completion hand over the records to the Employer. The PMC shall have the power to give notice to the

Contractor or his Engineer-In- Charge, about the non-approval of any work or materials and such works shall be suspended or the use of such materials should be discontinued until the decision of the Architects/ Structural Consultant/ Employer but such examination shall not in any way exonerate the Contractor from the obligation to remedy any defects which may be found to exist at any stage of the work or after the same is completed. Subject to the limitations of this clause, the Contractor shall take instructions only from the Architects/ Employer/ Structural Consultant as the case may be through PMC. The PMC shall have such other power and discharge other functions as are specifically provided in this contract included such incidental or consequential powers or duties, subject always to such specific instructions or directions of the Employer, which shall be duly notified to the Contractors.

4. Scope of Contract:

The contractor shall carry out and complete the said work in every respect in accordance with this contract and with the directions of and to the satisfaction of the Architect/Employer. The Architect may in his absolute discretion and from time to time, issue further drawings and/or written instructions, details, directions and explanations which are hereafter collectively referred to as "Instructions" reflected either in the minutes or in any other form in regard to:

- a) The variation or modification of the design, quality or quantity of works or the additions or omissions or substitutions of any work.
- b) Any discrepancy in the drawings and/or drawings and/or specifications.
- c) The removal from the site of any material brought thereon by the contractor and the substitution of any other material thereafter.
- d) The removal and/or re-execution of any works executed by the Contractor.
- e) The dismissal from the works of any person employed thereupon.
- f) The opening up for inspection of any work covered up.
- g) The amending and making good of any defects.
- h) Removal of improper works and materials.
- i) Assignment and subletting.
- j) The Employer shall have a right to delete or reduce any scope of work or any item from the contract and contractor shall not make any extra claim on this count
- k) Postponement of any work to be executed under the provision of the contract. The contractor shall forthwith comply with and duly execute any work comprised in such Architect's/Employer's Instructions, directions and explanations given to the Contractor or his representative. If instructions, directions upon the works by the Architect/Employer shall, if involving a variation be confirmed in writing by the Contractor, within 7 days and if not dissented in writing within a further 7 days by the Architect/Employer, such instructions shall be deemed to be the "Employer/Architect's Instructions" within the scope of the contract. If compliance with these instructions as aforesaid involves work and/or expenses and/or loss beyond that contemplated by the contract, then, unless the same were issued. If the Contractor fails to comply with the Employer/Architect's instructions within a fortnight after the receipt of written notice from the Employer/Architect requiring compliance with such instructions, the Employer, through the Architects, may employ some other agency to execute any work whatsoever which may be necessary to give effect to such instructions. For the purpose of entering day to day instructions by the Employer/Architect/PMC, the Contractor shall maintain at his own cost, a 'Site Instructions Book' in quadruplicate in which the instructions shall be entered by Employer/Architect/PMC./ Bank's Engineer. 'Instructions' to the Contractor shall be generally issued through PMC/Architect / Sabha Engineer. However Employer, for the sake of urgency as a result of inspection, may issue instructions directly with the knowledge of the Architects who should ratify the same promptly.

5. Drawings and Specifications:

The Work shall be carried out to the entire satisfaction of the Employer/ Architects or their Consultants and in accordance with the signed drawings, specifications, preambles and such further drawings and details as may

be provided by the Architect/ Structural Consultant and in accordance with such written instructions, directions and explanation as may from time to time be given by the Employer/Architect/ Structural Consultant whose decisions as to sufficiency and quality of the work and materials shall be final and binding upon all parties. No drawing shall be taken as in itself an order for execution unless, in addition to the Architect /Structural Consultant's signature, it bears express words stating remark "VALID FOR CONSTRUCTION". No claim for payment for extra works shall be allowed unless the said work shall have been executed under the provisions of clause no7----- (AUTHORITIES NOTICES PATENT.....) or by the authorities directions in writing of the Consultant as herein mentioned. One complete set of the drawings, certified copy of tender document together with Specifications shall be furnished by the Architects to the Contractor. The Architect/Structural Consultant shall furnish, within such time, as May reasonable, ne copy of additional drawings, which in his opinion are necessary for the xecution of any work. Such copies shall be kept on the works, and the Architect/Structural Consultant or his representatives shall at all reasonable times have access to the same. The Contractor before the issue of the Final Certificate shall return all drawings, certified copy of tender document together with specifications to the Architects. The Original Contract documents shall remain in the custody of the Employer and shall be produced by him at his office as and when required. Any additional prints of drawings if any,required by the Contractors, may be supplied by the Architect /Structural Consultant but on the payment of charges. Any work indicated on the drawings and not mentioned in the specification or vice-versa shall be furnished as though fully set forth in both. Work not specifically detailed, called for, marked or specified shall be the same as similar parts that are detailed marked or specified. The Contractor's work shall not deviate from the drawings and the specifications. The Architect's interpretation of these documents shall be final and without appeal. Errors or inconsistencies discovered in the drawings and specifications shall be promptly brought to the attention of the Architect for interpretation or correction. Local conditions, which may affect the work, shall likewise be brought to the Architect's attention. If at any time, it is discovered that work is being done which is not in accordance with the contract drawings and specifications, the contractor shall correct the work immediately. Corrections of defective work shall not be a basis for any claim for extension. The Contractor shall not carry on work except with the knowledge of the Architect / Employer / Engineer. Figured dimensions on the scale drawings and large size details shall govern and large size details shall take precedence over small-scale drawings. Any work done before receipt of such details, if not in accordance with the same, shall be removed and replaced or adjusted as directed, by the Contractor without expense to the Employer. These general conditions apply with equal force to all the work including authorized extra works. All Drawings, Specifications and copies thereof furnished by the Architect are his property. They shall not be used on anyother work and shall be returned to the Architect at his request on completion or termination of the Contract. At the completion of the contract, the contractor shall return to the Architect, all drawings/copies provided under the contract. The Architect shall have full power and authority to supply to the Contractor through PMC from time to time during the progress of works such further drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and maintenance of the works and the Contractor shall carry out and be bound by the same.

6. Discrepancy in Various Documents:

The Contractor shall provide everything necessary for the proper execution of the works according to the true intent of and meaning of the Drawings, Specifications etc. taken together whether the same may or may not be particularly shown or described therein, provided that the same can be inferred there from. If the Contractor finds any discrepancy in the Drawings or between the drawings, Specifications etc., he shall immediately refer the same in writing to the Architect who shall decide which shall be followed, and his decision shall be final and binding on contractor after bank concurrence.

7. Authorities, Notices, Patent Rights & Royalties: -

The Contractor shall conform to the provisions of the statutes relating to the works and to the Regulations and Bye Laws of any Local Authority and of any Water, Lighting or other Companies or Authorities with whos systems the Structure is proposed to be connected and shall before making any variation from the Drawings and Specifications that may be necessitated by so conforming, give to the Architect written notice, specifying the variations proposed to be made and the reason for making it, and apply for instructions thereon. The Contractor shall bring to the attention of the Architect, all notices required by the said Acts, Regulations or bye laws to give to any authority and pay to such authority or to any public offices, all fees that may be properly chargeable, in respect of the works and lodge the receipts with the Architect./Employer through PMC. The Contractor shall indemnify the Employer against all claims in respect of patent rights, design, trade marks or name or other protected rights in respect of any constructional plant machine, work or material used for or in connection with the works or temporary works from and against all claims, demands, proceedings,

damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. The Contractor shall defend all actions arising from such claims, unless he has informed the Architect /PMC before any such infringement and received their permission to proceed and shall himself pay all royalties, license fees, damages, costs and charges of all and every part that may be legally incurred in respect thereof.

8. Contract Price:

The Contract Price shall not be adjusted or altered in any way whatsoever otherwise than in accordance with the express provisions of these conditions and subject to Clause 40 C ----(ALTERATION.....) of these conditions.

9. Contract Bills:

The Contract Bills for certificate of payment shall be described in mode of payment. Any error in description or omission of items from the Contract bills shall not vitiate this contract but shall be corrected and deemed to be a variation required by the Architect.

**10. General Obligations :
Contractor's General Responsibilities**

The Contractor shall be subject to the provisions of the Contract and with due care and diligence, execute and maintain the works and provide all labour including the supervision thereof, new material, Constructional Plant and all other things whether of a temporary or permanent nature, required in and for such execution and maintenance so far as the necessity for providing the same is specified in or is reasonably to be inferred from the Contract. The Contractor shall take full responsibility for the adequacy, stability and safety of all site operations and methods of construction, provided that the Contractor shall not be responsible except as may be expressly provided in the Contract for the design or specification of the Permanent Works or for the design or specification of any Temporary works prepared by the Architect.

11. Contract Agreement:

The Contractor shall when called upon to do so enter into and execute a Contract Agreement to be prepared and completed at the cost of the Contractor in the form annexed with such modifications as may be necessary.

12. Performance Bond/Security Deposit

The Contractor shall, (if the tender so provides) at his own expense provide or obtain a Bank Guarantee in the format approved by the Employer to be jointly or severally bound to together with him to the Employer in the sum provided in the tender for the due performance of the Contract.

13. Sufficiency of Tender:

a) The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices stated in Schedule of Quantities/Scope of work and/or the Schedule of Rates and Prices, which rates and prices shall cover all his obligations under the Contract, and all matters and things necessary for the completion of the works.

b) Contractor not Entitled to Extra Payment

Except as otherwise as specifically provided in the Contract, the Contractor shall not be entitled to any extra payment nor to resale from the Contract nor to be relieved from any of his obligation for reasons of his misunderstanding, or his failure to obtain correct information or his inability to foresee any matter which may affect the execution or maintenance of the works.

14. Inspection of Site:

a)The Contractor shall inspect and examine the site and its surroundings and information available in connection therewith and shall satisfy himself so far as is practicable before submitting his tender as to the form and nature of the ground, including the subsurface conditions, the hydrological and estimate conditions, he extent and nature of work and materials necessary for the completion of the works, the means of access to the site and accommodation he may require and in general shall himself obtain all necessary information subject as above mentioned, as to risks, contingencies and all other circumstances which may influence or affect his Tender.

15. Work to be to the Satisfaction of the Architect / Hitkarni Sabha

The Contractor shall execute and maintain the works in strict accordance with the contract to the satisfaction of the Architect/Employer/PMC and shall comply with and adhere strictly to the instructions and directions from them or their representative/s.

16. Programme to be furnished:

a) Within a 15 days time after the acceptance of his Tender, the Contractor shall submit to the Architect / Sabha Engineer / Project Management Consultant for his approval and/or information a BAR Chart/chart showing the order of procurement and method in which he proposes to carry out the works, a general description of the arrangements and methods which he proposes to adopt for the execution of the Works, the Constructional Plant and Temporary Works which he intends to supply, use or construct as the case may be, the scheduling of samples, Shop Drawings and approvals from concerned authorities as required under the contract.

b) If the actual progress of the works does not conform to the approved chart, the Contractor shall be required to submit a revised programme and implement the same for the completion of the works within the stipulated time for completion.

c) List of personnel I. Authorized representative II. Technical & non-technical staff III. Skilled & unskilled labours IV. Security staff, deputed at site for on schedule completion of this contract.

d) The submission to and approval by the Project Management Consultant of such programs shall not relieve the Contractor of any of his duties or responsibilities under the contract.

17 Contractor's Superintendence:

The Contractor shall give or provide all necessary superintendence during the execution of the works and as long thereafter as the Architect/PMC/Employer may consider necessary. The Contractor or one of his competent and authorized agent or representative is to be constantly on the works and shall give his whole time to the superintendence of the same. Such authorized agent or representative shall receive on behalf of the Contractor the directions and instructions from the Architect /PMC /Employer.

18 Contractor's Employees:

a) The Contractor shall provide and employ on the site skilled and experienced technical assistants, foremen and leading hands to give proper supervision and such skilled, semi-skilled and unskilled labour for the proper and timely execution and maintenance of the works.

b) The Contractor shall be required to remove forthwith from the works any person employed by the Contractor in or about the execution or maintenance of the works who in the opinion of the Architect/PMC/Employer misconducts himself or incompetent or negligent and thus considered to be undesirable and shall be replaced as soon as possible by a competent substitute approved by the Architect/PMC/Employer.

19 Setting Out:

The Contractor at his own expenses to set out the works accurately in accordance with the plans and to the complete satisfaction of the Architect. The Contractor shall be solely responsible for the true and perfect setting out of the works in relation to original points lines and levels of reference and for the correctness of the positions levels, dimensions and alignment of all parts of the works and for the provision of all necessary instruments, appliances and labour in connection therewith. The responsibility for the true and proper setting out rests with the Contractor who shall rectify any error at his own cost to the satisfaction of the Architect, unless such error is based on incorrect data supplied in writing by the Architect or his Representative, in which case the expenses of rectifying shall be borne by the Employer. The checking of any setting out or of any line or level by the Architect or his Representative shall not in any way relieve the Contractor of his responsibility for the correctness thereof and the Contractor shall carefully protect and preserve all benchmarks, sight rails, pegs and other things used in setting out the works.

20 Bore Holes and Exploratory Excavation:

If the Architect shall require the Contractor to make bore holes or to carry out exploratory excavation such requirement shall be an addition ordered under the provision of clause 42 ---- (EXTRA ITEM) hereof and such anticipated works shall have been included in the scope of work.

21 Security and maintenance of Premises Lighting and of users / customers / passers by:

The Contractor shall in connection with the works provide and maintain at his own cost the entire premises, including but not limited to lights/ guards facing and watching when and where necessary or required by the Architect or his Representative or by any duly constituted authority for the protection of the works or for the safety and convenience of the public or others. The Contractor shall provide fencing / plastic sheets / bamboo etc. to protect the users of the Sabha officer / College student / General Public / adjacent markets from any injury / damage due to the construction. The inlet / outlet of materials shall be so regulated so as to cause the least disturbance to the existing uses.

22 a) Care of Works:

From the commencement to the completion of the works, the Contractor shall take full responsibility for the care thereof and of all temporary works, and in case any damage, loss or injury shall happen to the works or to any part thereof or to any temporary works from any cause whatsoever, save and except risks as defined in sub-clause (b). In this clause, shall at his own cost, repair and make good the same, so that at completion, the permanent works shall be in good order and condition and in conformity in every respect with the requirements of the contract and the Architect's instructions. In the event of any such damage, loss or injury happening from any of the excepted risks, the contractor shall, if and to the extent required by the Architect and subject always to the provision of Clause mentioned elsewhere in the conditions hereof, repair and make good the same as aforesaid at the cost of the Employer. The Contractor shall also be liable for any damage to the works occasioned by him in the course of any operations carried out by him for the purpose of complying with his obligations under Clause 40-41---(ALTER-ADD and CONTRACTOR TO SEARCH) thereof.

b) Excepted Risks :

The "Excepted Risks" are Force majeure, exceptionally in elemental weather, fire, earthquake, civil commotion, riot, lockout, strike, war, hostilities (whether war be declared or not), invasion act of foreign enemies, rebellion, revolution in correction or military or usurped power civil war or a cause solely due to or use or occupation by the Employer of any portion of the works in respect of which a Certificate of Completion has been issued all of which are herein collectively referred to as "Excepted Risks".

23 Insurance in Respect of Damage to Person and Property:

From Commencement to Completion, the Contractor shall be responsible for all injury to persons, animal or things and for all structural and decorative damage to property which may arise from operation or neglect of himself or any subcontractor or of any of his or a sub-contractor's employee whether such injury or damage may arise from carelessness, accident or any other cause whether in any way connected with the carrying out of this contract. This clause shall be held to include interalia any damage to building, whether immediately adjacent or otherwise, any damages to roads, streets, footpaths, bridges, or ways as well as all damage to the buildings and works forming the subject of this contract by first or other inclemency weather. The contractor shall indemnify the Employer and hold him harmless in respect of all and Any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of any award of compensation or damages consequent upon such claim. The Contractor shall reinstate all damage of every spot mentioned in this clause so as to deliver up the whole of the contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties. The Contractor shall indemnify the Employer against all claims which may be made against the Employer by any member of the public or other party in respect of anything which may arise in respect of the works or in consequence thereof and shall at his own expense effect and maintain until the virtual completion of the contract with an approved office a policy of insurance in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the Employer on the signing of the contract. The Contractor shall also indemnify the Employer against all claims which may be made upon the Employer whether under the Workmen's Compensation Act or any other statute in force during the currency of this contract or at common law in respect of any employee of

the Contractor or of any sub- contractor and shall at his own expense effect and maintain until the virtual completion of the contract, with an approved office a Policy of Insurance in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the Employer from time to time during the currency of the contract. The Contractor shall be responsible for anything, which may be excluded from the Insurance Policies above referred to, and also for all other damages to any property arising out of and incidental to the negligent or defective carrying out of the contract; however such damage shall be caused. The Contractor shall at all times indemnify the Employer and keep indemnified in respect of any costs, charges for expenses arising out of any claim that may arise on account of the Contractor's operation at the site or proceedings and also in respect of any award of or compensation of damages arising there from. It shall also be the Contractor's responsibility to file and pursue with the Insurance Company for a claim if any. The Employer with the concurrence of the Architect shall be at liberty and is hereby empowered to deduct the amount of any damages, compensations, costs, charges and expenses arising or acquiring from or in respect of any such claim or damages from any sums due or to become due to the Contractor. Before commencing the work, the Contractor shall without limiting his obligations and responsibilities under the condition, obtain the necessary insurances. If he shall fail to effect and keep in force the insurances referred to in this clause hereof or any other insurances which he may be required to effect under the terms of contract then the contractor shall be fully responsible for the consequences of such a default. In any such case the Employer may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for the purpose and from time to time deduct the amount so paid by the Employer as aforesaid from any monies due or which may become due to the Contractor or recover the same as a debt due from the Contractor. The Contractor shall provide the Employer with documentary evidence from time to time that he has taken all the insurance policies mentioned in the foregoing paragraphs and that he has paid the necessary premium for keeping the policy valid till the works are completed and handed over to the employer. The Architect/PMC shall ensure the validity of the insurance policies on behalf of the Employer. If extension of time limit is granted by Employer, he shall have to ensure that the insurance policies are progressively extended.

24 Compliance with Statutes, Regulations etc.

The Contractor shall comply with the provision of Payment of Wages ACT 1936, Minimum Wages Act 1948, Employees Liability Act 1938, Workmen's Compensation Act 1923, Industrial Dispute Act 1947, Maternity Benefits Act 1961 and the Contractor's Labour (Regulation and Abolition) Act 1970 and / or any such statutes ordinance or have and the modification thereof and the regulation or Bye -Laws of any local or other duly constituted authority and rules and regulations of public bodies and companies which may be applicable to the works or to any temporary works as aforesaid and shall keep the Employer indemnified of every kind for breach of any such statute, ordinance or Law Regulation or Bye-Laws Contractor, as required, will pay necessary P.F. and E.S.I contribution for the contractor's workers and employer shall be absolved of all these risks.

25 Fire Insurance:

The Contractor shall at the time of signing of the contract insure until the end of defect liability period of the contract against loss or damage by fire in an office/company to be approved by the Architect/Employer in the joint names of the Employer and Contractor (the name of the former being placed first in the policy) for the full amount of the contract and for any further sum if called upon to do so by Bank / Architect / PMC the premium of such further sum being allowed in the contract shall be authorized extra. Such a policy shall cover the property of the Employer only and the Architect and Surveyors' fees for assessing the claim and in connection with his services generally in the reinstatement and shall not cover any property of the Contractor or any sub contractor or employee. The Contractor shall deposit the policy and receipt for the premium with the Employer within twenty one days from the date of signing the contract unless otherwise instructed. In default of the contractor insuring as provided above the Employer or the Architect on his behalf may so insurance and may deduct the premium from any moneys 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 the Insurance Office should they elect to do so, proceed with all the completion of the works in the same manner as though the fire had not occurred and in all respects under the same conditions of contract. The Contractor in case of rebuilding or reinstatement after fire shall be entitled to such extension of time for completion as the Architect may deem fit but shall however not be entitled to reimbursement by the Employer of any short fall or deficiency in the amount finally paid by the insurer in settlement of any claim arising as set out herein.

26 Giving of Notices and Payment of Fees

The Contractor shall give all notices and pay all fees required to be given or paid by any National or State Statute Ordinance or other Law or any Regulation or Bye –Law of any local or other duly constituted authority in relation to the execution of the works or of any temporary works and by the rules and regulations of all public bodies and companies whose property or rights are affected or may be affected in any way by the works.

27 Returns of Labour etc.:

The Contractor shall furnish all such information regarding the supervisory staff, the numbers of the several classes of labour from time to time employed on the site, constructional plant etc. as the PMC may require.

28 Materials and Workmanship :

a) Quality of Material and Workmanship and Tests:

All materials and workmanship shall be of the respective kinds described in the contract and in accordance with the Sabha / Architect's/PMC instructions and the contractor shall upon the request of the Sabha / Architect/PMC furnish to them all invoices, accounts, receipts and other vouchers to prove the materials comply therewith and shall be subjected from time to time to such tests as the Banks / Architect's / PMC may direct at the place of manufacture or fabrication or on the site or at all or any of such places. The Contractor shall at his own cost provide such assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used and shall supply samples of materials before incorporation in the works for testing as may be selected and required by the Sabha / Architect/ PMC. The material testing shall be done at approved labs /institutes like NIT Jamshedpur / BIT Mesra / BIT Sindri / etc. and other govt labs as directed to PMC/ Architects/ Employer.

b) Cost of Samples and Shop Drawings:

All samples for the fittings and fixtures, wood, hardware etc. should be submitted for approval before using in the work. The Contractor at his own cost as directed by the Architect shall supply all Samples and Shop Drawings.

c) Cost of Tests

The cost of making any test shall be borne by the Contractor, if such test is clearly intended by or provided for in the contract and in the cases only for a test under load or of a test to ascertain whether the construction of any finished or partially finished work is appropriate for the purposes which it was intended to fulfil is particularized in the contract in sufficient detail to enable the Contractor to price or allow for the same in tender. Further the cost of tests if as per advice instruction of statutory authorities/CVC /CTE'S organisation shall be borne by the contractor.

d) Cost of Test not provided for etc.

If any test is ordered by the Architect / PMC which is either:

- i) Not so intended by or provided for or,
- ii) (In the case above mentioned) is not so particularized or,
- iii) Though so intended or provided for is ordered by the Architect / PMC to be carried out by an independent person at any place other than the site or the place of manufacture or fabrication of the materials tested, then the cost of such test shall be borne by the Contractor if the test shows the workmanship or materials not to be in accordance with the provisions of the contract or the Architect's instructions but otherwise by the Employer

29

a) Examination of Work Before Covering Up:

No work shall be covered up or put out of view without the approval of the Sabha / Architect/PMC and the Contractor shall afford full opportunity for the Sabha / Architect/PMC to examine and measure any work which is about to be covered up or put out of view and to examine foundations before permanent work is placed thereon. The Contractor shall give due notice to the Sabha / Architect/ PMC whenever any such work or foundations is or are ready or about to be ready for examination and the Sabha / PMC/Architect shall without unreasonable delay unless he considers it necessary and advises the contractor accordingly attend for the purpose of examining and measuring such work or of examining such foundations.

b) Uncovering and Making Openings:

If the Contractor puts any part of the foundations or covers up or puts out of view before he has notified the Sabha / Architect/PMC and received instructions, he shall be liable to reinstate all work that may subsequently be, at any time, damaged on account of any defect in or insufficiency of the foundation. The Contractor shall at the request of the Architect, open up for inspection any work, and should the Contractor refuse or neglect to comply with such requests, the Employer through the Architect, may employ other agency to open up the

same. If the said work has been covered up in contravention of the Architect's instructions, or if on being opened up, if he found not in accordance with the drawings and the specifications or the instructions of the Architect, the expenses of opening it again, whether done by the Contractor, or such other agency, shall be borne by the Contractor, and shall be recoverable from him by the Employer or may be deducted by the Employer from any monies due or which may become due to the Contractor. If the work has not been covered in contravention of such instructions and found to be in accordance with the said drawings and specifications or instructions than the expenses aforesaid shall be borne by the Employer and be added to the contract sum; provided always that in the case of foundation or any other urgent work so open up and required immediate attention, the Architect shall within 7 days after receipt of written notice from the Contractor that the work has been opened make or cause the inspection thereof to be made at the expiration of such time, if such inspection shall not have been made. The contractor may cover up the same and shall not be required to open it up again except at the expenses of the Employer

30.

a) Removal of Improper Work and Materials:

The Sabha / PMC/ Architect shall during the progress of the works have power to order in writing from time to time.: i) The substitution of proper and suitable material and, ii) The removal and proper re -execution notwithstanding any previous test thereof or interim payment therefore of any work which in respect of materials or workmanship is not in accordance with the contract in the opinion of the Sabha/ Architect/PMC.

b) Default of Contractor in Compliance :

In case of default on the part of the Contractor in carrying out such order the Employer shall be entitled to employ and pay other agency to carry out the same and all expenses consequent thereon or incidental thereto shall be borne by the Contractor and shall be recoverable from him by the Employer or may be deducted by the Employer from any amount due or which may become due to the Contractor.

31 Suspension of Work :

The Contractor, shall on the written order of the Architect/Employer suspend the progress of the works or any part thereof for such time or times and in such manner as the Architect may consider necessary and shall during such suspension properly protect against threats or damage and secure the work, so far as is necessary in the opinion of the Architect. The cost, if any, incurred by the Contractor in giving effect to the Architect's instructions and PMC's recommendations, if any, under this clause shall be borne and paid by the Employer unless such suspension is: i) Otherwise provided for in the contract or ii) Necessary by reason of some default on the part of the Contractor or Provided that Contractor shall not be entitled to recover any such extra cost unless he gives written notice of his intention to claim to the Architect on receipt of the Architect's order. The Architect shall settle and determine the payment and/or extension of the time under Clause 35 ----DELAYS & EX hereof to be made to the Contractor in respect of such claim as shall, in the opinion of the Architect, be fair and reasonable.

c) Default of Contractor in Compliance:

In case of default on the part of the Contractor in carrying out such order the Employer shall be entitled to employ and pay other agency to carry out the same and all expenses consequent thereon or incidental thereto shall be borne by the Contractor and shall be recoverable from him by the Employer or may be deducted by the Employer from any amount due or which may become due to the Contractor.

32 Commencement of Works:

The Contractor shall commence the works on site in 14 days after the receipt by him of an order in writing to this effect from the Employer or the date of possession whichever is later and shall proceed with the same with due expedition and without delay except as may be expressly sanctioned or ordered by the Architect/Employer or be wholly beyond the Contractor's control.

33 Possession of Site:

a) Save in so far as the contract may prescribe and with the Employer's written order to commence the works, the Contractor shall be given possession of the whole of the site or part by part progressively enabling him to commence and proceed with the execution of the works in accordance with the programmes referred to in

Clause 16 hereof. If the Contractor suffers delay on account of the Employer's failure to give possession of site in accordance with the terms of this clause, necessary extension of time (without any financial implications) shall be granted by the Employer for the completion of the entire works, on recommendations of Bank / Architect/PMC. b) The Contractor shall bear all costs and charges for special or temporary way leaves required by him in connection with access to the site. The Contractor shall also provide at his own cost any additional accommodation outside the site required by him for the purposes of the works.

34 Time for Completion

Subject to any requirement in the contract as to completion of any section of the works before completion of the whole, the whole of the works shall be completed within **9 months** the time stated in the contract calculated from the date of the Employer's written order to commence the works or such extended time as may be allowed under Clause 35----- (DELAYS AND EXT..) hereof.

34.1 Certification of Virtual Completion of Works

The contractor shall report in writing to the Sabha / Architects / PMC when the works are completed in all respects. The Sabha / Architects / PMC shall after the verification of works and in consultation with Architects issue to the contractor a certificate (along with list of defects / rectification to be attended as per clause No.39---(DEFECTS)) to be called "Virtual Completion Certificate" a copy whereof shall be submitted to the employer to enable it to take possession of the completed works. The Defects liability period shall commence only from the date of issue of such Virtual Completion certificate.

35 Delays and Extension of Time for Completion

In the opinion of the Employer, the works be delayed (a) by force majeure (b) by reason of any exceptionally in clemently weather or (c) by reasons of proceedings taken or threatened by or dispute with adjoining or neighbours of adjoining properties or public authorities arising otherwise than through the Contractor's own default or (d) by the works or delays of the other Contractors or Tradesman engaged or nominated by the Employer or the Architect and not referred to in the Schedule of Quantities and/or specifications or (e) by reason of the Architect's / employer instruction or (f) by reason of civil commotion, local commotion of workmen or strike or lockout affecting any of the building trades or (g) due to extra or additional work or other circumstances provided the Contractor has intimated to the Architect/ employer through PMC full and detailed particulars soon after such work has been commenced or (h) in consequence of the Contractor, not having in due time necessary instructions from the Architect/ through PMC for which he shall have specifically applied in writing ahead of time, giving the Architect reasonable time to prepare such instructions, the Employer shall make a fair and reasonable extension of time for completion of work. In case of such strike or lockout, the Contractor shall, as soon as may be, give written notice thereof to the Architect/PMC but the Contractor shall nevertheless constantly use his endeavours to prevent delay and do all that may reasonably be required to the satisfaction of the Architect/PMC/Employer to proceed with the work.

36 Rate of Progress:

The whole of the material plant and labour to be provided by the Contractor in tune with Clause 13----- (INSPECTION OF SITE) hereof and the mode, manner and speed of execution and maintenance of the works are to be of a kind and constructed in a manner approved of by the Sabha / Architects / Project Management Consultant. Should the rate or progress of the works or any part thereof, be at any time in the opinion of the Sabha / Architect's / Project Management Consultant too slow to ensure the completion of the works by the prescribed time or extended time for completion, the Sabha / Architects / Project Management Consultant shall so notify the Contractor in writing and the Contractor shall there upon take such steps as the Contractor may think necessary and the Sabha / Architects / Project Management Consultant may approve to expedite progress so as to complete the works by the prescribed time or extended time for completion. If the work is not being carried on by day and night the Contractor shall request permission to work by night as well as by day then if the Architect/Employer shall grant such permission the Contractor shall not be entitled to any additional payment for so doing but if such permission shall be refused and there shall be no equivalent practicable method of expediting the progress of works, the time of completion of the works shall be extended by the Employer by such period as is solely attributable to such refusal. All work at night shall be carried out without unreasonable noise and disturbance. The Contractor shall indemnify the Employer from and against any liability for damage on account of noise or other disturbance created while or in carrying out the work and from and against all claims, demands, roceedings, damages, costs, charges and expenses whatsoever in regard or in relation to such liability.

37 Liquidated Damages for Delay

If the Contractor shall fail to complete the works within the time prescribed by Clause 34 hereof or extended time then the Contractor shall pay to the Employer the sum stated in the Tender as Liquidated Damages for such default. The Employer may deduct without prejudice to any other method of recovery deductible amount of such extent from the money that stands due or which may become due to the Contractor. The payments or deduction of such damages shall not relieve the Contractor from his obligations and liabilities under the contract.

38 Certificate of Completion of Works:

a) When the whole of the works have been substantially completed and have satisfactorily passed any final test that may be prescribed by the contract, the Contractor may give a notice to the effect to the Sabha / Architects / Project Management Consultant accompanied by an undertaking to finalize any outstanding work during the period of maintenance. Such notice and undertaking shall be in writing and shall be deemed to be a request by the Contractor for the Sabha / Architects / Project Management Consultant to issue a Certificate of Completion in respect of the works. The Architect, shall within twenty eight days of the date of delivery of such notice either issue to the Contractor, with a copy to the Employer, a Certificate of Completion stating the date on which, in his opinion, the Works were substantially/virtually completed in accordance with the contract or give instructions in writing to the Contractor specifying all the work which, in the Sabha / Architects / Project Management Consultant's opinion, requires to be done by the Contractor before the issue of such Certificate. The Sabha / Architect/PMC shall also notify the Contractor of any defects in the works affecting substantial completion that may appear after instructions and before completion of the Works specified therein. The Contractor shall be entitled to receive such certificate of completion within twenty-eight days of completion to the satisfaction of the Sabha / Architect/PMC of the Works so specified and making good any defects so notified.

b) Certification of Completion by Stages

Similarly, in accordance with the procedure set out in sub clause (a) of this Clause, the Contractor may request and the Project Management Consultant shall issue a Certificate in respect of: i) Any section of the Permanent Works in respect of which a separate time for completion is provided in the contract, and ii) Any substantial part of the Permanent Works, which has been completed to the satisfaction of the Sabha /Architect/PMC and occupied or used by the Employer. If any part of the Permanent Works shall have been substantially completed and shall have satisfactorily passed any final test that may be prescribed by the contract, the Architect, on recommendations of Sabha Engineer / PMC, may issue a Certificate of Completion in respect of that part of Permanent Works before completion of the whole of the works and upon the issue of such Certificate, the Contractor shall be deemed to have undertaken to complete any outstanding work in that part of the Work during the period of maintenance. Provided always that Certificate of Completion given in respect of any section or part of the Permanent Works before Completion of the whole shall not be deemed to certify completion of any ground or surfaces regarding reinstatement, unless such Certificate shall expressly so state.

39 Defects:

a) Definition of "Defects Liability Period:

In these conditions, the expression "Period of Defects Liability" shall mean the period of Defects Liability named in the Tender, calculated from the date of completion of the Works, certified by the Architect/PMC/ Sabha Engineer in accordance with item no. 12 of Annexure-1 (appendix to form of offer) and mentioned elsewhere in the tender, or in the event of more than one certificate having been issued by the Sabha Engineer / Project Management Consultant under the said Clause from the respective dates so-certified. In general, the Defects Liability Period shall be one year\ after the virtual completion of the works (except for all Water Proofing Works for which the period shall be 10 years).

b) Defects:

The Contractor shall make good at his own cost and to the satisfaction of the PMC/Architect/ Sabha Engineer, all defects, shrinkage, settlement, or other faults and all damages, loss and expenses consequent thereon or incidental thereto, and such damage, loss and expenses shall be recoverable from him by the Employer or may be deducted by the Employer upon the PMC/ Architect's / Sabha Engineer Certificate in writing from any money due or that become due to the Contractor.

c) Entry to the Premises for Attending Defects:

The premises shall have/remain in exclusive physical possession of the Employer and the Contractor is given only a temporary permission to enter the said premises with his workman, agents for attending the defects, during the defects liability period. If the Contractor or his workman whether negligently or otherwise causes any damage or loss to the property, fixtures of the Employer lying in the premises, the Contractor shall be bound to reimburse such loss to the Employer. The Employer always is entitled to deduct any amount of sum loss from the amounts payable to the Contractor.

d) Execution of Work of Repair etc.

To the intent that the Works shall at or as soon as practicable after the expiration of the Defects Liability Period be delivered to the Employer in the condition required by the Contractor, fair wear and tear excepted, to the satisfaction of the Sabha Engineer /Architect/PMC, as that in which they were at the commencement of the DLP, the Contractor shall finish the Work, if any, outstanding at the date of completion, as certified under Clause 34.1 hereof, as soon as practicable after such date and shall execute all such work of repair, amendment, reconstruction, rectification and making good defects, imperfections, shrinkages or other faults as may be required of the Contractor in writing by the Architect/PMC/ Sabha during the DLP within fourteen days after its expiration, as a result of an inspection made by Architect/Employer/PMC prior to its expiration.

e) Cost of Execution of Work of Repair etc.:

All such work shall be carried out by the Contractor at his own expenses if the necessity thereof shall, in the opinion of the Sabha/Architect/PMC, be due to the use of materials or workmanship not in accordance with the contract or to neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract. If, in the opinion of the Architect/PMC/Employer, such necessity shall be due to any other cause, the value of such work shall be ascertained and paid for as if it were additional work.

f) Remedy on Contractor's Failure to Carry Out Work Required:

If the Contractor shall fail to do any such work as aforesaid required by the Architect/PMC/ Sabha Engineer, the Employer shall be entitled to employ and pay other persons to carry out the same and if such works which is in the opinion of the Architect/PMC/ Sabha Engineer, the Contractor was liable to do at his own expense under the Contract, then all expenses consequent thereon or incidental thereto shall be recoverable from the Contractor by the Employer or may be deducted by the Employer from any money due or which may become due to the Contractor.

40. Alterations, Additions and Omissions:

a) The term "Variation" as used under this clause means the alteration or modification of the design, quality and quantity of work as shown upon the drawings, scope of works, specification or included in the priced schedule of quantities and desired by or referred to in the schedule of quantities and includes the addition, omission or substitution of any work, the alteration of the kind of standard or any of the materials or goods to be used in the work, and removal from the site of any works materials or goods executed or brought thereon by the Contractor for the purpose of work other than work materials or goods which are not in accordance with this contract. The Architect/Employer shall have power to order the Contractor to do any of the following: i) Increase or decrease the quantity of any work included in the contract. ii) Omit any such work. iii) Change the character or quality or kind of any such work. iv) Change the levels, lines, position and dimensions of any part of the Works and v) Execute additional work of any kind necessary for the completion of the works and no such variation shall in any way validate or invalidate the contract, but the value, if any, of all such variations shall be taken into account in ascertaining the amount of the Contract Price.

b) Orders for Variation to be in Writing:

The Contractor shall make no such variations without an order in writing of the Architect/Employer. Provided that no order in writing shall be required for Increase or decrease in the quantity of any work where such increase or decrease is not the result of an order given under this Clause, but is the result of the quantities exceeding or being less than those stated in the scope of works.

**C) PRICE VARIATION ADJUSTMENT (PVA) CLAUSE
-NOT APPLICABLE IN THIS SPECIALISED WORK-**

41 Contractor to Search:

The Contractor shall, if required by the Sabha /Architect/PMC in writing, search under the directions of the Sabha /Architect/PMC for the cause of any defect, imperfection or fault appearing during the progress of the works or in the Period of DLP. Unless such defects, imperfection or fault shall be one for which the Contractor is liable under the contract, the cost of the work carried out by the Contractor in searching as aforesaid shall be borne by the Employer. If such defect, imperfection or fault shall be one for which the Contractor is liable as aforesaid, the cost of work carried out in searching as aforesaid shall be borne by the Contractor and he shall in such case repair, rectify and make good such defect, imperfection or fault at his own expense in accordance with the provisions of Clause 39 and 40 hereof.

c) Claims: -

The Contractor shall send to the employer's representative/ PMC prior to submission of Interim Bill/Running Bill giving particulars 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 Architect/Employer, which he has executed. No final or interim claim for payment for any such work or expense will be considered which has not been included in such particulars. Provided always that the Architect shall be entitled to authorize payment to be made for any such work or expense, notwithstanding the Contractor's failure to comply with this condition, if the Contractor, has at the earliest practicable opportunity, notified the Architect/PMC/Employer in writing such claims along with required particulars.

42 Extra Item of Work:

a) Work or material of nature not included under the Schedule of items which has to be executed or supported, insurance of any of the Provisions of this contract shall be considered as an extra item. When alterations/additions or omissions made to any work or material shall be such that the cost of the resulting work cannot be estimated according to the tendered items the same shall also be considered extra item. The Contractor shall carry out the extra items as only after written communication/ approval by the Architect/Employer/through PMC/ Sabha Engineer. However, extra charges or claims in respect of any work will not be allowed unless the works they relate are clearly outside the spirit and meaning of the tender item/specifications and such works are ordered by the Architect/Employer through PMC/ Sabha Engineer and claimed for specified manner before the particular work is actually commenced.

b) Prices for Extras, Ascertainment there of:

The extra item rates shall generally be derived from the quoted/ tender rates of the Contractor for comparable items of similar nature/scope/description under Schedule of Quantities of the Tender, making allowance for variations only. However if no comparable items are available in the unit rates and the quantity of work is to be executed can conveniently be derived / measured; the same shall be arrived at based on the prevailing rates in the original tender. However, where the work is so disjointing the unit rates or the quantity of work done cannot be conveniently be derived/measured then it will be within the purview of the Architect/Employer to derive the rates either from Tender item or other extra items or by rate analysis showing clearly the fair market cost of material, cost of labour, plus 15% to cover overheads, profit etc. The actual cost shall be determined for the above purpose, as the cost of: -

- i) Materials supplied or used at site on items forming part of completed item of work as determined by the Architect/PMC/Sabha Engineer by inquiry of the prevailing market rate at the time of procurement.
- ii) Materials (non-consumable) which are used temporarily and not forming a part of the completed item of main work, provided the same are solely meant for the particular and this cost would be determined by the Architect/PMC/Sabha Engineer by inquiry of prevailing market rate.
- iii) The actual cost of transport if solely transported for the execution of the particular extra work and running charge of equipment if any used for the execution of the particular extra item of work.
- iv) Skilled and unskilled labour charges for the actual strength of labour employed and petty supervision charges as certified by the Architect/PMC/Sabha Engineer. Other relevant applicable costs viz. water, electricity, sundries etc as per CPWD guidelines may be considered on satisfactory production of documentary evidence to the PMC/Architect/Employer. No escalation shall be entertained on such extra items.

43 Plant Temporary Works and Materials: -

a) Plant etc. Exclusive use for the Works : -

All Constructional Plant, Temporary Works and materials provided by the Contractor shall when brought on to the site immediately be deemed to be exclusively intended for the construction and completion of the Works and be deemed to become the property of the Employer and the Contractor shall not remove the same or any part thereof (Save for the purpose of moving it from one part of the site to another without the consent in writing of the Employer which shall not be unreasonably withheld. But the Employer will permit the Contractor the exclusive use of all such Constructional plant, Temporary works and materials in and for the completion of the works until the happening of any event which gives right to the Employer to exclude the Contractor from the site and proceed with the completion of the works.

b) Revesting of Plant Etc.: -

Upon the removal of any such Constructional Plant, Temporary works of materials with consent as aforesaid the same shall be deemed to re-vest in and become the property of the Contractor and upon completion of the Works the remainder of the said Constructional Plant and Temporary Works and any unused materials provided by the Contractor shall be deemed to re-vest in and become the property of the Contractor who shall remove the same. If the Contractor fails to remove any of the said Constructional Plant, Temporary Works of unused materials within such reasonable times after the completion of Works as may be allowed by the Architect/PMC/ Sabha Engineer then the Employer may sell the same and shall after deducting from the proceeds the charges and expenses and in connection with such sale pay the balance (if any) to the Contractor.

c) Employer not Liable for Damage to Plant etc.: -

The employer shall not at any time be liable for the loss of or injury to any or the said Constructional Plant, Temporary Works or materials save as mentioned in Clause 22 ---(CARE OF WORK)hereof.

44 Approval of Materials, Etc.:

The Architect/PMC/Employer is at a liberty to reject any materials, if in his opinion they are of sub standard quality or not as per the tender specifications.

45 Works to be measured: -

The Project Management Consultant/Sabha Engineer shall, except as otherwise stated, ascertain and determine by measurement the value in terms of the contract of work done in accordance with the contract. It shall, when it required any part or parts of the works to be measured, give notice to the Contractor's authorized agent or representative, who shall forthwith attend or send a qualified agent to assist the PMC/Architect/Sabha Engineer in making such measurement, and shall furnish all particulars required by either of them. Should the Contractor not attend, or neglect or omit to send such agent, then the measurement made by the PMC or approved by him shall be taken to be the correct measurement of the work. For the purpose of measuring such Permanent Work as is to be measured by records and drawings, the PMC shall prepare records and drawings month by month of such work and the Contractor as and when called upon to do so writing, shall, within fourteen days, attend to examine and agree such records and drawings with the employer's representative PMC/Architect/Sabha Engineer and shall sign the same when so agreed. If the Contractor does not so attend to examine and agree such records and drawings, they shall be taken to be correct. If, after examination of such records and drawings, the Contractor does not agree with the same or does not sign the same as agreed, they shall nevertheless be taken to be correct, unless the Contractor shall, within fourteen days of such examination, lodge with the employer's representative PMC/Sabha Engineer for decision by the Architect/Employer, notice in writing of the respects in which such records and drawings are claimed by him to be incorrect.

46 Method of Measurements: -

a) Measurements shall be taken in accordance with the method stipulated in the specification. In case it is not stated the following shall be the method of measurements:

- i) As per Indian Standard method of measurements, SP 27 - Handbook of method of measurement of building works.
- ii) The measurement for certificate of payment shall be as described in mode of payment.

b) Quantity Surveying: -

The Contractor will himself undertake the quantity surveying work and submit his bills supported by reconciliation statements as directed. In case he fails to submit his bills in proper order, the Employer reserves for himself the right to employ an expert who will also be employed, if the bills stated by the Contractor show inaccuracies frequently indicating that the Contractor is not capable of taking the required measurements and producing a proper bill. The Contractor (or the expert) will make the measurements on the basis of the drawings. The billing procedure and formats shall be as approved by the Architect/Sabha. The fee of the said expert shall be deducted from the Contractors Bill.

47 Assignment or Sub-Letting : -

The Contractor shall not assign or sub-let any portion of the work, except as expressly provided elsewhere in these documents.

48 Certificates and Payments:
a) Certificates and Payments : -

i) The Contractor shall submit to the Project Management Consultant/Sabha Engineer after the end of each month statements and voucher and documents etc. as directed and signed by the Contractor showing the quantities and value of the materials, equipments etc. ordered, work done on the site and of the stock of equipments and unused materials on the site intended to form part of the permanent work or such other items as directed.

ii) The rates of prices in such monthly statements shall be in accordance with stipulations in the contract.

iii) If any rates or prices in the said contract are in the opinion of the Project Management Consultant/ Banks Engineer not applicable to some or any part of the work executed or materials supplied and the PMC/Banks Engineer has not fixed a rate or price at the time when the monthly statement is prepared then temporary/provisional rates or prices shall be assigned by the Project Management Consultant's Representative/Sabha Engineer.

iv) Neither the temporary rates or prices assigned under sub- clause (iii) of this clause nor the quantities mentioned in the statements submitted under sub-clause (i) of this clause shall be binding on the Employer or on the Contractor.

v) The Contractor shall when required by the Architect/PMC/Sabha Engineer furnish all proper documents vouchers, returns etc. as to values to assist the Architect/PMC/Sabha Engineer in the preparation of certificate.

b) Interim Payment:

The Contractor will be paid interim payment on the certificate of the Project Management Consultant's/ Sabha Engineer contract value of the Permanent Works executed up to date together with such amount (if any) that the Project Management Consultant/ Sabha Engineer may consider proper on account of materials delivered by the Contractor on the site and in addition such amount that the Project Management Consultant/Banks Engineer may consider fair and reasonable for any Temporary Works subject to a retention of the percentage named in the Contract until the amount retained shall reach the "Limit of Retention Money" named in the Contract (hereinafter called "the retention money") after which time no further deduction of retention will be made. The issue of interim payment certificate by the Project Management Consultant/Architect/ Sabha Engineer for the value of work done and period of honouring such certificates by the Employer shall be as indicated in special condition of Contract hereto.

c) Final Bill:

When the Architect has granted a certificate or certificates of completion for the whole of the works under clause hereof and when the Architect/PMC/Sabha Engineer has ascertained (excluding in so doing unsettled or disputed claims of the Contract) the final sum (that is to say the gross payment for the completion of the whole of the works) due to the Contractor, the Project Management Consultant/Sabha Engineer shall after allowing for the amount of all previous certificate and after determining and allowing for any sum due to the Employer from the Contractor for delay and after allowing for all other payments due from the Contractor to such a sum out of the balance so calculated as remaining due to the Contractor as will leave to be retained by the Employer a sum equal to retention money for defects liability period . The issue of Final payment certificate by the Project Management Consultant/Architect/Sabha Engineer for the value of work done and period of honouring such certificates by the Employer shall be as indicated in special condition of Contract hereto. As soon as possible after the Certificate Certificates of completion for the whole of the works have been issued, the Contractor shall furnish a final account for the works in the form and manner prescribed by the Architect/PMC/Sabha Engineer.

d) Payment after Defects Liability Period:

The said retention money retained under sub-clause (c) of this clause and the amount if and by which the final sum exceeds the final sum ascertained under the said sub-clause (c) will not be paid by the Employer until after the expiration of defects liability period and then (subject to the deduction of such sums if any as the Project Management Consultant/Sabha Engineer shall determine to be due from the Contractor to the Employer) only upon the Architect/PMC/Employer/Sabha Engineer being satisfied that all the Contractor's obligations under the Contract have been satisfactorily performed.

e) Time of Payment: -

Payment upon each of the Project Management Consultant / Architects Certificates/Sabha Engineer shall be made by the "Employer within the specified time.

f) Correction/ Withholding of Certificates: -

The Project Management Consultant/Sabha Engineer may by any certificate make any correction or modification in any previous certificate, which shall have been issued and shall have power to withhold approval of any certificate if the works of any part thereof are not being carried out to satisfaction.

49 Remedies and Powers :

a) Default of Contractor: -

If the Contractor shall become bankrupt, or have a receiving order made against him, or shall present his petition in bankruptcy, or shall agree to carry out the Contract under a committee of inspection of his creditors or, being a corporation, shall go into liquidation (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), if the contractor shall assign the Contract, without the consent in writing of the Employer first obtained, or shall have an execution levied on his goods, or if the Architect/PMC/Sabha Engineer shall certify in writing to the Employer that in his opinion the Contractor :-

i) Has abandoned the Contract, or

ii) Without reasonable excuse has failed to commence the works or has suspended the progress of the works for twenty eight days after receiving from the Architect/Employer written notice to proceed, or Has failed to remove materials from the site or to pull down and replace work for twenty eight days after receiving from the PMC's /Sabha Engineer written notice that the said materials or work had been condemned and rejected by the Architect's under these conditions, or

iii) Despite previous warnings by the Architect/ PMC/ Employer in writing, is not executing the works in accordance with the Contract, or is persistently or flagrantly neglecting to carry out his obligations under the Contract, or has, to the detriment of good workmanship, or in defiance of the Architect's instructions to the contrary, sub-let any part of the contract then the Employer may, after giving fourteen days notice in writing to the Contractor, enter upon the site and the works and expel the Contractor there from without thereby voiding the contract, or releasing the Contractor from any of his obligations or liabilities under the Contract, or affecting the rights and powers conferred on the Employer or the Architect by the Contract, and may himself complete the works or may employ any other Contractor to complete the works. The Employer or such contractor may use for such completion so much of the Constructional plant, temporary works and materials, which have been deemed to be reserved exclusively for the execution of the works, under the provisions of the contract, as he or they may think proper, and the Employer may at any time, sell any of the said constructional plant, temporary works and unused materials and apply the proceeds of sale in or towards the satisfaction of any sums due or which may become due to him from the Contractor under the Contract.

b) Valuation at Date of Forfeiture : -

The Architect shall, as soon as may be practicable after any such entry and expulsion by the Employer, fix and determine expiate, or after reference to the parties, or after such investigation or enquiries as he may think fit to make or institute, and shall certify that amount, if any, had at the time of such entry and expulsion been reasonably earned by or would reasonably accrue to the Contractor in respect of work then actually done by him under the Contract and the value of any of the said unused or partially used materials, any Contractual Plant and any temporary works.

c) Payment after Forfeiture : -

If the Employer shall enter and expel the Contractor under this Clause, he shall not be liable to pay to the Contractor any money on account of the Contract until the expiration of the Defects Liability Period and thereafter until the costs of execution and maintenance, damages for delay in completion, if any, and all other expenses incurred by the Employer have been ascertained and the amount thereof certified by the PMC/Architect/Sabha Engineer. The Contractor shall then be entitled to receive only such sum or sums, if any, as the Architect may certify would have been payable to him upon due completion by him after deducting the said amount, if such amount shall exceed the sum which would have been payable to the Contractor on due completion by him, then the Contractor shall, upon demand, pay to the Employer the amount of such excess and it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly.

50 Urgent Repairs : -

If, by reason of any accident of failure, or other event occurring or connection with the works, or any part thereof, either during the execution of the works, or during the DLP, any remedial or other work or repair shall in the opinion of the Architect/PMC/Sabha Engineer, be urgently necessary for the safety of the works and the Contractor is unable or unwilling at once to do such work or repair, the Employer may employ and pay other persons to carry out such work or repair as the PMC/Architect/Sabha Engineer may consider necessary. If the work of repair so done by the Employer is the work which in the opinion of the Architect/ PMC/Sabha Engineer, the Contractor was liable to do at his own expense under the Contract, all expenses incurred by the Employer in so doing shall be recoverable from the Contractor by the Employer, or may be deducted by the Employer from any monies due or which may become due to the Contractor. Provided always that the Architect/PMC/Sabha Engineer as the case may be, shall as soon after the occurrence of any such emergency as may be reasonably practicable notify the Contractor thereof in writing.

51 Matters to be finally Determined by the Architect: -

The Architect's /Sabha Engineer decision, opinion, direction certificate (except for payment) with respect to all on any of the matters under Clauses hereof (which matters are hereinafter referred to as excepted matter) shall be only on PMC's scrutiny and recommendations to the Sabha and shall be final and conclusive and binding on the parties hereto and shall be without appeal: - Clause 5 -Architect's/Sabha Engineer interpretation of drawings and further drawings and instructions.

Clause 15 - Work to the satisfaction of the Architect/Sabha Engineer.

Clause 28 -Quality of material and workmanship and tests.

Clause 30(a) -Removal of improper work and materials.

Clause 35 – except 35(e)

Clause 40 - Variations

Any other decision, opinion, direction, certificate or valuation of the Architect/Sabha Engineer to give any of the same shall be subject to the right of arbitration.

52 Settlement of Disputes and Arbitration Act 1996 : -

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

i) If the contractor considers that he is entitled to any extra payment or compensation in respect of the works over and above the amounts admitted as payable by the Architect or in case the contractor wants to dispute the validity of any deductions or recoveries made or proposed to be made from the contract or raise any dispute, the contractor shall forthwith give notice in writing of his claim, or dispute to the **Building committee Hitkarni Sabha Jabalpur** and endorse a copy of the same to the Architect/ Engineer, within 30 days from the date Of disallowance thereof or the date of deduction or recovery. the said notice shall give full particulars of the claim, grounds on which it is base and detailed calculations of the amount claimed and the contractor shall not be entitled to raise any claim nor shall the Bank be in any way liable in respect of any claim by the contractor unless notice of such claim shall have been given by the contractor to the **Building committee Hitkarni Sabha Jabalpur** in the manner and within the time as aforesaid. The contractor shall be deemed to have waived and extinguished all his rights in respect of any claim not notified to the **Building committee Hitkarni Sabha Jabalpur** in writing in the manner and within the time as aforesaid.

ii) **Building committee Hitkarni Sabha Jabalpur** shall give his decision in writing on the claims notified by the contractor. The contractor may within 30 days of the receipt of the decision of **Building committee Hitkarni Sabha Jabalpur** submit his claims to the conciliating authority namely the **Building committee Hitkarni Sabha Jabalpur** for conciliation along with all details and copies of correspondence exchanged between him and the **Building committee Hitkarni Sabha Jabalpur** if the conciliation proceedings are terminated without settlement of the disputes, the contractor shall, within a period of 30 days of termination thereof shall give a notice to the concerned **Building committee Hitkarni Sabha Jabalpur** of the Hitkarni Sabha for appointment of an Arbitrator to adjudicate the notified claims failing which the claims of the contractor shall be deemed to have been considered absolutely barred and waived. Except where the decision has become final, binding and conclusive in terms of the contract, all disputes or differences arising out of the notified claims of the contractor as aforesaid and all claims of the Sabha shall be referred for adjudication through arbitration by the sole

Arbitrator appointed by the **Building committee Hitkarni Sabha Jabalpur** It will also be no objection to any such appointment that the Arbitrator so appointed is a Sabha officer and that he had to deal with matter to which the contract relates in the course of his duties as Bank officer. If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole Arbitrator shall be appointed in the manner aforesaid by the said **Building committee Hitkarni Sabha Jabalpur**. Such person shall be entitled to proceed with the reference from the stage be entitled to proceed with the reference from the stage at which it was left by his Predecessor. It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each dispute along with the notice for appointment of arbitrator. It is also a term of this contract that no person other than a person appointed by such **Building committee Hitkarni Sabha Jabalpur** as aforesaid should act as Arbitrator. The conciliation and arbitration shall be conducted in accordance with the provisions of the Arbitration & Conciliation Act 1996 or any statutory modification or re - enactment thereof and the rules made there under. It is also a term of the contract that if any fees are payable to the arbitrator these shall be paid equally by both the parties. However, no fees will be payable to the arbitrator if he is a Sabha officer. It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof, shall be paid and fix or settle the amount of costs to be so paid.

8. SPECIAL CONDITIONS OF CONTRACT(ANNEXURE-5)

8.1. Location of Site

The site is located at Jabalpur.

8.2. Dimensions and Levels

All dimensions and levels shown on the Drawings shall be verified by the Contractor on the site and he will be held responsible for the accuracy and maintenance of all dimensions and levels. If any discrepancy is observed the same shall be brought to the knowledge of Architect/ Employer/ PMC immediately.

8.3. Notice of Operation:

a) The Contractor shall not carry out important operation without the consent in writing of the Architect/ Project Management Consultant/Hitkarni Sabaha.

b) If it is found that the two or more persons who are connected with one another either financially or as principal and agent or master and servant have tendered separately under different names, for the same work without disclosing their relation, the tender will be cancelled. Any contract if entered into, under such conditions, will also be cancelled at any time during its currency and earnest money will be forfeited.

8.4. Programme of Works and Method of Construction:

In pursuance of General Condition of Contract, the contractor on starting the work shall furnish to the Architect/PMC/Sabha Engineer a program for carrying out the work stage by stage in the stipulated time. Bar chart etc. on individual work shall be maintained showing the progress regularly. The contractor shall submit to the Project Management Consultant/Sabha Engineer regular progress report stating the number of skilled and unskilled labours employed on the works, working hours done, quality of cement used, place, type and quality/quantity of work done during the period.

8.5. Assistance for Employer/Architect/ Project Management Consultant:

The Contractor shall provide for the Employer/Architect /PMC/Sabha Engineer at all times during the Contract including Defects Liability Period, all such men as he may require to assist him in carrying out or checking any measurements, levels, setting out or measuring up of work. The Contractor is also to provide ladders, gangways, etc., and the necessary attendance to move and adopt as directed for inspection or measurement of the works by the Architect.

8.6. Construction Records

The Contractor shall maintain full and accurate records of the dimensions and positions of all new work and any other information necessary for the Project Management Consultant/Sabha Engineer to be able to prepare complete drawings recording details of the works as constructed. The same may be handed over to the Employer through PMC/Sabha Engineer as and when required.

8.7. Safety of adjacent Structures of Works:

a) The Contractor shall provide and erect to the approval of the Employer/Architect/ Project Management Consultant/Sabha Engineer such supports as may be required to protect efficiently all structures or works which may be endangered by the execution of the works or otherwise take such permanent measures as may be required by the Project Management Consultant/ Engineer to protect the structures or Works. The Contractor will be allocated an area for his plant, stores, and compound workshop and site offices within the site.

b) Work at Night: If the contractor is required to work at night and/or on Sundays and holidays in order to complete the work within the time schedule the contractor shall provide and maintain at his own cost sufficient lights to enable the work to proceed satisfactorily without danger/ Approaches to the site also shall be sufficiently lighted by the contractor. No extra payments will be made for night work. Prior intimation and approval should be taken from Employer through Architects/ PMC/Sabha Engineer in this regard. Any permission etc., from local statutory bodies shall be obtained as applicable at his own risk & cost.

c) Reporting of accidents to labour

The contractor shall be responsible for the safety of persons employed by him on the works and shall report accidents to any of them in writing, whenever and wherever occurring on the works, to the employer who shall make every arrangement to render all possible assistance. This shall be without prejudice to the responsibility of the contractor under the insurance clause of the general conditions of contract. The overall responsibility for the same lies with the Contractor.

8.8. Requisition of Materials:

The Bills of Quantities shall not be used as a basis for quantities of materials and the Contractor is entirely responsible for assessing the quantities of materials to be ordered. The employer is not bound to supply any materials and EMPLOYER may reset the requisition of materials.

8.9. Power, Water & Other facilities:

The Contractor shall be responsible to provide within the scope of work all facilities necessary for performance of the work including (but not limited to) water, power, transportation, labour, tools, construction and testing equipment and machinery and land at or about the job site (s) for the Contractor's field offices, godowns, Workshops and residential accommodation for Contractor's staff, quarry rights for raw material, borrow areas, access roads, and right (S) of way to or about the job site (s) and Contractor's office, godown, workshop accommodation, quarries and/or borrow area. The EMPLOYER does not warranty or undertake the provision of any facility aforesaid or otherwise whatever to the Contractor, or assistance in obtaining/procuring the same or other assistance whatever for or in the performance or testing of the work and the Contractor shall not imply by conduct, expression or assurance or by any other means, any promise or obligations on the part of the EMPLOYER contrary to the provision hereof and any such promise or obligation understood by the Contractor shall not be binding upon the EMPLOYER. Any assistance which the EMPLOYER renders to the Contractor in terms hereof or otherwise relative to the work by provision of any facility, water, power etc. as above shall not for any cause afford a basis or defence to the Contractor for any of his obligations under the contract, nor ground for extension of time for completion.

8.10. Procurement of materials:

a) The Contractor shall procure all materials by his efforts and at his own cost. The Contractor shall not remove any material from the site without a written authority of the Project Management Consultant/Sabha Engineer on completion of the works. The contractor shall obtain the instructions of the controlling Authorities as to how the surplus materials if any, is to be disposed off.

b) Cement storage:

The Contractor shall at his own cost erect and maintain a cement storage shed on the site having water tight walls and roof. The shed should be capable of storing twenty tones (400 bags) of cement. at a time

8.11. Temporary Services:

The Contractor shall provide and maintain all temporary services on or about the site including providing Tower cranes; hoists for material movements required for the execution of the works and shall remove them on completion as decided by Architect/ Project Management Consultant/Sabha Engineer.

8.12. Unauthorized Persons:

No unauthorized persons are to be allowed on the site. The Contractor shall instruct all such persons to keep out and shall take steps to prevent trespassing.

8.13. Keeping Site Clean and clear:

During the progress of the works and when directed by the Architect/ Project Management Consultant/Sabha Engineer the Contractor shall keep the site clear of all rubbish and debris including that which may be deposited on the site by any sub-contractors until the date of issue of certificate of Completion. The cost of keeping the site clean shall be deemed to have been included for in the rates. On completion of the works, the Contractor shall at his own expense clear away and remove from the site not later than 7 days from the date of completion of works all constructional plant, surplus material, rubbish and temporary works of every kind as required by local statutory authorities if applicable, and leave the entire site and works clean and in a workman like condition. In case of failure by the contractor, the employer under the advice of Architect/ Project Management Consultant/Sabha Engineer will have the right to get the site cleared at the risk and cost of the contractor to the satisfaction of the Architect/ PMC/Employer/Sabha Engineer.

8.14. Office Accommodation store for Contractor, Employer and Project Management Consultant on the site.

a) The Contractor shall erect and maintain entirely at his own expense offices for the Project Management Consultant, the Architect's representatives and for his own staff respectively at such places as the Architect shall indicate. These offices shall be provided by the contractor with furniture and light, toilet facilities etc.

b) The Contractor shall provide for all necessary storage on the site in a specified area for all materials such as timber, cement, lime and such other material, which are likely to deteriorate by exposure to sun or rain. All such stores shall be cleared away and the ground left in good and proper order on completion of this contract; unless otherwise expressly mentioned herein.

c) All materials which are stored on the site such as bricks, metal, sand etc. shall be stacked in such a manner as to facilitate rapid and easy checking of quantities of such materials.

8.15. Lighting for Works

The Contractor shall at all times provide approved lighting as required for the proper execution and supervision of the works at his own cost.

8.16. Labour Hutments

The contractor shall not be allowed to put up any hutments/temporary structures for accommodating his labour/staff on site . He shall be required to make his own arrangement elsewhere at his own cost. However, if local authorities so permit and subject to the Contractor arranging for such permission, some space at site which will not come in the way of the permanent construction, temporary construction facilities and offices may be provided to the Contractor at the discretion of the Employer for purely temporary bachelor accommodation or essential/core staff engaged on Emergency or essential services round the clock like security, fire fighting, concrete laying and curing with proper sanitary facilities.

8.17. Works Diary

The PMC/Sabha Engineer shall keep a diary/Register on the site in which all his remarks, instructions, decisions and the essential details, of the work shall be recorded. The Contractor shall assist in keeping the diary by supplying daily information on the works as required by Employer/Architect/ Project Management Consultant/Sabha Engineer.

8.18. Progress Report:

The Contractor shall submit regular monthly progress reports to the Employer/Architect / Project Management Consultant/Sabha Engineer in a form as required by him which shall also include progress photographs of the works. **Digital Photographs shall be taken once a week sufficient to show the progress of work at the Site by the Contractor and e-mailed every evening to the Architect / Employer / PMC/Hitkarni Sabha.** In addition, the contractors shall maintain site records/registers etc. as required and directed by the Architect/PMC/Employer/Sabha Engineer.

8.19. Site Meetings:

Progress and quality evaluation meetings will be held at the site every week. The Contractors' senior representative -in-charge of the project along with his site-in-charge and other staff as required participating in these meetings and ensuring all follow up actions.

8.20. Contractor to Verify Site Measurements:

a) The Contractor shall check and verify all site measurements whenever requested by other specialists, Contractors or by nominated or other sub-contractor to enable them to prepare their own shop drawings and pass on the information with sufficient promptness as will not in any way delay the works. A copy of all such information passed on shall be given to the Project Management Consultant/ Engineer.

b) Measurement to be recorded before work is covered up: The contractor shall take joint measurements with the Architect/ PMC's representative/ Engineer before covering up or otherwise placing beyond the reach of measurement any item of work. Should the contractor neglect to do so, the same will be uncovered at the contractor's expense or in default thereof, no payment or allowance shall be made for such work or the materials with which the same was executed. No claim for interim bill payment will be entertained unless the bill is accompanied with detailed measurements.

c) Typographic or clerical errors

The Architect's /Sabha Engineer clarifications regarding partially omitted particulars or typographical or clerical errors shall be final and binding on the Contractor.

8.21. Items not covered

a) If any item of work is ordered to execute which is not covered in the contract it will be paid for through deriving from analogous item of the contract and if such item is not available then as per valuation that would be derived on the basis of the actual cost of the materials and labour incurred in carrying out the said work, as specified and directed by Employer/Architect/PMC and as determined by the Employer, plus **10%** (Ten percent) to allow for Contractor's profit and overhead and other related costs.

b) Any work not carried out as per drawings issued for Execution and Specification and/or instructions or is defective in the opinion of the Architect/PMC/Sabha Engineer shall be demolished and replaced by new work by the contractor to the satisfaction of the architect and/or consulting Engineer. If the Architect may allow such work to remain the contractor shall accept a reduction in the rate quoted by him and/or reduction in the total cost of such works as will be assessed and decided upon by the architect. Employers decision on recommendation of PMC/Architect/Sabha Engineer shall be final and binding to the contractor.

c) **Substitution /Variation/ Deviations:** Should the contractor desire to substitute any materials and workmanship, He/they must obtain the approval of the Employer/ Architects /Sabha Engineer in writing for any such substitution well in advance. Materials designated in this specification indefinitely by such term as "Equal" or "Other approved" etc. specific approval of the Employer / Architects/Sabha Engineer has to be obtained in writing. The price of all such additional items / non-tendered items will be worked out on the basis of rates quotes for similar items in the contract wherever existing or on engineering rate analysis based on prevalent fair price of labour, material and other component as required. The tender rates, shall hold good for any increase or decrease the tendered quantities up to variation of 25 % as a whole on the entire tender. For variation beyond 25 % on the entire tender as a whole, the rate for the respective item may be reviewed on mutually agreed terms.

8.22. Contract Rates:

The Contract prices and variation rates shall remain firm till final completion of the work and shall be deemed to include all labour, materials, use of plant tools, temporary works and buildings, etc. insurance, sales tax, works contract tax, VAT, local taxes and duties, royalties , service tax, establishment charges, overhead, profit, supervision, transport, sampling, testing, shop drawing and other charges and every expense incurred in the proper and due execution, completion and maintenance of the works, and shall be in full satisfaction and discharge of every obligation and imposed upon him by the contract and nothing extra shall be payable unless specifically stated in this contract.

8.23. Time of Completion & Progress of Works:

The whole of the work as stipulated shall be completed within the stipulated time period starting from the date of the written order by the Employer to commence the work. The work shall generally be preceded in accordance to agreed program of works. Time is the essence of the contract and the works must be completed within the time schedule as indicated in the appendix to the Tender. Any tender which disagrees with time schedule of construction and stipulates a longer period is liable to be rejected. The Contractor shall take all special steps he thinks might be necessary to complete the work in the stipulated time including any special plant, equipment, additional quantity of shuttering and other materials, labour etc. and give detailed and specific indication of the same in his tender submission and include the cost thereof in his quoted rates.

8.24. Statutory Obligations, Notice, Fees and Charges:

a) The Contractor shall comply with and give all notices required by any act, any instrument rule or order made under any Act, or of any regulation or bylaws of JBP./Municipal Corporation and other any local body or authority or of any agency which has any jurisdiction with regard to the works or with whose systems the same we are or will be connected (all requirements to be complied with being referred to in these Conditions as the statutory requirements)

b) If the Contractor shall find any divergence between the statutory requirements and all or any of the contract documents or any variation instruction issued in accordance with these Conditions, he shall immediately give to the Employer/Architect/Sabha Engineer a written notice specifying the divergence.

- c) If the Contractor gives notice under paragraph (b) of this sub-clause or of Employer /Architect/Sabha Engineer shall otherwise discover or receive notice of a Divergence between the statutory requirements and all or any of the contract documents or any variation instructions issued in accordance with these conditions, the Employer shall within 7 days of discovery or on receipt of a notice issue instructions in relation to the divergence.
- d) If in any emergency compliance with paragraph (a) of this sub-clause requires the Contractor to supply materials or execute work before receiving instruction under paragraph (c) of this sub-clause the Contractor shall supply such limited materials and execute such limited work as are reasonably necessary to secure the statutory requirements.
- e) The Contractor shall forthwith inform the Employer/ Architect/ Project Management Consultant/Sabha Engineer of the emergency and of the steps that he is taking under this paragraph of these conditions.
- f) Work executed and materials supplied by the Contractor under sub-paragraph (i) of this paragraph shall be deemed to have been executed and supplied pursuant to Employer instruction in accordance with these Conditions provided that the emergency arose because of a divergence between the statutory requirements and all or any of the documents referred to in these Conditions or any variations, instructions issued in accordance with these Conditions.
- g) Provided that the contractor complies with paragraph (b) of this sub-clause, the Contractor shall not be liable to the Employer under this Contract if the works do not comply with the statutory requirements from the Contractor having carried out work in accordance with the documents referred to these Conditions.
- h) The Contractor shall pay and indemnify the Employer against liability in respect of any fees or charges (including any rates or taxes) legally demandable under any Act, any instrument rule or order made under any Act, law or any regulation or below of any local authority or of any statutory or agency in respect of works.
- i) It will be the contractor's sole responsibility and obligation to arrange for blasting license from the relevant authorities, if the excavation requires blasting. The contractor will have to store the blasting powder in a suitably constructed store as per regulation of the explosive department and local bodies.

8.25. Materials and Workmanship to be best of the respective kind

- i) All materials, goods and workmanship shall as far as procurable be the best of the respective kinds and standards described in the Contract.
- ii) The Contractor shall upon the request of the Employer/ Architect/ Project Management Consultant/Sabha Engineer furnish him with documentation to prove that the materials and goods comply with sub clause (1) of this condition.
- iii) The Employer may issue instructions in regard to the removal from the site of any work, materials or goods which are not in accordance with this Contract. In case the Contractor fails to do so in accordance with the time schedule laid down by the Employer, then the Employer will be at liberty to have these material moved out at the expense of Contractor. Ruling of Employer in this regard will be final and binding under the advice of the Architect/PMC/Sabha Engineer.

8.26. Samples:

- a) Apart from adhering to any special provision made in the specifications regarding submission of samples, the Contractor shall within 10 days of his receipt of Letter of Intent, provide to the Architect/Employer samples along with the detailed literature of all materials he proposes to use in the building irrespective of the fact that a specific make/material might have been stipulated. If certain items proposed to be used are of such nature that samples cannot be presented or prepared at the site, detailed literature/test certificate of the same shall be provided instead. Before submitting the samples/literature the Contractor shall satisfy himself that the material/equipment for which he is submitting the samples/literature meet with the requirement of the specification . The Employer/ Project Management Consultant/Architect/Sabha Engineer shall check the samples and give his comments and/or approval to the same. Only when the samples are approved in writing by Employer he shall proceed with the procurement and installation of the same. The approved samples shall be signed by the Architect for identification and shall be kept on record at Employer's office until the completion and acceptance of the work and shall be available at the site for inspection/comparison at any time. The Contractor shall keep with him a duplicate of such samples to enable him to process the matter. For items of work where the samples are to be made at the site, the same procedure shall be followed. All such samples shall be prepared at a place where it can be left undisturbed until the completion of the project. The Architect shall give his comments/approval to the samples at his earliest convenience. Any delay that might occur in approving of the sample s for reasons of its not meeting with the specifications shall be to the account of the Contractor.

b) Testing of concrete: -DELETED

c) Testing of work and materials:

The Contractor shall if required by the Project Management Consultant/Sabha Engineer, arrange to test materials/proportions of the works at his own cost in order to prove their soundness and quality. If after any such test the work is found, in the opinion of the Architect/PMC/Sabha Engineer, to be defective or unsound, the contractor shall pull down and re-erect the same at his own cost.

- d) **Treasure trove:**
Should any treasure, fossils, minerals, or works of art of antiquarian interest be found during excavation or while carrying out works, the same shall be the property of the employer. The contractor shall give immediate notice to the Architect of any such discovery and shall hand over any such treasure to the employer on demand.
- 8.27. **Approved Makes:**
The specifications provide a list of approved makes of some materials specified. The tender price quoted shall cover for this aspect. Only when it is not possible to use any of the approved makes, either due to non availability or due to technical reasons and the Contractor shall propose alternative materials and if found suitable these shall be approved by the Employer for construction.
- 8.28. **Dismissal of Undesirable Persons:**
The Employer may issue instructions requiring the dismissal from the works of any person employed thereon without assigning any reason. The decision of Employer in this regard will be final and binding.
- 8.29. **a) Access to the Works**
The Employer/Employer's representative, Architect /Architect's Representative, Project Management Consultant/representatives and their nominees shall at all reasonable times have access to the works and to the workshops or other places of the Contractor or his sub-contractors/suppliers where work is being carried out for the Contract. When work is to be so carried out in workshops or other places of a sub-contractor the Contractor shall by a term in the sub-contract incorporate a similar right of access to those workshops or places for the Employer and their nominees/representatives and shall do all things reasonably necessary to make such right effective.
- b) Facilities to other contractors:**
The Contractor shall give full facilities and cooperation to all other contractors working on site such as, plumbing, electrical, lift erection etc. as directed by the Architect/ Project Management Consultant/Sabha Engineer and shall arrange his program of work so as not to hinder the progress of other works. The decision of the architect/ Project Management Consultant/Sabha Engineer on any point of dispute between the various contractors on this count shall be final and binding on all parties concerned.
- 8.30. **Employer/Architect's Instruction:**
i) The Contractor shall forthwith comply with all instructions issued to him by the Employer/Architect/ Project Management Consultant/Sabha Engineer in regard to any matter in respect of which the Employer expressly empowered by these Conditions to issue instructions. If within seven days after receipt of a written notice from the Employer/Architect/ Project Management Consultant/Sabha Engineer requiring compliance with an instruction the Contractor does not comply therewith, then the Employer may employ and pay other persons to execute any work whatsoever which may be necessary to give effect to such instruction and all cost incurred in connection with such action shall be recoverable from the Contractor by the Employer as a debt or may be deducted by him from any monies due or to become due to the Contractor under this Contract.
ii) All instructions issued by the Employer/Architect/ Project Management Consultant/sabha Engineer shall be issued in writing. However any instruction issued orally shall be given immediate effect and shall be confirmed in writing within 3 days.
- 8.31. **Liquidated Damages:**
If the Contractor shall fail to complete the works within the stipulated period of completion mentioned herein above, the Contractor shall be liable and shall pay to the Employer as pre-estimated damages at the rate indicated in the APPENDIX TO FORM OF TENDER.
- 8.32. **Termination:**
In the event of the Contractor failing to complete the works within the stipulated period of completion as mentioned hereof, the Employer may, notwithstanding anything contained to the contrary in the contract, terminate at any time the contract without being liable in any manner whatsoever to the Contractor, by giving 30 days notice in writing to the Contractor and proceed to complete or get completed the works which have remained incomplete/not done at the time of such termination at the risk and cost of the Contractor.
- 8.33. **Contract Price**
The contract prices as indicated in accepted tender value and as detailed in priced bill of quantities shall govern this aspect of the contract.
- 8.34. **Preparation of building works for occupation and use on completion:**
On completion of the work, the contractor shall inform the PMC/Architect/Sabha Engineer in writing that he has finished the work and it is ready for the inspection. He will leave the entire possession of site neat and clean and ready and to the satisfaction of the Architect./PMC/ Employer/Sabha Engineer.

8.35. Insurance against third party risks:

On commencement of the work, the contractor shall take out and submit to the Employers a suitable insurance policy against third party risks. The limits of liability of this insurance shall be as follows:

- a) Contractor's all risk - 'CAR' policy for the value of contract price and necessary workmen compensation policy valued for the duration of work.
- b) Rs.15 Lakhs in respect of any one accident or series of accidents arising out of one event. Contractor shall take out third party insurance for 3 no. of such accidents.
- c) Rs.5,00,000/- (Five lakhs) in respect of any person.

8.36. All the work shall be carried out as per the detailed drawings and architect's instruction and in stages as desired by the architect.

9. CONTRACTORS LABOUR RULES– REGULATION - (ANNEXURE- 4)

9.1. Labour Rules :

The Contractor shall at all times during the continuance of the Contract, comply fully with all existing Acts, regulations and bylaws including all statutory amendments and re-enactment of State or Central Government and other local authorities and any other enactments, notifications and acts that may be passed in future either by the State or the Central Government or local authority, including Indian Workmen's Compensation Act. Contract Labour (Regulation and Abolition) Act 1970 and Equal Remuneration Act 1976, Factories Act, Minimum Wages Act, Provident Fund Regulations, Employees Provident Fund Act, schemes made under the same Act and also Labour Regulations as revised Health and Sanitary Arrangement for Workmen, Insurance and other benefits and any act of the central, state and local governments, and shall keep Employer indemnified in case any action is commenced by competent authorities for contravention by the Contractor. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated henceforth on the part of the Contractor, the Architect/Employer/Sabha Engineer shall have the right to deduct from any money due to the Contractor, his amount of Performance Security or recover from the Contractor personally any sum required or estimated to be required for making good the loss or damage suffered by the Employer, responsibility in connection with the employees of the contractor, who shall, in no case, be treated as the employees of the Employer at any point of time.

9.2. Fair Wages:

9.2.1. The Contractor shall pay the labourers engaged by him on the work not less than fair wage which expression shall mean, whether for time of piecework, the respective rates of wages fixed by the local authorities as fair wages for the area payable to the different categories of labourers or those notified under the Minimum Wages Act for corresponding employees of the Employer, whichever may be higher.

9.2.2. The Contractor shall, notwithstanding the provisions of a contract to the contrary, cause to be paid a fair wage to labourers indirectly engaged on the Works, including any labour engaged by sub/contractors in connection with the said works as if the labourers had been directly employed by him.

9.3. Notices:

9.3.1. The Contractor shall before he commences the work, display, and correctly maintain in a clean and legible condition at a conspicuous place on the Site, notices in English and in a language spoken by the majority of the workers, stating therein the rate of wages which have been fixed as fair wages and the hours of work for which such wages are earned and send a copy of such notices to the Architect/PMC/Sabha Engineer.

9.4. Record of wages etc.

The contractor shall maintain records of wages and other remuneration paid to his employees in such form as may be convenient and as per the requirements of the PMC/ Employer/ Architect/Sabha Engineer and the Conciliation Officer (central), Ministry of Labour Government of India, or such other authorized person appointed by the central or State Government and the same shall include the following particulars of each worker :

9.4.1. Name, worker's number and grade;

9.4.2. Rate of daily or monthly wage;

9.4.3. Nature of work on which employed;

9.4.4. Total number of days worked during each wage period;

9.4.5. Total, amount payable for the work during each wage period; All deductions made from the wage with details in each case of the ground for which the deduction is made;

9.4.6. Wage actually paid for each wage period.

9.4.7. The Contractor shall provide a Wage Slip for each worker, employed on the Works.

9.4.8. The Wage records and Wage Slips shall be preserved for at least 12 months after the last entry for Inspection of Wage Records.

9.4.9. The Contractor shall allow inspection of the aforesaid Wage Records and Wage Slips to the Architect/PMC/Sabha Engineer and to any of his workers or to his agent at a convenient time and place after due notice is received, or to the Employer or any other person authorized by him on his behalf.

9.4.10. The Employer/Architect/Sabha Engineer or any other person authorized by them on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of the Fair Wages Clause. He shall also have the Power to investigate into any complaint regarding any default made by the Contractor or subcontractor in regard to such provision.

9.4.11. No party shall be represented by a legal practitioner in any investigation or inquiry under this Clause, unless Architect/Employer/Sabha Engineer agree otherwise.

9.5. Safety Provisions:

The Contractor shall comply with all the precautions as required for the safety of the workmen by the I.L.O. Convention No. 62 as far as they are applicable to the Contract. The Contractor shall provide all necessary safety appliances, gears like goggles, helmets, masks, etc. to the workmen and the staff.

A. SCAFFOLDS

i) 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 of wood or steel. The steps shall have a minimum width of 450mm and a maximum rise of 300 mm. Suitable hand holds of good quality wood or steel shall be provided and the

ii) Scaffolding or staging more than 4m. above the ground floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly bolted, braced or otherwise secured, at least 1 m. 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.

iii) Working platforms, gangways and stairways 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 4 m. 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.

iv) 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 or railing whose minimum height shall be 1m. Wherever 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.

v) 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 290mm. for ladder up to and including 3m. in length. For longer ladders this width shall be increased at least 20mm for each additional meter of length.

vi) A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer obtained prior to construction.

OTHER SAFETY MEASURES

vii) All personnel of the contractor working within the plant 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.

viii) 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.

EXCAVATION & TRENCHING

ix) All trenches, 1.25m. or more in depth shall at all times be supplied with at least one ladder for each 30m. in length or fraction thereof. The ladder shall be extended from bottoms of the trench to at least 1m. above the surface of the ground. Sides of trenches which are 1.5m or more in depth shall be stepped back to give suitable slope or securely held by timber bracing so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5m of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.

x) The contractor shall take all measures on the site of the work to protect the public from accidents and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any persons for injury sustained owing to neglect of the above precautions and to pay any such persons or which may with the consent of the contractor, be paid to compromise any claim by any such person.

DEMOLITION

xi) Before any demolition work is commenced and also during the process of the work:

- a) All roads and open areas adjacent to the work site shall either be closed or suitably protected.
- b) 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.
- c) 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 overloaded with debris or materials as to render it unsafe.

PERSONAL SAFETY EQUIPMENTS

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

- a) Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
- b) Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes shall be provided with protective goggles.
- c) Those engaged in welding works shall be provided with welder's protective eye sight lids.
- d) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- e) When workers are employed in sewers and manholes, which are in use, the contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into manholes and the manholes so. Opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public.
- f) The contractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead or any toxic material in any form. Wherever men above the age of 18 are employed on the work of such painting the following precautions should be taken:
 - g) No paint containing lead or lead products shall be used except in the form of paste or ready made paint. Paints like vinyl and epoxies having toxic fumes should be applied after following all precautions laid down by manufacturers.
 - i) 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.
 - ii) Overalls shall be supplied by the contractor to the workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
- xiii) 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.

HOISTING MACHINES

xiv) Use of hoisting machines and tackle including their attachments anchorage and supports shall conform to the following standards or conditions:

- a) These shall be of good mechanical constructions sound material and adequate strength and free from patent defect and shall be kept in good repair and in good working order.
 - b) Every rope used in hoisting or lowering materials or as means of suspension shall be of durable quality and adequate strength and free from patent defects.
 2. Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years shall be in charge of any hoisting machine including any scaffolding winch or give signals to operator.
 3. In case of every hoisting machine and of every chain ring hook, shackle shovel and pulley block used in hoisting or as means of suspension the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load, each safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
 4. In case of departmental machines, the safe working load shall be notified by the Site Engineer/PMC/Sabha Engineer. As regards contractor's machines, the contractor shall notify the safe working load of the machine to the PMC whenever he brings any machinery to site of work and get it verified by the PMC concerned.
- xv) Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum of the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulated mats, wearing apparel, such as

gloves, sleeves and boots as may be necessary, should be provided. The workers should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.

xvi) All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.

xvii) These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.

xviii) To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the Labour Officer, Engineers of the Department or their representatives.

xix) Notwithstanding the above clause from (i) to (xviii), there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

9.6. First Aid:

At every workplace, there shall be maintained in a readily accessible place first aid appliances including an adequate supply of sterilized dressings and sterilized cotton wool as prescribed in the Factory Rules of the State in which the work is carried on. The appliances shall be kept in good order and, in large workplaces; they shall be placed under the charge of a responsible person who shall be readily available during working hours. At large workplace, where hospital facilities are not available within easy distance of the works, First Aid Posts shall be established and be run by a trained compounder/Dr.. Where large workplaces are remotely situated and far away from regular hospitals, an indoor ward shall be provided with one bed for every 250 employees. Where large work place are situated in cities, towns or in their suburbs and no beds are considered necessary owing to proximity of city or town hospitals, suitable transport shall be provided to facilitate removal of urgent cases to these hospitals. At other workplaces, some conveyance facilities shall be kept readily available to take injured person or persons suddenly taken seriously ill, to the nearest hospital. At large workplace, there shall be provided and maintained an ambulance room containing the prescribed equipment and in the charge of such medical and nursing staff as may be prescribed. For this purpose, the relevant provisions of the Factory Rules of the State Government of the area, where the work is carried on, may be taken as the prescribed standard.

9.7. Accommodation for Labour:

The Contractor shall during the progress of the Work provide, erect and maintain necessary temporary living accommodation and ancillary for labour at his own expenses to the standards and scales as approved by the PMC/Sabha Engineer.

9.8. Drinking Water:

In every workplace, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of water fit for drinking. Where drinking water is obtained from an intermittent public water supply, each workplace shall be provided with storage where drinking water shall be stored. Every water supply storage shall be at a distance of not less than 15 meters from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well, which is within such proximity of latrine, drain or any other source of pollution, well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust-proof and water-proof. A reliable pump shall be fitted to each covered well. The trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

9.9. Washing and Bathing Places:

Adequate washing and bathing places shall be provided separately for men and women. Such places shall be kept in clean and drained condition.

9.10. Latrines and Urinals:

Except in workplaces provided with water/flushed latrines connected with a water borne sewage system, all latrines shall be provided with receptacles on dry-earth system which shall be cleaned at least four times daily and at least twice during working hours and kept in a strictly sanitary condition. Receptacles shall be tarred inside and outside at least once a year.

Regulation 6 - Payment of Wages

i) Wages due to every worker shall be paid to him direct. All wages should be paid in current coins or currency or in both.

ii) Wages of every worker employed on the Contract shall be paid where the wage period is one week, within THREE days from the end of the Wage period, and in any other case before the expiry of the 7th day or 10th day from the end of the wage period according as the number of workers does not exceed 1,000 or exceeds 1,000.

NOTE: The term "Working Day" means a day on which the work on which the labour is employed is in progress.

Regulation 7 - Register of Workmen:

A register of workmen shall be maintained in the Form appended to the regulations and kept at the work site or as near to it as possible, and relevant particulars of every workman shall be entered therein within THREE days of his employment.

Regulation 8 - Employment Card:

The Contractor shall issue an employment card in the Form appended to these regulations to each worker on the day of work or entry into his employment. If a worker already has any such card with him issued by the previous employer, the Contractor shall merely endorse that Employment Card with relevant entries. On termination of employment, the Employment Card shall again be endorsed by the Contractor and returned to the worker.

Regulations 9 - Register of Wages, etc.:

- i) A Register of Wages cum Muster Roll in the Form appended to these regulations shall be maintained and kept at the Work Site or as near to it as possible.
- ii) A wage slip in the form appended to these regulations shall be issued to every worker employed by the Contractor at least a day prior to disbursement of wages.

TECHNICAL SPECIFICATIONS

GENERAL:

14.1 These specification shall be read in connection with the latest ,IS specification In case this specification are found.

14.2 MATERIALS TO BE APPROVED /BEST QUALITY:

The whole of the materials. Employed in connection with the permanent work, shall be new and the best of its kind . All materials shall be in accordance with these specifications and shall be as approved by the Architect/PMC.

14.3 STANDARDS:

Except where otherwise specified and permitted by the Architect, all materials shall confirm to the latest edition of Indian standard specification .

TECHNICAL SPECIFICATIONS

- 1) Cement –A.C.C/Lafrage/Ultra tech/Birla gold
- 2) Sand Nabada or equivalent
- 3) Stone chips
- 4) P.V.C Door – Syntex & Equivalent
- 5) Reinforcement- Tiscon/SAIL or ISI mark TMT quality
- 6) FLUSH Door- Green or equivalent
- 7) Paints - Asian/Berger/Snowcem
- 8) Water proof material
- 9) Ceramic Tile –Asian/Kazaria/Jonson
- 11) P.V.C Water tank-Syntex or equivalent

CLASSIFICATION OF EXCAVATED MATERIALS

a) Soil : This shall comprise top soil, turf, sand, clay, mud, peat, black cotton soil, shale, moorum, copra admixture of these and similar material w hich yields to the ordinary application of pick spade and/or shovel, rake or other ordinary digging equipment. Removal of gravel or any other nodular material having dimensions in any one direction not exceeding 300mm occuring in such soil shall be deemed to be covered under this category. Macadam surfaces such as water bound macadam and bitumen/tar bound, soling of roads, paths etc. in all depths/thicknesses shall be classified as soils.

b) Ordinary Rock : Laterites, shales and conglomerates, varieties of lime stone and sand stone etc., cement/lime concrete, stone masonry and brick w ork in cement/lime mortar below ground level, reinforced cement concrete and boulders having maximum dimension in any direction of more than 300mm., loose or embedded in soil, may or may not be requiring blasting are classified as ordinary rocks.

c) **Hard Rock (Requiring Blasting)** : This shall comprise Granites, Basalt and similar rocks for the excavation of which the use of mechanical plant and or blasting is required.

d) **Excavation in Rocks, where blasting is prohibited** : Hard rock requiring blasting but where blasting is prohibited for any reason and excavation has to be carried out by chiselling, wedging or any other agreed method.

MORTARS

1 **Cement:** Cement to be used in the works shall be any of the following types with the prior approval of the Engineer-in-charge :

- a) Ordinary portland cement, 33 Grade conforming to IS : 269.
- b) Ordinary portland cement, 43 Grade conforming to IS : 8112.
- c) Ordinary portland cement, 53 Grade conforming to IS : 12269.
- d) Sulphate resistant portland cement conforming to IS : 12330.

2 **Sand:** Sand to be used in the work, shall conform to IS: 1542-1960 for plaster and IS: 2166-1965 for masonry work.

3 **Cement Mortar:** Cement and sand shall be mixed in specified proportions given in the agreement/drawings. All mortars shall be mixed with a minimum quantity of water to produce desired workability consistent with maximum density of mortar. The mix shall be clean and free from injurious type of soil/acid/alkali/organic matter or deleterious substances.

4 **Water :** Water used for mixing and curing shall be clean and free from injurious amount of oils, acids, alkalis, salts, sugar, organic or other substances. Potable water is generally considered satisfactory for preparing mortars.

5 The mixing shall preferably be done in a mechanical mixer operated manually or by power. Hand mixing can be resorted to as long as uniform density of the mix and its strength are assured subject to prior approval of the Engineer-in-Charge. Hand mixing operation, if permitted, shall be carried out on a clean water tight platform where cement and sand shall be first mixed dry in the required proportion by being turned over and over, backwards and forwards several times till the mixture is of uniform colour. Thereafter, minimum quantity of water shall be added to bring the mortar to the consistency of stiff paste. The mortar shall be mixed for at least two minutes after addition of water. Mortar shall be mixed only in such quantity as required for immediate use. The mix which has developed initial set, shall not be used. Initial set of mortar with O.P.C. shall normally be considered to have taken place in 30 minutes after mixing. If the mortar has stiffened during initial setting time because of evaporation of water, same can be re-tempered by adding water as frequently as needed to restore requisite consistency but this retempering shall not be permitted after 30 minutes. Mortar, unused for more than 30 minutes, shall be rejected and removed from site.

PLAIN CEMENT CONCRETE

1 **Cement:** Cement to be used in the works shall be any of the following types with the prior approval of the Engineer-in-charge :

- a) Ordinary portland cement, 33 Grade conforming to IS : 269.
- b) Ordinary portland cement, 43 Grade conforming to IS : 8112.
- c) Ordinary portland cement, 53 Grade conforming to IS : 12269.
- d) Sulphate resistant portland cement conforming to IS : 12330.

2 **Aggregates:** aggregate shall consist of clean, hard, strong, dense, non-porous and durable pieces of crushed stone. They shall not consist pieces of disintegrated stones, soft, flaky, elongated particles, salt, alkali, vegetable matter or other deleterious materials. All aggregate shall conform to IS: 383 and tests for conformity shall be carried out as per IS : 2386 parts I to VIII. The maximum value of flakiness Index for aggregate shall not exceed 35 percent. The aggregate shall satisfy the following requirements of grading:

Grading Requirements of Aggregate

IS Sieve Percent by weight passing the sieve 40mm 20mm 12.5mm 63mm 100 - 40mm 95-100 100 -20mm 30-70 95-100 100 12.5mm - - 90-100 10mm 10-35 25-55 40-85 4.75 0-5 0-10 0-10

3 Sand/Fine Aggregates :

Sand to be used for lime or cement concrete should be dry and free from all deleterious materials, and shall conform to IS: 383-2007 & fine aggregates shall not contain dust, lumps, soft or flaky materials, mica or other deleterious materials. Fine aggregates having positive alkali-silica reaction shall not be used. All fine aggregate shall conform to IS : 383. The fineness modulus of fine aggregate shall neither be less than 2.0 nor greater than 3.5

4 **Water :** Water used for mixing and curing shall be clean and free from injurious amounts of oils, acids, alkalis, salts, sugar, organic materials or other substances that may be deleterious to concrete. Potable water is generally considered satisfactory for mixing and curing of concrete.

5 **Concrete:** Concrete shall be mixed either in a concrete mixer or in a batching and mixing plant. Hand mixing is prohibited. Mixing shall be continued till materials are uniformly distributed and a uniform colour of the entire mass is obtained and each individual particle of the aggregate shows complete coating of mortar, containing its proportionate amount of cement. In no case, mixing shall be done for less than 2 minutes. Concrete shall be transported and placed as near as practicable to its final position. Concrete shall not be freely dropped into place from a height exceeding 1.50metres and it shall be compacted in its final position within 30 minutes of its discharge from the mixer. It shall be compacted thoroughly by vibration or other means during placing so as to produce a dense homogeneous void-free mass having the required surface finish. Bottom and side surfaces shall give a uniform

texture, smooth surface and good appearance. Non uniform texture and rough surface of concrete shall be treated as defective work and it has to be remedied with 1:3 cement plaster but in no case, more than 5% of area be permitted to be made good with plastering, Concrete having rough, non uniform texture and honey combing in more than 5% area shall be rejected and the payment for the formwork shall also be not made.

6 Formwork shall include all temporary or permanent forms required for forming the concrete of the shape, dimensions and surface finish as shown on the drawings together with all props, staging, centering, scaffolding and temporary construction required for their support.

7 All materials shall conform to the specifications issued by the Indian Standards Institution. Materials and components used for formwork shall be examined for damage or excessive deterioration before use/reuse and shall be used only if found suitable after necessary repairs. In case of timber form work, the inspection shall not only cover physical damages but also signs of attacks by decay, rot or insect attack or the development of splits.

8 Form shall be constructed with metal or timber. The metal used for forms shall be of such thickness that the forms remain true to shape. All bolts should be counter sunk.

9 The contractor shall furnish the design and drawing of complete formwork (i.e. the forms as well as their supports) for approval of the Engineer-in-Charge before any erection is taken up. Notwithstanding any approval or review of drawing and design by the Engineer-in-Charge, the contractor shall be entirely responsible for the adequacy and safety of form work.

10 The formwork shall be robust and strong and joints shall be leakproof. Staging must have cross bracings and diagonal bracings in both direction and the number of joints in the form work shall be kept to a minimum by using large size panels.

11 Rates in this chapter are for the finished work including the cost of all materials, labour, tools and plant required for design, construction and removal of formwork including properly supporting the members until the concrete is cured, set and hardened as required and also inclusive of lining with material approved by the Engineer-in-Charge so as to provide a smooth finish of uniform texture, appearance and to produce a finished concrete true to shape, line, levels and dimension as shown on the drawings. The material used shall leave no stain on the concrete and so fixed to its backing as not to impart any blemishes. The rate also includes coating of formwork with an approved release agent that will effectively prevent sticking and will not stain the concrete surface. Lubricating (machine oils) are prohibited for use as a coating.

12 The rate includes provision of gradient in formwork for terrace roof as per direction of Engineer-in-Charge and the gradient shall be provided necessarily so that water is drained out quickly and effectively.

13 Rates also include all leads and lifts of all materials etc. required for the work.

REINFORCED CEMENT CONCRETE

1 **Cement:** Cement to be used in the works shall be any of the following types with the prior approval of the Engineer-in-charge:

- a) Ordinary portland cement, 33 Grade conforming to IS : 269.
- b) Ordinary portland cement, 43 Grade conforming to IS : 8112.
- c) Ordinary portland cement, 53 Grade conforming to IS : 12269.
- d) Sulphate resistant portland cement, conforming to IS : 12330.

2 **Steel:** Steel to be used shall conform to IS: 1786. All steel shall be procured from original producers; no re-rolled steel shall be incorporated in the work. Only new steel shall be delivered to the site. Every bar shall be inspected before assembling on the work and defective, brittle or burnt bar shall be discarded. Cracked ends of bars shall be discarded.

3 **Aggregates:** aggregate shall consist of clean, hard, strong, dense, non-porous and durable pieces of crushed stone. They shall not consist pieces of disintegrated stones, soft, flaky, elongated particles, salt, alkali, vegetable matter or other deleterious materials. All aggregate shall conform to IS: 383 and tests for conformity shall be carried out as per IS: 2386 parts I to VIII. The maximum value of flakiness Index for aggregate shall not exceed 35 percent. The aggregate shall satisfy the following requirements of grading:

Grading Requirements of Aggregate

IS Sieve Percent by weight passing the sieve

40mm	20mm	12.5mm
63mm	100	- -
40mm	95-100	100
20mm	30-70	95-100
12.5mm	- -	90-100
10mm	10-35	25-55
4.75	0-5	0-10

4 **Sand/Fine Aggregates:** Fine aggregates shall not contain dust, lumps, soft or flaky materials, mica or other deleterious materials. Fine aggregates, having positive alkali-silica reaction, shall not be used. All fine aggregates shall conform to IS : 383. The fineness modulus of fine aggregate shall neither be less than 2.0 nor greater than 3.5.

5 **Water:** Water used for mixing and curing shall be clean and free from injurious amount of oils, acids, alkalis, salts, sugar, organic materials or other substances that may be deleterious to concrete. Potable water is generally considered satisfactory for mixing and curing of concrete.

6 **Concrete:** Concrete shall be mixed either in a concrete mixer or in a batching and mixing plant. Hand mixing is prohibited. Mixing shall be continued till materials are uniformly distributed and a uniform colour of the entire mass is obtained and each individual particle of

the aggregate shows complete coating of mortar, containing its proportionate amount of cement. In no case, mixing shall be done for less than 2 minutes. Concrete shall be transported and placed as near as practicable to its final position. Concrete shall not be freely dropped into place from a height exceeding 1.50metres and it shall be compacted in its final position within 30 minutes of its discharge from the mixer. It shall be compacted thoroughly by vibration or other means during placing so as to produce a dense homogeneous void-free mass having the required surface finish. Bottom and side surfaces shall give a uniform texture, smooth surface and good appearance. Non uniform texture and rough surface of concrete shall be treated as defective work and it has to be remedied with 1:3 cement plaster.

7 Item for Ready mixed concrete has also been included in this chapter in view of changing technology.

BRICK WORK

1 This work shall consist of construction of structures with bricks jointed together by cement mortar in accordance with the details shown on the drawings or as approved by the Engineer in charge

2 Burnt clay bricks shall conform to the requirements of IS:1077. They shall be free from cracks and flaws and nodules of free lime. The brick shall have smooth rectangular faces with sharp corners and emit a clear ringing sound when struck.

3 Cement mortar for the work shall be as per details given in Chapter III of this SOR.

4 All bricks shall be thoroughly soaked in a tank filled with water for a minimum period of one hour prior to being laid. Soaked bricks shall be removed from the tank sufficiently in advance so that they are skin dry at the time of actual laying. Such soaked bricks shall be stacked on a clean place where they are not contaminated with dirt, earth, etc.

5 The thickness of joints shall not exceed 10mm. All joints on exposed faces shall be tooled to give concave finish.

6 The brick work shall be built in uniform layers, and for this purpose wooden straight edge with graduations indicating thickness of each course including joint shall be used. Corners and other advanced work shall be raked back. Brick work shall be done true to plumb or in specified batter. All courses shall be laid truly horizontal and vertical joints shall be truly vertical. Vertical joints in alternate courses shall come directly one over the other. During construction, no part of work shall rise more than one metre above the general construction level, to avoid unequal settlement and improper jointing. Where this is not possible in the opinion of the Engineer in charge, the works shall be raked back according to the bond (and not toothed) at an angle not steeper than 45 degrees with prior approval of the Engineer in charge. Toothing may also be permitted where future extension is contemplated.

7 Where fresh masonry is to join with masonry that is partially/entirely set, the exposed jointing surface of the set masonry shall be cleaned, roughened and wetted, so as to effect the best possible bond with the new work. All loose bricks and mortar or other material shall be removed. In the case of vertical or inclined joints, it shall be further ensured that proper bond between the old and new masonry is obtained by interlocking the bricks. Any portion of the brick work that has been completed shall remain undisturbed until thoroughly set.

8 Green work shall be protected from rain by suitable covering and shall be kept constantly moist on all faces for a minimum period of seven days. Brick work carried out during the day shall be suitably marked indicating the date on which the work is done so as to keep a watch on the curing period. Watering may be done carefully so as not to disturb or wash out the green mortar. During hot weather, all finished or partly completed work shall be covered or wetted in such a manner as will prevent rapid drying of the brick work. During the period of curing of brick work, it shall be suitably protected from all damages. At the close of day's work or for other period of cessation, watering and curing shall have to be maintained. Should the mortar perish i.e. become dry, white or powdery through neglect of curing, work shall be pulled down and rebuilt as directed by the Engineer in charge. If any stains, appear during watering, the same shall be removed from the face. The scaffolding shall be sound, strong and safe to withstand all loads likely to come upon it. Putlog holes are not allowed.

9 Bricks having crushing strength of more than 40kg/cm². shall be used for load bearing walls.

10 Classification of Bricks and Masonry:-

In this schedule the following three classifications of bricks and masonry is given and shall have the minimum crushing strength when tested according to IS: 1077-1992

(a) Class 40 TM chimney brick/grog or ghol brick: - For this item either selected chimney burnt bricks or ghol bricks are used and superior workmanship than the following varieties is required. The crushing strength when thoroughly soaked in water shall not be less than 40kg/sq.cm.

(b) Class 25 TM chimney brick masonry: - The crushing strength when thoroughly soaked in water shall not be less than 25 kg/sq.cm.

(c) Class 25TM open bhatta or pajaw a burnt brick :- As is clear the only difference between (b) and (c) varies in the method of burning bricks. The crushing strength when thoroughly soaked in water shall not be less than 25 kg /sq. cm.

11 Periodical sampling and testing of bricks shall be carried out at contractors cost to classify the brick. The record of test results shall be kept with the Executive Engineer, or Authorised officer.

12 When reinforcement is used in 10cm thick brick masonry, minimum lap of reinforcement should be 15cm. In case of wall joints of the main wall, reinforcement should go 15cm to the main wall.

STEEL WORK

- 1 Structural steel shall be of tested, standard quality conforming to IS: 226-69 & commercial quality shall conform to IS: 1977-69.
- 2 Steel work in single section are for works, like hold fasts & iron work for wooden trusses, M.S. Square/round guard bars fixed in wooden or steel windows & ventilators frames etc.
- 3 Steel work riveted or bolted shall conform to IS: 1148-1968 and IS : 800-1962.
- 4 Welding of steel shall be electric arc welding as per IS : 816-1956 and shall be on the lines given in IS : 800-1962.
- 5 Rolling shutters should conform to IS : 6248-1971.
- 6 Rolled steel sections for fabrication of steel glazed doors, windows & ventilators shall conform to IS : 7452-1974.
- 7 Glass panes should conform to IS : 1761-1960.
- 8 Screws shall conform to IS : 4218 (Part I to V I) 1967.
- 9 Steel doors, windows & ventilators shall conform to IS : 1038-1975 and IS : 7452-1974.
- 10 The rates of steel doors, windows & ventilators include cost of all materials, labour, T&P, hire & running charges of machineries & wastages etc. and also include cost of welding, all fixtures, erecting and fixing the sections in position.
- 11 Rates of steel angle iron fencing include all forging, reducing to required size, shape & figure, drilling, tapping, punching, counter sinking for screws, nailing etc. and every description of workmanship that may be necessary to fabricate, finish, erect and fix in positions in perfect manner.
- 12 Cold rolled framed profiles of pressed steel made from commercial M.S. Sheets conforming IS-513 of 1973 and as per general specifications of IS : 4351 are to be filled with M-15 grade of concrete and rates of items with these sections are inclusive of the cost of concrete.

FLOORING

- 1 Marble chips / terrazo floors, skirting and dados shall conform to IS : 2114-1962.
- 2 Marble powder used in mosaic/terrazo topping shall pass through IS : sieve No.30.
- 3 Pigments used in terrazo/marble chips shall be of permanent colour.

4 For the situ marble chips/terrazo flooring the first grinding shall be done with carborandom stones of 60 grit size, the second grinding with 80 grit size and the third grinding with 120 to 150 grit size and the fourth grinding with 320 to 400 grit size.

5 For the slab or tiles flooring, the joints in the tiles or slab shall be of 1.50mm thickness. The joints shall be filled with the cement grout of the same shade as the colour of slab or tile. The terrazo tiles shall conform to IS : 1237-1959.

6 The slab or tiled flooring shall be grinded with carborandom stone. The first grinding shall be with carborandom stones of 48 to 60 grit size and the second grinding with 120 grit and final grinding with 220 to 350 grit. In case of plain/coloured terrazo tiles, initial grinding with carborandom stones of 48 to 60 grit is not necessary.

7 Chequerred terrazo tiles shall conform to IS : 1237-1959 and overall thickness of chequerred tiles should not be less than 22mm. The grooves in the chequerres shall be uniform and straight. The depth of the groove shall not be less than 3.0mm.

8 The glazed tiles white/coloured, shall be of approved make and shall conform to IS : 777-1970. The top surface of the tiles shall be glazed. The glazed shall be either glossy or matt as specified. They shall be flat & true to shape and free from crack, crazing spots, chipped edges and corners. The glazing shall be of uniform shade.

9 **MARBLE STONE:** Marble shall be hard, sound, dense and homogeneous in texture with crystalline texture. It shall be uniform in colour and free from stains, cracks, decays and weathering.

- i) Makarana second quality - White marble having lighter shades/spots.
- ii) Raj nagar plain - White marble with blue or grey shades.
- iii) Agaria White katani - White marble with irregular blue and black spots.

PHYSICAL PROPERTIES OF MARBLE BLOCKS, SLABS AND TILES

Sr.No. Characteristics Requirements Method of Test 1Moisture absorption after 24 hours immersion in cold water.

Max. 0.40% by weight IS : 1124-1974

2 Hardness Min. - 3 Mhos scale

3 Specific gravity Min. - 2.50 IS : 1122-1974.

10 **Kota Stone :** Kota stone slabs/tiles shall be of selected quality, hard, sound, dense and homogeneous in texture, free from cracks, decay, weathering and flaws. They shall be hand or machine cut in requisite thickness.

11 **Red/White/Coloured Sand stone :** The slabs of white, red and stones of other colours found at Shivpuri, Mandana, Jaisalmer, Dholpur, Basoda, Raisen and at other places to be used in flooring work shall be hard, durable and tough, free from cracks, decays and weathering. In case of red sand stones and other coloured sand stones, white patches or streaks and in case of white sand stones, coloured patches or streaks shall not be allowed. However, scattered spots upto 10mm diameter shall be permitted.

12 The rates include cost of all materials, labour, T&P, wastages, water for curing, hire & running charges of machinaries and all leads & lifts of all materials etc. complete. 14 In case of composite flooring with two or more types of stones and where single type of stone used is 90% or more in area, the entire area is to be paid at the rate of flooring with that type of stone and in case, where the area of single type of stone is less than 90%, the flooring done shall be measured separately and paid at the rate of flooring for each type of stone separately.

13. Ceramic/vitrified shall be of first quality, homogenous in colour/ texture free from cracks, decay and flaw and shall conform to IS 15622

ROOFING AND CEILING

1 In case of corrugated A.C. or G.S. sheet, the sheet shall be laid on the roof with a lap of not less than 15 cm. at the end of two corrugation at the sides. The holes for the screws or bolt shall be drilled (not punched) from inside towards outside about 23 cm. apart or as directed by the Engineer-in-charge. On the sides and at every 2nd corrugation on the ends, care being taken that all holes shall occur on the ridge of the sheet on the outside as laid in a uniform pattern.

2 The rates for A.C. or G.S. sheet roofing are inclusive of necessary overlaps and wastages in cutting and all standard screws, nuts, washers, bolts, patent 'J' & 'L' hooks, bolts and other fasteners required as per specifications unless otherwise specified. 3 In tiled roofing, the three lowest courses of tiles of each layer, ridge and hip tiles shall be set in cement mortar 1:6 (with pigment to match the colour of tiles and are inclusive of these items).

4 In Mangalore tiles, the three end rows at eaves, gable or other exposed parts should be tied with G.I. wire 18 gauge.

5 The wooden planks, fixed in the ceiling shall be of 20mm thickness and shall be planned, moulded, beaded and fixed to the pattern as directed by the Engineer-in-charge. The wooden beading should be of size 65x12mm section, fixed to the frame work with necessary screws and spacing not exceeding 30cm. or as directed by the Engineer-in- Charge. The overlaps of beading shall be mitred at the junction.

6 The G.S. sheet to be used in work shall conform to IS : 277-1969.

7 The A.C. sheet shall conform to IS : 459-1970.

8 The blown bitumen to be used for water proofing treatment shall conform to IS : 702.

9 The self finished felt type-2, grade-2 fibre base, self finished, bitumen felt shall conform to IS: 1322-1970.

10 Hessain base felt type-3 shall conform to IS : 1322-1970.

11 The rates include the cost of all materials, labour, T&P, wastages and hire & running charges of machinaries etc. for all the items of this chapter.

FINISHING WORK

1 Plastering shall be done as here shown on the drawing. Plastering shall be started from top and worked down. All putlog holes shall be properly filled in advance of the plastering while the scaffolding is being taken down. Wooden screeds 75mm wide and of the thickness of the plaster shall be fixed vertically 2.5 to 4 metres apart, to act as gauges and guides in applying the plaster. The mortar shall be laid on the wall between the screeds using the plasterer's float and pressing the mortar so that the raked joints are properly filled. The plaster shall then be finished off with a wooden straight edge reaching across the screeds. The straight edge shall be worked on the screeds with a small upward and sideways motion 50mm to 75mm at a time. Finally, the surface shall be finished off with a plasterer's wooden float. Metal floats shall not be used.

2 Pointing shall be carried out using mortar not leaner than 1:3 by volume of cement and sand or as shown on the drawing. The mortar shall be filled and pressed into the raked joints before giving the required finish.

3 Curing shall be commenced as soon as the mortar used for finishing has hardened sufficiently not to be damaged during curing. It shall be kept wet for a period of at least 7 days. During this period, it shall be suitably protected from all damages.

4 For a white wash, class C lime i.e. fat lime shall be used.

5 For colour wash the colouring material shall be of approved make and as approved by Engineer-in-Charge.

6 Dry distemper shall conform to I.S. 427-1965.

7 Oil bound distemper shall conform to I.S. 428-1969.

8 Cement paint shall conform to I.S. 5410-1969.

9 Primer on wooden surfaces is to be followed by putty of two parts of white chalk powder, one part of enamel paint and added by turpentine oil proportionately to prepare a smooth surface by sand papping.

10 Primer on metal steel surfaces shall be done with red oxide zinc chromite.

11 Synthetic enamel paint shall conform to I.S. 2932-1974, IS 2933-1975 and IS 133-1975.

12 Ready mixed paints shall conform to I.S. 3631-1966.

13 Clear synthetic varnish shall conform to IS 525-1968.

14 Copal varnish shall conform to I.S. 337-1975.

15 Waxing - A mixture of bee's wax and turpentine oil in proportion of 2 Bee's wax : 1½ double boiled linseed oil : 1 turpentine : ½ varnish shall be used. The wax is melted and added to turpentine.

16 The other paints etc. should conform to the following specifications:

- a) Aluminium paint - IS 2339-1963
- b) Black japan - IS 341-1968
- c) Anti corrosive Bituminous - IS158-1969
- d) Plastic emulsion paint - IS 5411-1974
- e) French polish - IS 348-1986
- f) Red oxide - IS 2074-1963
- g) Turpentine - IS 533-1973
- h) Double boiled linseed oil - IS 77-1977

17 Painting of frames and shutters of doors, windows, ventilators, steel work, and corrugated sheets etc. will be measured by multiplying the length or width by the height of one face only and the area thus obtained being further multiplied by factors as per I.S. 1200 of mode of measurements for building works with further amendments if any.

18 In case of sponge/sand faced (Non plain or equivalent) plastered surface of wall, the area measured, is to be multiplied by the factor 1.50 for payments of white wash, colour wash and distempering for one or more coats of required finish.

19 The rates in this chapter are for all locations like walls, ceiling, sloping roofs and in all floor sand heights and depths, and for all shades with cost of all materials, labour, scaffoldings, T &P, hire & running charges of machineries, ladders, cans, brushes and other appliances etc. required for the efficient execution of work.

DISMANTLING AND DEMOLISHING

1 The term "Dismantling" & "Demolishing" implies carefully taking up or down and removing by hand or with proper tools without any damage to articles and carefully lowering the materials to the ground but not thrown.

2 During dismantling every precaution shall be taken to prevent damage to any part of the structure and also to adjoining structures which are to be left intact. Any such damage claim, caused due to carelessness of the contractor, will be made good by the contractor at his own expenses.

3 All dismantled serviceable/unserviceable materials will form Government property. The serviceable material, received after dismantling, shall be stacked carefully within 50mts. lead as directed by Engineer-in-Charge.

4 Measurements of all works, except hidden works, shall be taken before dismantling and no allowance for increase in bulk shall be allowed.

5 The rates are applicable to all types of structures and for all floors and all heights and depth. The rates also include cost of T & P, scaffoldings and labour, hire and running charges of machineries if, required for the work.

SANITARY INSTALLATION

1 Water closets and urinals shall conform to I.S. 771-1963.

2 Wash hand Basin shall conform to I.S. 771-1963.

3 Sinks shall conform to I.S. 771-1963.

4 The R.S. or C.I. cantilever brackets for wash hand basin & sink shall conform to IS 775-1962.

5 Socket and spigot spun Iron pipes shall conform to I.S. 1534-1947

6 The flushing of W.C. pan shall be done by "pull and let go" Flushing cistern of valve-less syphonic type conforming to I.S. 774 -1960.

7 C.I. pipes shall conform to I.S. 3114-1965. The overflow pipes shall be of G.I. 15mm. diameter w ith fittings.

8 The outlet flush pipe shall be of 32 diameter. They shall be one piece lead pipe or telescopic galvanised inside and outside.

9 Glazed stone w are pipe shall be of grade "A".

10 All joints shall be made w ith special care, particularly those between pipes of different material. All joints shall be perfectly air and w ater tight. No joint shall be embedded in w all if, avoidable.

11 The rates include, unless other wise specified, cost of all material, labour, T&P, hire and running charges of machineries etc. with all leads and lifts required for the w ork. The rates also include labour for installation, making holes in walls, excavation, cutting of floors & making good the same to its original condition.

WATER SUPPLY

1 Galvanized mild steel tubes/pipes w ith threaded and screw ends, medium grade shall conform to I.S. 1239-1968 Part I, screwed both ends conforming to I.S. 554- 1955, pipe threads shall be used.

2 The pipes shall withstand either a hydraulic test of 14Kg/Sq.cm. or an air test of 7kg/sq.cm. with the fittings immersed in water.

3 All brass fittings including valves, stop cocks, ferrules, bib cocks shall conform to relevant I.S. specifications.

4 Ball valves shall comply the requirements of B.S. 1212-1953.

5 HDPE water storage tanks should be of approved make and conforming to IS:1270 as approved by the Engineer-in-Charge.

6 All socket and spigot spun Iron pipes shall conform to I.S. 1534-1947.

7 Lead for pipe joints shall be bluish-grey in colour, soft and malleable, readily melted and free from admixture of foreign matter and shall comply to I.S. 27 of 1950.

8 Water supply lines shall be avoided at the openings and they shall also not run with the lines carrying waste materials. Water supply line shall also not cross each other as far as possible.

9 The rates include cost of all materials, labour, T & P, hire & running charges of machineries etc. complete with all leads & lifts for all materials required for the work.

Materials

The pipes & Fittings of PPR-C (Poly Propylene Random Copolymer) PTMT Fill (Polytetra Methylene Terephthalate)

Jointing Procedure

1 Cut pipe straight (very important). This will allow pipe to bottom into the socket. .

2 Remove burr (shaving), use clean dry cloth or knife. Do not use abrasive material.

3 Clean pipe and fittings & ensure no dirt, grease or any other foreign matter

4 Check dry fit. Pipe should easily go into the socket 1/3 to 2/3 of the way before resistance is felt. This is commonly referred to as interference fit. If pipe goes to the bottom of fitting without any resistance (interference) ensure fittings is correct size. If it is correct size get another fitting.

5 Apply a thin coat of cement into the fittings socket and a full even coat on the pipe the depth of socket bottom. Do not puddle cement in socket.

6 Insert pipe into the socket quickly while cement is still fluid (wet), if cement dried, recoat pipe and fitting. Twist pipe turn, this will allow cement to cover any spot. Make sure pipe goes all the way to the bottom of the fitting.

7 Hold pipe and fitting together (30 second) to make sure pipe does not push out.

8 Wipe off excess cement with clean dry cloth.

9 Allow cement to cure before applying water (fluid) pressure. Cure time is depend upon temperature, humidity etc however under normal conditions, allow 24 hours cure time.

Installation of PPR-C Pipes

1 Sharp edged support should be avoided.

2 PPR-C. standard pipe clips may also be used care shall be taken not to over tighten and cause the clips to bite into the pipe. Pipe clips should be correctly aligned ; should provide a smooth surface of contact with pipe. Underground installation

1 The trench bottom should be free from hard and sharp objects.

2 In uniform and relatively soft fine grained soils, the pipes may be directly laid on evenly finished trench bottom. In other case the pipes should be laid on prepared under bedding. Ideal under bedding should consist of free running granular material passing 1/2" sieve offering free drainage. The thickness of prepared bedding should be one quarter of the pipe diameter

subject to a minimum 50mm (2"). The back fill at the side and immediately above the pipe should be similar to that specified above for under bedding, it should extend to a minimum height above the pipe equivalent to that of under bedding. It should be compact around the pipe.

Laying and Jointing

Satisfactory jointing plays an important part in successful installation of the pipe. The joints should generally be at least equal in service performance to the pipe. The important types of joints employed in PPR-C pipe installation have been mentioned above.

Repairs to Pipe

In General the best method is to cut the damaged portion and replace it by a new pipe or prefabricated replacement unit or special pipe fittings.

Testing

1 The pipes after being laid and jointed shall be tested for water tightness before being covered. The testing may be done in such sections as found necessary under the circumstances of availability of water for testing purposes.

2 Testing may be done by closing each end of the section of the pipe line being tested, by means of a valve, blank flanges cap or plug and filling the pipe with water. The pressure shall then be raised by means of a small hand force pump till it registers 15% or any other fixed percentage above the highest working pressure in the section as per Indian Standard Specification. The test pressure should be registered by means of a reliable gauge.

3 When the pipe is laid at an appreciable gradient, the test should be carried out at the lower end of the section.

4 The test pressure shall be maintained for 1/2 hour or any other specified period and each joint shall be inspected, while the pressure is on, the pipes shall be struck with a 2 kg. hammer.

5 All joints found sweating or leaking shall be set right and the above test applied until no further leaks are apparent. No pipe installation shall be accepted unless the leakage (evaluated on a pressure basis of 10 kg/cm²) is less than 240 liters per 24 hours per km. 25mm diameter pipe of 3.66 meter length and proportionate for other lengths of pipes. Leakage is generally due to newly made joints.

6 If any pipe bursts during testing the same shall be replaced and the pipe line retested.

7 The testing may be repeated till it is fully ascertained that there is no leakage in the pipe line and the work has been done strictly as per specifications.

ELECTRICAL WORK SPECIFICATION

INTERPRETATION OF WORK AND I.S.I STANDARD

In interpreting specifications or where item descriptions are conflicting or incomplete or otherwise subject to dispute the following order of decreasing importance shall prevail.

- (a) Items as detailed in "Good For Construction" drawings.
- (b) Description of items in the Schedule of Quantities.
- (c) Special Specification and Annexure (IF any) attached to the tender,
- (d) Indian standard specifications.
- (e) C.P.W.D. specifications for electrical works amended up to date,
- (f) Anything not covered by the above shall be as per I.E. Rules and regulations

SCOPE OF WORK

The general character and scope of work to be carried out under this contract is illustrated in the schedule of quantities and drawings. Contractor shall carry out and completed the said work under this contract in every respect and to the satisfaction of the Engineer-in-Charge. In general the work to be carried out shall comprise.

- a) Complete installation of all internal electrification for light points, light plugs, power plugs, all types of utility outlets, call-bell points, ceiling/exhaust fans etc.
- b) Supply and installation of circuit wiring, sub mains & mains cables.
- c) Supply and installation of all DBs, Sub-DBs and Main Boards and panels.
- d) Supply and installation of complete conduiting and wiring for low voltage systems.
- e) Supply and installation of complete earthing and lightning protection systems.
- f) Supply and installation of all fans and all types of lighting fixtures including installation of those fittings supplied by the client.
- g) Supply and installation of D.G. sets and all accessories.
- h) Modification of existing Main L.T. panel in existing building to accommodate new outgoing feeder for new building.

RELEVANT I.S. STANDARD

- | | | |
|---|------|-----------|
| 1. PVC insulated (heavy duty) electric cable for working Voltage up to and including 1100 V (revised) | I.S. | 1554-1988 |
| 2. PVC insulated cables (for voltages up to 1100v) | I.S. | 694-1989 |
| 3. Code of practice for electrical wiring and installation | I.S. | 732-1989 |
| 4. Rigid steel conduits for electrical wiring (second revision) | I.S. | 9537-198 |
| 5) Accessories for rigid steel conduits for electrical wiring | I.S. | 3837-1976 |
| 6) Boxes for the enclosure of electrical accessories | I.S. | 5133-1969 |
| 7) Switch Socket Outlets | I.S. | 4615-1968 |
| 8) Adhesive insulating tapes for electrical purposes | I.S. | 2448-1968 |
| 9) General safety requirement for electrical lighting fitting | I.S. | 1913-1969 |
| 10. Ceiling fans and regulators (3" revision) | I.S. | 347-1979 |
| 11. Propeller type AC ventilating fan | I.S. | 2312-1967 |
| 12. Code of practice for earthing | I.S. | 3043-1966 |
| 13. Code of practice for safety of building (General electrical installation) | I.S. | 1646-1961 |

14. Degree of protection provided for enclosure for L V Switchgear and other control gear	I.S.	1646-1964
15. Factory built assemblies of switchgear and control gear For voltages up to and including 1000 V.A.C.	I.S.	8623-1977
16. Code of practice for earthing	I.S.	3043-1987
17. Protection of building and allied structures against	I.S.	2309-1989
18. Guide for safety procedures and practices in electrical work	I.S.	5216-1982

GENERAL CONDITIONS

The specification generally applicable to this work shall be as per C.P.W.D. specifications for electrical works in India expert as otherwise specified in the description of items given in the schedule of Quantities or in the General and Technical specification. These specification will override the C.P.W.D. specification the requirement of these specification will be fulfilled by the contractor within the tendered rates and without any extra charge. The item rates quoted will be deemed to have taken these specification into account.

1. The electrical work will be carried out in accordance with the General Specification 1972 with amendments up to date for electrical works in Central Government buildings while complying in all respects with the requirement of the latest India Electricity Rules in force at the time of execution.
2. The electrical work shall be carried out simultaneously with the building work and will be continued till it is completed satisfactorily along with the completion of essential portions of building work.
3. If any minor alterations are found necessary, the contractor shall do the same within tendered rates.
4. The work shall be carried out in the best workmanlike manner and any defect in the work or changes in the design etc. as and when pointed out, shall be carried out by the contractor within the tendered rates.
5. The contractor shall employ adequate labour to complete the work within the stipulated time and make his own arrangement for housing labour and storage of materials etc. A full time electrical supervisor/ Engineer shall be employed by the contractor who will remain at site of work to receive order or any other instructions from the Engineer-in-charge.
6. Any materials supplied by the Employers, if damaged in any way during cartage or execution of work or otherwise, shall be made good by the contractor at his own cost.
7. During the progress or work, completed portions of the buildings may be occupied and put to use by the owner but contractor will remain fully responsible for maintenance of the electrical installations till be entire work covered by this contract is satisfactorily completed by him and taken over by the Engineer-in-charge.
8. The contractor shall obtain for himself, on his office responsibility and at his own expense, all the information which may be necessary for the purpose of tendering and for entering into a contract, and must inspect the site, examine and study the specifications, drawings and the design of the electrical installations, the building plans etc. The drawings supplied to the contractor for tender purpose must be returned in good condition with the tender. The contractor shall also make local and independent inquiries of required.

9. All tender rates will include the cost of materials, erection, commission, labour supervision, tools, plant, transport, all taxes, contingencies, breakage, wastage, sundries, loading, unloading, scaffolding, rigging and maintenance of installation for one year, item rates should be complete in all respects.
10. The contractor, while executing the work, shall conform to the provision of Government Acts relating to the regulations and Bye laws of the local authorities, and of the colony to whose system of supply the installation is proposed to be connected. The contractor shall give all notices, required by the Acts, Regulations or Bye-laws He will also undertake to provide test certificates and drawings as required and will make necessary arrangement to procure the electricity supply temporary or permanent. The contractor shall also obtain all approvals for the items of work done under this contract from the appropriate authorities. All inspection fees or submission fees paid by the contractor will be reimbursed by the owner against valid official receipts. Contractor shall possess a valid electrical contractor's license issued by the Inspectorate of the local government.

11. PROGRESS AND TIME OF COMPLETION:-

- (a) The work will commence immediately after the contractor receives instructions to proceed.
- (b) The contractor will work in co-operation with the building contractor and other contractors and shall arrange to place his conduits in the masonry and concrete work as the building or other work proceeds. Any hold up of the building or other work because of delay in laying of conduits or otherwise, shall be the responsibility of the electrical contractor and will make him liable for damages if any, by the employers.
- (c) The contractor shall draw up a time schedule on commencement of the work this time schedule shall be strictly adhered to.

12. COMPLETION TESTS:

On completion of installations the following tests shall be carried out-

- (a) Insulation Resistance Test.
- (b) Polarity Test of Switch
- (c) Earth Continuity test

13. MAINTENANCE

The completed installation inclusive of wiring, light fittings and fans (where supplied by the contractor) shall not be finally taken over and acceptance certificate issued to the contractor until the expiry of the defects liability period. During this period the contractor shall be liable for.

- (a) The replacement of any defects that may develop in goods of his own manufacture supplied by him.
- (b) The rectification of all the defects arising out of defective workmanship of the contractor Bringing to the notice of the Engineer-in-charge any defects arising out of materials supplied by the owner. The owner shall provide replacement of such materials until the installation is finally taken over, the contractor shall have the right of entry to the premises, of entry to the premises, at his own risk and expense, for maintaining the installation in proper order to facilitate maintenance the contractor should clearly indicate the detailed distribution diagram on every switch gear, distribution board, sub-distribution board and

14. POSITION OF LIGHTING, DISTRIBUTION BOARDS AND SWICHGEARS

- (a) The recommended positions of the lighting points, control switches, distribution boards and switch gears as shown on the layout drawings are indicative only and will be generally adhered to.
- (b) Should there be any discrepancy or incomplete description, ambiguity or omission in the drawings and other documents, whether original or supplementary, forming the contract, completion or maintenance of the installation, the contractor shall immediately, on discovering the same, bring it to the attention of the Engineer-in-charge.
- (c) Before installing lighting, fan and plug points, distribution boards, switches etc, final positions shall be ascertained by the contractor with the Engineer-in-charge.
- (d) The dimensions and other details of the electrical drawings shall be completed with the civil drawings at site before execution of the work.

15. PAINTING AND MARKING

All exposed steel work not actually embedded in the building construction (vizconduits, junction boxes, switch boards, D.Bs, M.Bs etc.) will be painted with one coat of primer and two coats of synthetic enamel paint in shades decided by the Engineer-in-charge the paint will match the existing shades of walls wherever instructed. This work will be done by the contractor without extra charges. All switchgears, MDSs, SDSs, and final DSs etc. shall be properly painted, labeled and numbered as required by the Engineer-in-charge.

16. COORDINATION WITH OTHER AGENCIES

The contractor shall co-ordinate with other agencies and ensure that following provisions are made: 1) cut outs for risers, trenches etc, II) Proper space for DBs and all switch boards III) recesses required for fitting in the slab/false ceiling

17. SAFETY AND PRECAUTIONS

Contractor shall ensure at all times that during the execution of his work or during movements or supply vehicles no damage or injury is caused to the work, property or personnel of other contracted agencies. In case of any such loss or damage, the contractor shall take full responsibility and liability for cost and expenses incurred Contractor must also make all reasonable provisions to safeguard his own workers.

TECHNICAL SPECIFICATION

A) CONDUCT, WIRING, SWITCHES AND ACCESSESSORIES:

1. PVC CONDUITS (If specified to Schedule)

This shall be hot extruded pipes made from virgin PVC. The pipes shall be UN Plasticized, rigid, free from filler material and stabilized against decay by ultra violet radiation. The pipe must afford the facility of cold bending at site. The conduit shall have a proper circular section and consistent wall thickness all parameters shall conform to the relevant IS code. The bends shall be made by the same manufacturer, due care having been taken to ensure even wall thickness throughout the bends shall be property and

concentrically belled for at least the same length as the pipe diameter and shall afford a close tight fit of the pipe into it. The conduit system shall be so laid out so that it will obviate the use of tees, elbows and sharp bends. M.S. Conducts (if specified in the Schedule) These shall be mild steel with 16 Gauge wall thickness for all sizes, welded, electric thread type class 'B' having perfectly circular tubing and light fitting joints. The conduit shall be protected from rust by one coat of black enameled paint applied inside and outside in its manufactured form. No steel conduit less than 19mm in diameter shall be used. Bends shall be of 16-gauge wall thickness and as far as possible the conduit system shall be so laid out that it will avoid the use of tees, elbows and sharp bends.

2. CEILING OUTLET BOXES

Outlet boxes shall be of sufficient depth and made of 16-gauge mild steel and protected from rust by one coat of black enameled paint applied inside and outside and so installed as to maintained continuity throughout these shall be protected at the time of laying so that no mortar finds its way inside during concrete filling or plastering. For each fluorescent fitting two outlet shall be provide 12" off-centre for a four feet fitting and 6" off-centre for a two feet fitting.

3. DRAW BOXES:

MS. Draw boxes/junction boxes of ample dimension shall be provided at convenient points on walls /ceiling to facilitate pulling of ling runs of cables wires. They will be completely concealed and covered with hylam covers and when finished shall be flush with plaster work. These boxes will be as few as possible all the M.S. boxes used for housing switches, plugs, drawing of wires etc. shall have metal on all sides except in front.

4. SWITCH BOXES:

M.S. boxes of 2 mm thickness of required sizes shall be provided to house the speed regulators, switches and sockets .they shall be of smooth internal or external finish all boxes shall have adequate no of holes of suitable diameter.

5. ERECTION

(a) Conduits shall be laid in perfect fashion as instructed duly fastened in the ceiling in a neat, proper manner in accordance with accordance with approved drawings. If required to lay along the skirting of the wall or in the floor filling, the same must be carried out neatly and with proper workmanship through a race way so as to conceal the entire run of wires and to provide a small covered chamber opening at the point of tapping as described in the drawing. Wherever necessary, chases will be cut on the floor by the contractor to sufficient depth to allow full thickness of raceways to submerge within or plaster over conduits Width of the chase will be made to accommodate the required number of conduits or the dimension of the raceways specified. The chases will be filled with cement and mortar (1:3) and properly cured by watering. If a chase is cut in an already finished surface the contractor shall fill the chase and complete it to match exiting finish within the tendered rates. When the conduct is to be embedded in a concrete member it shall be adequately tied to the reinforcement to prevent displacement during casting. Conduits in chases or laid above the slab shall be held by hooks spaced at a maximum of 1500mm center to center.

When the conduit is laid above the slab the same shall be covered with cement concrete mixture 1:3:6 using ¼" thick stone aggregate and coarse sand.

Suitable expansion joint fittings shall be provided at all the points where the conduit crosses any expansion joint in the building.

(b) The conduit shall have ample sectional area to facilitate the drawing of cable. The contractor should refer to the table given below for the laying of wires. Nominal Cross Sectional Conduit Size PVC/M.S. In mm Area of conductor

Sq.mm	Inches	19/20	25/25	32/32	38/4	50/50
1.5	3/0.029	4	8	12	-	-
2.5	3/0.36	3	6	10	-	-
4.0	7/0.029	2	5	8	-	-
6.0	7/0.036	-	4	7	-	-
10.0	7/0.044	-	3	5	6	-
16.0	7/0.064	-	2	3	5	7
25.0	19/0.044	-	-	2	3	6
35.0	10/0.064	-	-	-	2	5

Note:- The above shows the maximum capacities of conduits for a simultaneous drawing in of cables. The table applies to 1100 volts grade PVC insulated stranded copper conductor cables.

(c) All boxes shall have ample space at the back and on the sides for accommodating wires and check nut entries. Boxes shall be completely concealed having edges flush with wall surface Cover plate shall be fixed to these by means of brass machine screw No timber shall be used for any support. The boxes shall be painted before and after erection.

(d) The entire conduit system including outlet and boxes shall be thoroughly cleaned after completion of erection and before drawing cables.

6. SWICHE, SOCKETS AND REGULATORS:

All switches. Sockets and regulators shall be flushed with wall at the heights mentioned unless directed otherwise the mounting shall be done 11 the prescribed grid plates using the correct accessories and tools specified by the manufacture

7. CABLES:

All cables shall be 1100V and shall have been manufactured in accordance with the latest I.S. specification of the makes specified.

8. POINT WIRING:

The point shall be 1100V and shall be carried out in the under mentioned manner each of which conform to the give specification.

(a) In concealed/surface system including system including providing and fixing of conduits bends, junction boxes, check nuts. PNC bushes etc.

(b) Lop system will system will be adopted (only in the outlet boxes for neutral wire and in the switch box for wire) throughout including supplying and drawing of required sizes of wire without damaging the same

(c) Each circuit will have independent neutral wire and will be completed up to outlet box and switch box. The point will be completed with conduit including accessories and wires, necessary junction boxes, outlet boxes and switch boxes, connectors or ceiling roses, switches, switch plates and flush plates including necessary earthing and connection etc. the installation generally will be carried out on conformity with the Indian Electricity Act and IS specification.

(d) Wiring for light, fan, convenience plug point (SA) etc. will be as above. The size of wire shall not be less than 1.0 sq.mm or as specified against each item.

(e) The light plug points shall be complete with 3 pin 5 A plug socket and switch enclosed in an M.S. box with the controlling switch as required and the third pin shall be earthed as specified with copper earth wire.

(f) The fan point shall have a provision in the switch box for mounting regulators, unless directed otherwise.

(g) Wiring for power plugs shall be as above. Each circuit shall have one or maximum of two plug points as required and each point shall be earthed with at least 14 SWG copper earth/wire the point shall be considered complete with circuit, 3 pin 15 A plug socket and switch mounted in an MS box with flush plates. Wiring for power plug shall be as described in Schedule of Quantities.

(h) Separate and independent conduits will be used for each of the following systems

(i) Lighting system

(ii) Power system

(iii) Emergency system-separate for lighting and power

(iv) Television System

(v) Telephone system

(vi) Computer system

(i) Current carrying wires shall be carried so that outgoing and return current wires are carried in the same conduit. Only wires connected to the same phase should be carried in the same conduit.

(ii) Point wiring shall be complete with copper conductor earth wire run within the conduit and shall not be less than 2.24mm dia and shall be as mentioned in the individual Items

The rate per point shall include all materials and labour required for completing the points as mentioned above. Measurement will be in numbers of each kind of point.

(B) MAINS AND SUBMAINS:

Mains and sub-mains shall consist of wires, cables and conduits, bends, junction boxes rubbers, check-nuts etc. as specified above. The sizes and capacities of conduits and wires shall be as stated in the schedule of quantities and will commence from the main switches to the various distribution boards wires shall be drawn in concealed or surface conduits as required without being damaged. For this purpose draw boxes shall be located at convenient but not in conspicuous places. Every main and submain will item in an independent conduit of specified diameter. Necessary provision of wire lengths altering and emerging from the conduit must be made for connections. Color code for phase and neutral are to be followed i.e. only RED, YELLOW, BLUE and BLACK color wires are to be used. Measurements will be taken of the actual conduit run containing the wires from one switchgear to another. Per meter rate shall include all materials, connections, labour etc. as specified above.

(C) CABLE WORK

1. STORAGE AND HANDLING

Cable drums shall be stored on a well-drained, hard surface; preferably concrete the drums do not sink into the ground causing rot and damage to the cable drum.

During storage, periodical rolling of drums once in 3 months through 90 degrees shall be done. Rolling shall be done in the direction of the arrow marked on the drum. It should be ensured that both ends of the cables are properly sealed to prevent ingress/absorption of moisture by the insulation. Protection from rain and sun is preferable. Sufficient ventilation between cable drums, should be ensured during storage. The drums shall always be rested on flanges and not on flat sides. While removing cables, the drums shall be properly mounted on jacks or on a cable wheel or any other suitable means, making sure the spindle, jack, etc. is strong enough to take the weight of the drum. The drum shall not be sharply bent within a small radius. The minimum safe bending radius for all types of PVC cables shall be taken as 12 times the overall diameter of the cable. Wherever practicable, large radius should be adopted at joints and termination, the bending radius of individual cores of multi-core cables shall not be less than 15 times its overall diameter. Cables with kinks and straightened kinks or with similar apparent defects like defective armoring etc. shall not be installed.

2. INSTALLATION

The cable installation including necessary joints shall be carried out in accordance with the specifications given herein. For details not covered in the specification, IS 1255-1967 shall be followed. Before the cable laying is undertaken, the route of the cable shall be decided by the Engineer-in-charge. While shortest practical routes should be preferred, cable runs shall generally follow fixed developments such as roads, foot paths etc. Cables of different voltages and also power and control cables should be kept in different trenches with adequate separation. Where available space is restricted, LV/MV cable shall be laid above HV cable. Where cables cross one another, the cable of higher voltage shall be laid at a lower level than the cable of lower voltage.

3. LAYING DIRECT IN GROUND

(a) **Width of trench:** The width of trench shall be first determined on the following basis.

- (i) The minimum width of trench for laying single cable shall be 300mm
- (ii) Where more than one cable is to be laid in the same trench in horizontal formation, the width of trench shall be increased such that the inter-axial spacing between the cables, except where otherwise specified, shall be at least 200mm.
- (iii) There shall be a clearance of at least 150mm between axis of the end cables and the sides of the trench.

(b) **Depth of Trench:** The depth of trench shall be determined on the following basis

- (i) Where cables are laid in single tier formation, the total depth of trench shall not be less than 750mm for cables up to 11 KV and 1200mm for cables above 1.1KV.
- (ii) When more than one tier of cables is unavoidable and vertical formation of laying is adopted, depth of trench as above shall be increased by 300mm for each additional tier to be formed.

(c) **Excavation of Trenches:** The trenches shall be excavated in reasonably straight lines. Wherever there is a change in direction, suitable curvature shall be provided where gradients and change in depth are unavoidable, these shall be gradual. Excavation should be done by suitable means—manual or mechanical. The excavated soil shall be stacked firmly by the side of the trench such that it may not fall back into the trench. Existing property exposed during trenching shall be temporarily supported or propped adequately as directed by the engineer-in-charge. The trenching in such cases shall be done in short lengths, necessary pipe laid for passing cables therein and the trench quickly refilled.

If there is any danger of a trench collapsing or endangering adjacent structure, the sides should be well stored up with timbering and/ or sheeting as the excavation proceeds. Where necessary, these may even be left. In places when backfilling the trench shall be level and free from stone, bricks etc. the trench shall be provided with layer of clean, dry cushion of not less than 8cm in depth.

4. LAYING OF CABLE IN TRENCH:

The cable drum shall be properly mounted on jacks or on cable wheel at a suitable location, making sure that the spindle, jack etc. are strong enough to carry the weight of the drum without damage & that the spindle is horizontal in the bearings so as to prevent the drum creeping to one side while rotating.

The cable shall be pulled over rollers in the trench steadily and uniformly without jerks and strains. The entire cable length shall as possible be laid off in one stretch. However where this is not possible the remainder of the cable may be removed by, Flaking, i.e. by making one long loop in the reverse direction. For short runs and sizes up to 50 sq.mm. of cable up to 1.1 KV grade, any other suitable method of direct handling and laying can be adopted with the prior approval of the engineer- in charge when the cable has been properly straightened the cores are tested for continuity and insulation resistance and the cable is then measured the ends all lead sheathed cables shall be sealed with solder immediately in case of PVC cables, suitable moisture seal tape shall be used for this purpose.

Cables laid in trenches in a single tier formation shall have a covering of clean dry sand of not less than 170mm above the base cushion of sand before protective cover is laid.

At the time of original installation, approximately 3m of surplus. Cable shall be provided on each side of the underground joints (straight through/tee termination) and at entries and gland plates as may be decided by the Engineer-in-charge the surplus cable shall be left in the form of a loop. Where there are long runs of cable length, loose cables may be left at suitable intervals as specified by the Engineer-in-charge.

Unless otherwise specified, the cables shall be protected by second class bricks of not less than 200mm x 100mm x 100mm (nominal size) as per CPWD building specification or protection covers placed on top of the sand (bricks to be laid breadth wise) for the full length of the cable to the satisfaction of the engineer-in-charge. Where more than one cable is to be laid in the same trench, this protective covering shall cover all the cables and project at least 50mm over the side of the end cables.

5. BACK FILLING;

The trenches shall be back filled with excavated earth free from stones or other sharp edged debris and shall be rammed and watered if necessary, in successive layers not exceeding 300mm. Unless otherwise specified, a crown of earth not less than 50mm in the center and tapering onwards the sides of the trench shall be left to allow for soil subsidence. The crown of earth however should not exceed 100mm so as to be hazard to vehicular traffic, the temporary reinstatement of roadways should be inspected at regular intervals, particularly during the wet weather and any settlement should be made good by further fillings as may be required. After the subsidence has ceased, trenches through roadways or other paved areas shall be restored to the same density with the same materials as the surrounding area and repaired in accordance with the relevant CPWD building specifications to the satisfaction of the engineer-in-charge.

Where roads or lawns have been cut or curb stones displaced, the same shall be repaired and made good by turning/ asphaltting to the satisfaction of the engineer-in-charge and surplus earth or rock removed to place as specified.

6. ROUTE MARKERS:

Route markers shall be provided along straight runs of the cables at locations approved by the engineer-in-charge and generally at intervals not exceeding 30 m. markers shall also be provided to identify the change in direction of the cable routes and also for location of every underground joint. Cost of route markers are to be included within the same rate.

7. LAYING IN PIPES/CLOSED DUCTS:

At location such as road crossings, entry to buildings, on poles in paved area, etc. cables shall be laid in pipes or closed ducts. Stoneware pipes G.I.C.I. or spun reinforced concrete pipes shall be used for such purposes. Pipes shall be continuous and clear of debris or concrete before a cable is drawn. Sharp edges shall be smoothed to prevent any injury to cable insulation or sheathing.

Pipes for cable entries to tile building shall slope downwards from tile building and suitably sealed to prevent entry of water inside the building. Further the mouth of the pipes at the building end shall be suitably sealed to avoid entry of water cable grips draw wires and winches etc may be employed for drawings cables through pipes/closed ducts etc.

8. LAYING ON SURFACE:

The cables may be laid on slotted angle cable trays thoroughly fastened at every meter length at regular intervals. When laid over bracket supports the cables shall be clamped to prevent undue sag. In case of single core cables the clamps shall be of non-magnetic materials. A suitable non-corrosive packaging shall be used for clamping unarmored cables to prevent damage to the cable sheath.

Wherever more than one cable is laid/run side by side, marker tags as approved inscribed with cable identification details shall be permanently attached to all the cables in the manholes/pull pits/joints pits/entry points in buildings/open ducts etc. these shall also be attached to various cables laid direct in ground at suitable intervals as decided by the Engineer-in-Charge before the trenches are filled up.

Jointing work shall be carried out only by licensed/experienced cable jointer. Sufficient ventilation shall be provided during jointing operation in order to disperse fumes given out by fluxing. Jointing materials and accessories like conductor ferrules, solder flux and protective tapes, filling compound, jointing boxes etc. of right quality and correct sizes conforming to relevant Indian standards, wherever they exist, shall be used.

The design of the joint box and the composition of the filling compound shall be such as to provide an effective sealing against entry of moisture in addition to affording proper electrical characteristics at the joints. Where special type of splicing connector kits or epoxy resin spliced joints are specified, materials approved for such application shall be used and instruction of the manufacture/approved for such materials shall be strictly followed. Insulation resistance of cable to be jointed shall be measured with 500Vmeggur up to 1.1KV grade and with 2500/5000Vmeggur for cables of higher voltage Unless the insulation resistance values are satisfactory, jointing shall not be tenacious oxide film is formed which makes soldering of aluminium conductor difficult this oxide film should be removed using appropriate type of flux. The clamps for the armored shall be clean and tight.

(D) MAIN BOARDS:

The power panels shall comprise of set of 200A rating copper bus bar, earth terminals, MCCBs, MCBs and neutral link mounted in three tiers phase wise as details in the schedule of quantities. These shall be housed in ahinged double door sheet metal box of ample dimensions made by the approved MCBs manufacturer suitable locking arrangement shall be made if necessary. All distribution boards shall be fitted with MCB.s connected on the live sides. The bus bar shall be such that the circuit could be isolated easily. The capacity of MCBs will be as detailed in the drawing. All the distribution boards shall be painted with approved paint each circuit shall have an independent neutral wire and shall be numbered and marked, as required by the Architects/Engineer-in-charge sample of the complete distribution board shall be approved before installing. The rate per item will include all the above mentioned materials and labour required. Measurements will be in numbers of complete sets as described in the schedule of quantities.

(E) SWITCH BOARDS SHEETS CUBICLE CUBICLE PATTERNS:

1. CONSTRUCTION:

Switch boards shall be of sheet steel cubicle, indoor, floor mounting, free standing type the design shall be totally enclosed, completely dust should vermin proof the sheet steel used shall be 2mm thick Gaskets shall be used between all adjacent units and beneath all covers to render the joints effectively dust proof.

A base channel of 50mm x 25mm fabricated out of 3mm thick hot rolled sheet steel painted black shall be provided to prevent corrosi of the sheet steel cubicle and facilitate cleaning of floors. The switchboards shall be easily extendible. The arrangement shall be logical, compact and neat. The switchboard shall have a uniform height throughout its length.

Barriers shall be provided between the modules accommodating equipment associated with outgoing circuits all modules shall have a covering at the bottom so that entry to dust, rats and vermin is not possible.

2. FEEDER ARRANGEMENTS:

The switchboard shall be of single front construction and equipment shall be mounted on the front only. Switchboard shall be of dead front type, i.e. all switches, pushbuttons etc. shall be operational from the front. The rating of switches fuses, contractor etc. shall be as specified. If in the extreme circumstances a particular switchgear rating should not be available, the next higher rating must be supplied. Out Outgoing feeders shall be neatly arranged in different compartments. Normally equipment for individual feeders shall be accommodated in separate modules the framework shall house the switches, switch fuse units, starters and contractors, MCBs and MCCBs etc. in multi-tier formation the equipment shall be mounted independent of the back-plate and not on the rear surface of the housing. Each module shall be fitted with individual door and concealed hinges. All doors shall be held securely against sponge the equipment rubber gaskets to make the equipment dust proof. All hinged doors shall be provided with insulated, key-operated, half turn knobs.

The compartment doors shall be so interlocked that it should not be possible to open the door when the switch is in "ON" position.

3. BUS BARS:

Aluminium bus bars may be used. There phase and neutral bus bars shall be o the, total incoming switches current rating, housed in separate buss-bar chambers. And rated for a

temperature rise of 30 C over the ambient temperature specified based on insulated conductor rating (I.S: 8084-1976). Neutral bus bars may be of one half the size of phase bars. An earth bus of size approximately 500/0 of the phase shall be provided. Individual switch component shall be connected with the earth bus through copper connecting wire. Bus bars shall be supported on unbreakable non-hygroscopic hylam supports rigidly coded PVC insulation. Bus bar chamber shall have a separate screwed cover with danger sign screwed to the cover.

4. CABLE COMPARTMENT:

A cable compartment running along the vertical module shall be provided for easy termination of all incoming and outgoing cables entering either from top or bottom adequate supports shall be provided for the cables necessary. The cable compartment shall have its own screwed removable cover for easy access during cabling.

5. CONTROL WIRING:

All control wiring shall be carried out through the common vertical compartment. In case neat bunches. Power connections of the circuits shall be done by aluminium or copper flats of adequate sizes. Control wiring, shall be done by PVC insulated wires of minimum size 1.5 sqmm copper. All control wiring shall be fitted with identification ferrules at each end not more than two connections shall be made by any one terminal. The wire shall be arranged and supported in such manner that there shall be no strain on the terminations. The termination shall be no strain on the termination. The terminal shall be of adequate current rating and size to suit individual feeder arrangements. Power terminals shall be pressure clamp type suitable for copper/ aluminium wires.

6. CABLE ENTRY:

Cubicles shall be designed to facilitate aluminium conductor PVC cable entry from top or bottom as mentioned in the drawing BOQ. Removable steel gland plates shall be fitted at the top and bottom with pre-punched holes for cable entry.

7. PAINTING:

All steel work shall be painted in approved shade as required

(F) specification for medium voltage equipment

(1) Air Circuit Breakers (A,C,Bs)

Air circuit breakers shall be horizontal draw out type fully interlocked and meeting the requirements of IS: 2516. Breakers shall be rated for medium voltage of 600V and rates for full load current as indicated on drawings. Breakers shall be capable of breaking system short circuits specified and earth faults, where required and be provided with facilities for electrical and or mechanical interlocking.

Breakers shall be unless specified otherwise, spring-charged, motor operated, complete with facility for manual spring charging and manual closing arrangement, isolating plug and safety shutters, mechanical ON/OFF indicator, silver plated arching and main contracts. Arch chutes and trip free operation Breakers shall be capable of being racked into "Service" "Test" and "Isolated" position and kept locked in any position with mechanical indication of position.

Unless otherwise state A.C Bs shall be four pole with neutral making contract first and breaking contract last. If neutral contractors are used they must follow the same system.

(2) Switch fuse Units:

Switch fuse units shall have quick-make break contracts with operating mechanism suitable for rotary operation in the case of cubicle mounting. All switches shall be rated according to the equipment schedule of drawings and shall withstand the prospective system fault current. Switch fuse units shall be three pole and neutral.

Fuses shall be HRC cartridge type conforming to I.S. 2208 with a breaking capacity commensurate with system fault level. Fuses shall be link type with visible indication. Unless otherwise stated, switch fuse units shall be three pole and neutral.

(3) Instrument Transformers Meters & Relays:

Ammeters and Voltmeters shall have moving iron spring controlled dead beat elements in square bezel flush type cases 144mm in size and suitable for switch board mounting. Meters shall conform to BS: 89 and have grade accuracy. Scale ranges shall meet with the requirement or as indicated on the drawings or in the Schedule of quantities.

Energy meters shall be two element switch board mounting type suitable for unbalanced loads. Meters should incorporate a KVA demand meter with an integration time of 30 minutes. In case of two incoming feeders, a summing C.T. shall be provided with the meter. Meters shall conform to BS.37. All tripping may be through combination of IDMT thermal and magnetic releases as specified.

(G) EARTHING:

Earthing shall conform to the specifications given below. For other details not covered in this specification, relevant Indian standards shall be referred to.

Types of earth electrodes

(a) Pipe Earth electrode:

G.I. pipe shall be of medium class, 40mm dia. And 4.5m in length. Galvanizing of the pipe shall conform to relevant Indian Standard. G.I. pipe electrodes shall be cut tapered from top to the bottom and provided with holes of 12 mm dia. Drilled not less than 75mm each other up 2m of length from the bottom. The electrode shall be buried in the ground vertically with its top not less than 200m below ground level.

(I) PLATE EARTH ELECTRODE:

For plate electrode minimum dimensions of the electrode shall be as under

(i) GI plate electrode 600mmx600mmx6mm thick

(ii) Copper plate electrode 600mmx600mmx3mm thick

The electrode shall be buried in the ground with its face vertical and the top not less than 3 m below ground level

(b) Method of installing watering Arrangements

(c) In the case of plate electrode a watering pipe of 20mm dia of medium class G.I. pipe shall be provided and attached to the electrode. A funnel with mesh shall be provided on the top of this pipe for watering the earth. In case of pipe electrode a 40mm x 200mm reducer shall be used for fixing the funnel. The watering funnel attachment shall be housed in a masonry enclosure of not less than 300mm x 300mm x 300mm. A cast iron/ frame with cover and locking arrangement shall be suitably embedded in the masonry enclosure.

(C) LOCATION OF EARTH ELECTRODE:

Normally an earth electrode shall not be situated less than 1.5m from any building. Care shall be taken that the excavations for the earth electrode may not affect the column footing or foundations of the building. In such cases the electrodes shall be situated farther away from the building. The location of the earth electrode will be where the soil has reasonable chance of remaining moist, as far as possible entrances pavements and roadways are to be avoided for locating the electrode.

(D) METHOD OF CONNECTING EARTHING LEAD TO EARTH ELECTRODE.

In the case of plate earth electrode the earthing lead shall be securely bolted to the plate with two bolts nuts, check nuts and washers, in the case of pipe earth electrode, it shall be connected by means of a through bolt, nuts, washers and cable socket. All materials used for connecting the earth lead with electrode shall be GI in case of GI pipe or GI plate earth electrode and of tinned brass in case of copper plate electrode the earthing lead shall be securely connected at the other end to the main board.

Loop earthing shall be provided for all mountings of main board and other material clad switches and distribution fuse board with not less than 14 SWG copper or 12 SWG GI or 4sqmm. Aluminium wire. The earthing lead from the electrode onwards shall be suitably protected from mechanical damage by a 15mm dia GI. 1 pipe in case of wire and by 4 sq mm dia medium G.I. pipe in case of strip. Portions of this protection pipe within ground shall be buried at least 300mm deep (to be increased to 500mm in case of road crossing and pavement). The portion within the building shall be recessed in walls and floor to adequate depth. In all cases the relevant provisions of rules 33,61 and 67 of Indian Electricity rules 1956 as amended shall be complied with. Metallic covers or supports of all medium voltage or H.T. apparatus or conductors shall in all cases be connected to not less than two separate and distinct earth stations including electrodes. No earth electrode shall have a greater ohm resistance than five ohms as measured by an approved earth testing apparatus. In roady soil the resistance may be up to eight ohms.

DESIGN ZONE

Architects Engineers, Interior Designers & Valuers

B-1 Deshbandu Complex, Naudra Bridge

JABALPUR

Ref.
SCHEDULE PART -I

NAME OF WORK- CONSTRUCTION OF HOSTEL BUILDING FOR HITKARINI SCIENCE COMMERCE & ARTS COLLEGE DEOTAL IN HITKARINI COMPLEX AT MOUZA TEMAR JABALPUR (M.P.)

S.No.	Description	Unit	Rate	Qty	Amount
2.1	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m.				
	2.1.1 All kinds of soil.	Sqm	5.53	400.0	2212.0
2.2	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level and removal of rubbish upto a distance of 50m outside the periphery of the area cleared.	Sqm	2.85	400.0	1140.0
2.3	Clearing grass and removal of the rubbish upto a distance of 50 m outside the periphery of the area cleared.	Sqm	1.46	400.0	584.0
2.6	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in over areas foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.				
	2.6.1 All kinds of soil.	Cum.	107.0	500.0	53500.0
2.7	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.				
	2.7.1 Ordinary rock	Cum.	171.0	13.5	2308.5
	2.7.2 Hard rock (requiring blasting)	Cum.	284.0	4.5	1278.0
	2.7.3 Hard rock (blasting prohibited)	Cum.	364.0	1.2	436.8
2.8	Excavation work in foundation trenches or drains not exceeding 1.5 m in width or 10 sqm on plan including dressing of sides and ramming of bottoms lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m.				
	2.8.1 Ordinary rock	Cum.	182.0	4.2	764.4
	2.8.2 Hard rock (requiring blasting)	Cum.	307.0	5.2	1596.4
	2.8.3 Hard rock (blasting prohibited)	Cum.	369.0	1.5	553.5
2.9	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides,				

ramming of bottoms, depth upto 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :

2.9.1 All kinds of soil

2.9.1.1 Pipes, cables etc, not exceeding 80 mm dia. metre 75.0 48.5 3637.5

2.9.1.2 Pipes, cables etc. Exceeding 80 mm dia. but not exceeding 300 mm dia. metre 122.0 20.0 2440.0

2.9.1.3 Pipes, cables etc. Exceeding 300 mm dia but not exceeding 600 mm. metre 190.0 26.5 5035.0

2.24 Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m. Cum. 49.0 50.0 2450.0

2.25 Extra for every additional lift of 1.5 m or part thereof in.

2.25.1 All kinds of soil. Cum. 20.0 15.0 300.0

2.25.2 Ordinary or hard rock. Cum. 36.0 15.0 540.0

2.26 Supplying and filling in plinth with crusher stone dust/ coarse sand under floors including, watering, ramming consolidating in layers not exceeding 20cm in depth in layers not exceeding 20cm in depth and dressing complete. Cum. 530.0 40.0 21200.0

2.27 Supplying and filling in plinth with Hard muram/ Hard copra under floors including, watering, ramming consolidating and dressing complete Cum. 337.0 36.0 12132.0

4.1 Providing and laying in position cement concrete of specified gradeexcluding the cost of centering and shuttering - All work up to plinthlevel :

4.1.1 With 20mm nominal size graded stone aggregate.

4.1.1.1 M 25 Cum. 5036.0

4.1.1.2 M 20 Cum. 3831.0

4.1.1.3 M 15 Cum. 3414.0 48.0 163872.0

4.1.1.4 M 10 Cum. 2900.0 133.0 385700.0

4.1.2 With 40mm nominal size graded stone aggregate.

4.1.2.1 M 15 Cum. 3362.0

4.1.2.2 M 10 Cum. 2833.0 45.0 127485.0

4.1.2.3 M 7.5 Cum. 2546.0

4.1.2.4 M 5 Cum. 2301.0

4.2 Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. up to floor two level, excluding the cost of centering, shuttering and finishing :

4.2.1 With 20mm nominal size graded stone aggregate

4.2.1.1 M 25 Cum. 5210.0

4.2.1.2 M 20 Cum. 4039.0

4.2.1.3 M 15 Cum. 3643.0 11.0 40073.0

4.2.1.4 M 10 Cum. 3140.0

4.2.2 With 40mm nominal size graded stone aggregate

4.2.2.1 M 15 Cum. 3549.0 9.5 33715.5

4.2.2.2 M 10 Cum. 3076.0

5.1	Providing and laying in position specified grade of reinforced cement concrete (with 20mm nominal size graded stone aggregate) excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :				
5.1.1	M 20 Nomial mix	Cum.	3936.0	90.5	356208.0
5.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses fillets, columns, pillars, posts and struts su spended floor roof slabbeams, etc. up to floor two level excluding cost of centeringshuttering, finishing and reinforcement :				
5.2.1	M 20 Nomial mix (with 20mm nominal size graded stone aggregate)	Cum.	4321.0	32.5	140432.5
5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
5.3.1	M 20 Nomial mix (with 20mm nominal size graded stone aggregate)	Cum.	3863.0	46.2	178470.6
5.16	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding including cost of binding wire up to floor two level including all wastage etc. complete.				
5.16.1	Mild steel and Medium Tensile steel bars.	Kilogram	41.50		
5.16.2	Hard drawn steel wire	kilogram	46.60		
5.16.3	Cold twisted bars (CTD) kilogram	42.00	21575.0	90150.0	
5.16.4	Hot rolled deformed bars	kilogram	42.00		
5.16.5	Hard drawn steel wire fabric	kilogram	54.00		
5.16.6	Thermo-Mechanically Treated bars.(TMT)	kilogram	42.00		
5.9	Centering and shuttering including strutting, propping etc. and removal of form for :				
5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.	Sqm	127.00	96.5	12255.5
5.9.2	Walls (any thickness) including attached pilasters butteresse s, plinth beams and string courses etc.up to plinth level.	Sqm	193.00	21.0	4053.0
5.9.3	Suspended floors, roofs, landings, balconies and access platform. Shelves (Cast in situ) Lintels, beams, beams, girders, bressumers and cantilevers, Columns, Pillars, Posts and Struts Walls in super structure.	Sqm	199.0	900.0	179100.0
5.9.4	All types of staircases including riser & landing.	Sqm	248.0	19.6	4860.8
5.9.5	Arches, domes, vaults up to 6 m span	sqm	691.0		0
5.9.6	Extra for arches, domes, vaults exceeding 6 m span		260.0		0
5.9.7	Chimneys and shafts	sqm			147.0
5.9.8	Vertical and horizontal fins individually or forming box louvers band, facias and eaves boards Weather shade, Chajjas, corbels etc., including edges.		259.0		0
5.9.9	Extra for shuttering in circular work or any other geometrical shape (20% of respective centering and shuttering items).	20% of respective			
5.9.10	Cornices and mouldings	sqm	323.0		0
5.9.11	Coffer / waffle slab of any size or shape as shown in the drawing.	Sqm	710.0		0

6.3	Brick work with well brunt open bhatta, bricks, crushing strength not less than 25kg /sqcm and water absorption not more than 20% in foundation and plinth				
6.3.1	Cement Mortar 1:6 (1 cement : 6 sand).	Cum.	1955.0	33.5	65492.5
6.4	Brick work with well brunt open bhatta bricks of class designation 40 insuperstructure above plinth level up to floor II level in all shape and sizes in :			0	0
6.4.1	Cement mortar 1:4 (1 cement : 4 sand)	Cum.	3780.0	9.2	34776.0
6.4.2	Cement mortar 1:6 (1 cement : 6 sand)	Cum.	3599.0	53.1	191106.9
6.10	Half brick masonry with M.S. brick of class designation 40 in super structure above plinth level up to floor II level				0.0
6.10.1	Cement mortar 1:3 (1 cement : 3 sand)	sqm	438.0	160.0	70080.0
6.10.2	Cement mortar 1:4 (1 cement : 4 sand)	sqm	419.0	16.5	6913.5
6.13	Extra for providing and placing in position 2 Nos. 8mm dia. M.S. bars at every third course of half brick masonry (with M.S. bricks).	sqm	48.0	176.5	8472.0
7.12	Stone work in plain ashlar in super structure upto floor two level in cement mortar 1:6 (1 cement : 6 sand) including pointing with cement mortar 1:2 (1 white cement : 2 marble dust/sand) with a mixture of pigment matching the stone shade :				
7.12.1	One face dressed.				
7.12.1.1	Red sand stone		Cum.	13998.0	
7.12.1.2	White sand stone	Cum.	14032.0		
7.12.2	Both face dressed.				
7.12.2.1	Red sand stone.		18567.0	12.7	235800.9
7.12.2.2	White sand stone	Cum.	17585.0	9.5	167057.5
10.13	Providing and fixing T-iron, flat iron and square iron frames, grill for doors windows and ventilators of mild steel Tee-sections, joints mitred and welded with 15x3 mm lugs 10cm long embedded in cement concrete blocks 15x10x10 cm of 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with dash fastener or with fixing clips or with bolts and nuts as require including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.	Kg.	43.8	1245.0	54531.0
13.1	12 mm cement plaster of mix :				
13.1.1	1:4 (1 cement: 4 sand)	90.0	117.5	10575.0	
13.1.2	1:6 (1 cement: 6 sand)	sqm	80.0	55.5	4440.0
13.2	15 mm cement plaster on rough side of single or half brick wall of mix :				
13.2.1	1:4 (1 cement: 4 sand)	sqm	106.0	111.0	11766.0
13.2.2	1:6 (1 cement: 6 sand)	sqm	93.0	1.6	148.8
13.3	20 mm cement plaster of mix :				0
13.3.1	1:4 (1 cement: 4 sand)	sqm	129.0	18.5	2386.5
13.3.2	1:6 (1 cement: 6 sand)	sqm	113.0	22.5	2542.5
13.4	12 mm cement plaster 1:3 (1 cement: 3 sand) finished with a floating coat of neat cement.	sqm	121.0	16.0	1936.0

13.5	floating coat of neat cement on the rough side of single or half brick wall.	sqm	132.0	29.0	3828.0
13.6	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 sand) finished with a top layer 6mm thick cement plaster 1:6 (1 cement: 6 fine sand).	sqm	117.00	114.0	0.0 0.0 13338
13.7	18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement: 5 sand) and a top layer 6mm thick cement plaster 1:3 (1 cement: 3 sand) finished rough with sponge.	sqm	132.00	117.5	15510.0
13.8	6 mm cement plaster of mix :CM 1:3 (1 cement: 3 sand)	sqm	69.00	55.0	3795.0
13.9	6 mm cement plaster 1:3 (1 cement: 3 sand) finished with a floating coat of neat cement and thick coat of lime wash for bearing of R.C.C. slabs and beams.	sqm	100.00	14.0	1400.0
13.10	Neat cement punning	sqm	23.00	19.0	437.0
13.13	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers. For each bag of 50 kg cement used in the mix	each bag	45.00	168.0	7560.0
11.23	Kota / cuddapah stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 sand) : 11.23.1 25 mm thick.	Sqm	670.00	90.0	60300.0
11.24	Kota /cuddapahstone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	sqm	701.00	40.0	28040.0
11.26	Providing nosing in treads of steps of Kota stone/ sand stone slab./ Marble stone i/c rubbing polishing etc. Complete.	metre	27.00	49.0	1323.0
11.27	Extra for Kota stone/ sand stone in treads of steps and risers using single length up to 1.05 metre.	Sqm	7.00	90.0	630.0
11.31	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (6-7mm thickness) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete	sqm	547	260.0	142220.0
11.32	Providing and laying Ceramic glazed floor tiles of any size (9-10mm thickness) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick Cement Mortar 1:4 (1 Cement : 4 sand) including pointing the joints with white cement and matching pigment etc., complete.	sqm	737	70.0	51590.0

11.33	11.33 Providing and laying Ceramic glazed floor tiles of any size (9-10mm thickness) of 1st quality conforming to IS : 15622 of approved make in all colours, shades, except White, Ivory, Grey, Fume Red Brown laid on 20mm thick bed of Cement Mortar 1:4 (1 Cement : 4 sand) including pointing the joints with white cement and matching pigments etc., complete.	sqm	759	50.0	37950.0
11.34	Providing and laying polished vitrified floor tiles in different sizes of 10mm thickness with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 sand) including grouting the joints with white cement and matching pigments etc., complete.				
11.34.1	Size of Tile 50x50 cm	sqm	868		
11.34.2	Size of Tile 60x60 cm	sqm	958	500.1	479095.8
11.34.3	Size of Tile 80x80 cm	sqm	1458		
11.34.4	Size of Tile 100x100 cm	sqm	1627		
11.37	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction and of approved size and shape laid in required colour and pattern over and including 40mm thick compacted bed of course sand filling the joints with sand etc. all complete as per the direction of Engineer in charge.	Sqm	367	56.0	20552.0
13.7	Providing and applying Birla/J.K. or equivalent wall care exterior/interior mix putty for outer surface i/c sand pappering for making the surface smooth for applying any or vinyle paint with all cost of materials, labours, and scaffolding etc. in all position complete.(this Item is to be executed only in new public buildings).	Sqm	93	2800.5	260446.5
13.49	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :				
13.49.1	Two or more coats on new work	sqm	37	2800.5	103618.5
13.27	White washing with lime to give an even shade:				
13.27.1	New work (three or more coats)	Sqm	7.00	2900.5	20303.5
13.28	Colour washing such as green, blue or buff to give an even shade :				
13.28.1	New work (two or more coats) with a base coat of white washing with lime	Sqm	9.50	130.5	1239.8
13.28.2	New work (two or more coats) with a base coat of whiting	Sqm	9.60	130.5	1252.8
13.29	Distempering with dry distemper of approved brand and manufacture (two or more coats) and of required shade on new work, over and including priming coat of whiting to give an even shade.	sqm	28.00	140.6	3936.8
13.30	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade				
13.30.1	New work (two or more coats) over and including priming coat with cement primer.	Sqm	45.00	290.0	13050.0

13.31	Distemping with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification. 13.31.1 Two or more coats on new work.	Sqm	31.00	150.0	4650.0
13.32	Applying one coat of cement primer of approved brand and manufacture on wall surface : 13.32.1 Cement primer.	Sqm	19.00	2890.0	54910.0
13.33	Finishing walls with water proofing cement paint of required shade : 13.33.1 New work (Two or more coats applied @ 3.84 kg/10 sqm).	Sqm	31.00	2890.0	89590.0
13.34	Finishing walls with textured exterior paint of required shade : 13.34.1 New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sqm.	Sqm	105.00	36.0	3780.0
13.35	Finishing walls with Acrylic Smooth exterior +paint of required shade: 13.35.1 New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	Sqm	59.00	360.0	21240.0
22.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying: a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30cm on parapet wall and tucked into groove in parapet all around. (with five years service gurantee).	sqm	277.00	690.0	191130.0
				Total Rs.	5149225.8
B.	8% Internal Sanitary & water supply				411938.06
C.	8% External Sanitary & water supply				411938.06
D.	10% electrification				514922.575
E	Approximate cost SCHEDULE Part-1				300000.0
				Total Rs.	6788024.45
				Say Rs.	6800000.00

Rs. Sixty eight lacs only)

Ar. Vinita Maheshwari

DESIGN ZONE

Architects Engineers, Interior Designers & Valuers

B-1 Deshbandu Complex, Naudra Bridge
JABALPUR

Ref.

SCHEDULE PART -1

NAME OF WORK- CONSTRUCTION OF HOSTEL BUILDING FOR HITKARINI SCIENCE COMMERCE & ARTS COLLEGE DEOTAL IN HITKARINI COMPLEX AT MOUZA TEMAR JABALPUR (M.P.)

S.No.	Description	Unit	Rate	Approx. Qty	Amount
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Provide prime cost sum for the following items-

- i) Drinking water filter equipment with water cooler etc.
- ii) wall/floor tiles
- iii) Vitrified tile flooring
- iv) Bathroom & toilet fitting.
- v) Water proofing treatment to shuken portion/Terrace by approved agency.
- vi) Drilling of tube well perfectly vertical for the specified depth below the ground level & Casing pipes, submersible pump accessories etc.
- vii) Aluminium doors, windows and ventilator, etc. as per design
- X) Wood work in frames of doors, window and shutter/fluss shutter etc. as per design
- ix) S.S. Railing/pipe line, etc.

Add for Contractor's overhead & profit.

The amount provided above approximate & provisional.

- ii) The item and material included in the provisional sum shall be procured from the firm(s) nominated by the employer in Consultation with the Consulting Engineer.
- iii) The Contractor shall procure the item / Material from the nominated firm (s) and bring the same in original packing etc. Supported by invoices/bills.
- iv) The actual cost of labour for laying fixing shall be assessed at site.
- v) The Contractor shall quote the percentage account for his overheads & profit.
- vi) The Employer reserves the right to delete any or all the items described in Para 1(a)

HITKARINI SCIENCE COMMERCE & ART'S COLLEGE DEOTAL GARHA JABALPUR (M.P.)

FINANCIAL PROPOSAL (Part-I)

Percentage rate tenders are invited on behalf of the HITKARINI SABHA / HITKARINI LAW COLLEGE for the following Work in form 'A' M.P. P.W.D.SOR 15TH JUNE 2009" and will be received in the office of the HITKARINI SABHA JABALPUR up to 4 pm on/3/2012 from the reputed firms .

- * Name of the work : Construction of Hostel Building in Hitkarini Complex at Mouza Temar Jabalpur (M.P.)
- * Probable amount of Contract : Rs. 68.0 Lacs
- * Type of Tender Form : PROFORMA 'A' M.P. P.W.D. S.O.R. INFORCE FROM 15TH JUNE 2009
- * Period of completion : 9 Month from the date indicated in the work order or letter of intent including rainy season.
- * Last date for issue of tender form : March 2012

- 1) Contractor to quote '+'/ '-/' zero % on the schedule of rates (A) mentioned in the following table
- 2) Only single % is to be quoted for the complete set of work. Specifying more than single percentage (%) or quoting specific unit rate/ Lumpsum rates will make your offer invalid.
- 3) Prefix the % with '+' for rates above the schedule rate '-' for rates below the schedule rate, put zero % if the schedule rate itself are being offered.
- 4) The % is to be put in the space provided below the following table both in figure and in words.

You are requested to quote most competitive rates for the following work, as per instructions contained in this tender notice and in the said tender form.

DETAILS OF ITEMS

- Building Work : The current schedule of rates of M.P. P.W.D. S.O.R. inforce from 15th June 2009
- Electric Fitting : The current schedule of rates of M.P. P.W.D. S.O.R. inforce from 15th June 2009
- Water supply & Sanitary fitting : The current schedule of rates of M.P. P.W.D. S.O.R. inforce from 15th June 2009

**I/we here by agree to execute above work at % (In figures)
.....Percent(in words)**

Signature of the Contractor.

Name
Address.....

The Employer (HITKARINI SABHA / HITKARINI SCIENCE COMMERCE & ART'S COLLEGE) shall not be bound to accept the lowest or any other tender and Reserves the right to reject any tender without assigning any reason vis-à-vis No reason shall be furnished for acceptance or rejection of the tender.

HITKARINI SCIENCE COMMERCE & ART'S COLLEGE DEOTAL GARHA JABALPUR (M.P.)

FINANCIAL PROPOSAL (Part-II)

- * Name of the work : Construction of Hostel Building in Hitkarini Complex at Mouza Temar Jabalpur (M.P.)
- * Period of completion : 9 Month from the date indicated in the work order or letter of intent including rainy season
- * Last date for issue of tender form : March 2012
- 1) Only single X% is to be quoted for the complete set of items/Services and not item/service wise. specify more than single percentage (X%) or quoting specific unit rate/ Lumpsum rates will make your offer invalid.
- 2) The % is to be put in the space provided below the following table both in figure and in words.

You are requested to quote most competitive rates for the following items/services, as per instructions contained in this tender notice and in the said tender form.

DETAILS OF ITEMS/SERVICES

- i) Drinking water filter equipment with water cooler.
- ii) Wall / floor tiles
- iii) Vitrified tile flooring
- iv) Bathroom & toilet fitting.
- v) Water proofing treatment to shuken portion /Terrace by approved agency.
- vi) Drilling of tube well(1 No.) perfectly vertical for the specified depth below the ground level & Casing pipes, submersible pump accessories etc.
- vii) Aluminium doors, windows and ventilator, etc. as per design
- ix) S.S. Railing/pipe line, etc.

The item provided above approximate & provisional.

- ii) The item and material included in the provisional sum shall be procured from the firm(s) nominated by the employer in Consultation with the Consulting Engineer.
- iii) The Contractor shall procure the item / Material from the nominated firm (s) and bring the same in original packing etc. Supported by invoices/bills.
- iv) The actual cost of labour for laying fixing shall be assessed at site.
- v) The Contractor shall quote the percentage account for his overheads & profit.
- vi) The Employer reserves the right to delete any or all the items described in Para 1(a)

Add for Contractor's overhead & profit.

..... % (In figures)Percent(in words)

Signature of the Contractor.

Name

Address.....

The Employer (HITKARINI SABHA / HITKARINI SCIENCE COMMERCE & ART'S COLLEGE) shall not be bound to accept the lowest or any other tender and Reserves the right to reject any tender without assigning any reason vis-à-vis No reason shall be furnished for acceptance or rejection of the tender

