



INSTITUTE OF PHYSICS

BHUBANESWAR-751 005

(An Autonomous research institute of Dept. of Atomic Energy, Govt.of India)

Tender No.NIT/IOP/16/2015-16

(A)REPAIR/RENOVATION OF QTRS.NO.B-1 TO B-12 (B) REPAIR/RENOVATION OF QTRS.NO.C-1 TO C-4 (C) REPAIR/RENOVATION OF QTRS.NO.D-2 TO D-4.

PART-I

TECHNICAL BID



Section I
Notice Inviting Tender

INSTITUTE OF PHYSICS

Bhubaneswar

Tel. No. : 0674-2301058 Fax : 0674-2301058

NOTICE INVITING TENDER

Tender No. NIT/IOP/ 16/2015-16

Name of the Work : (A) Repair/Renovation of Qtrs.No.B-1 to B-12.
(B) Repair/Renovation of Qtrs.No.C-1 to C-4.
(C) Repair/Renovation of Qtrs.No.D-2 to D-4.

Estimated Cost : Rs.65,13,132/-
Period of Contract : 6 months
Earnest Money Deposit : Rs..1,30,265/-
Tender Cost : Rs. 1000/- (Non-refundable)

Important dates :

- (a) Sale of Tender : 30/09/2015 to 12/10/2015
- (b) Last date for submission of Tender :12/10/2015 upto 1500 hours
- (c) Opening of tender in the presence of attending bidders at IOP , Bhubaneswar-751 005, : 12/10/2015 at 1530 hours

For further details, please refer to the detailed NIT in IOP's Website www.iopb.res.in

NOTE:

- (1) Tender documents will not be issued to bidders not meeting the eligibility criteria indicated in the detailed NIT.
- (2) Canvassing in any form shall disqualify the Tenderer in participating in the Tender.

(DIRECTOR)



**Institute of Physics
Sachivalaya Marg
Bhubaneswar-751 005
Tender No-NIT/IOP/08/2015-16**

Part-I
Section II
Detailed Notice Inviting Tender



**INSTITUTE OF PHYSICS
BHUBANESWAR-751 005**
NOTICE INVITING TENDER
Tender No.NIT/IOP/16/2015-16

1.0 Sealed tenders under Two Bid Systems are invited by the Director, Institute of Physics, Bhubaneswar- 751 005 from reputed contractors for the following work:

Name of the work	: (A) Repair/Renovation of Qtrs.No.B-1 to B-12. (B) Repair/Renovation of Qtrs.No.C-1 to C-4 (C) Repair/Renovation of Qtrs.No.D-2 to D-4.
Estimated cost	: Rs.65,13,132/- (Rupees Sixty Five Lakh Thirteen Thousand One Hundred Thirty Two only).
Earnest Money Deposit (EMD)	: Rs. 1,30,265/- (Rupees One Lakh Thirty Thousand Two Hundred Sixty Five only)
Cost of tender document	: Rs. 1000/- (Rupees one thousand only.) (Non refundable) (To be paid by cash)

2.0 Important dates:

Sale of Tender Document	: 30/09/2015 to 12/10/2015.
Last date for submission of Tender	: 12/10/2015 upto 1500 hours
Opening of tender in the presence of attending bidders at IOP , Bhubaneswar-751 005.	: 12/10/2015 at 1530 hours

Note: In case the last date of sale and/or the date of receipt and opening of tender is declared as a holiday, the respective date shall be treated as postponed to the next working day.

Tender Document can be obtained from the Office of Accounts Officer , Institute of Physics, Bhubaneswar-751 005 from 1100 hours to 1330 hours and 1400 hours to 1600 hours on any working day except Saturday, Sunday and Government holidays on production of all prescribed documents along with an application in the prescribed format. and on payment of cost of Tender (Rs. 1000/-) by way of cash . The Authority reserves the right to reject any or all the tenders or to allot parts of the work to different agencies without assigning any reasons thereof.

Cost of Tender Document is not refundable.

3.0 Scope of Work:

(A) Repair/Renovation of Qtrs.No.B-1 to B-12.,(B) Repair/Renovation of Qtrs.No.C-1 to C-4.
(C) Repair/Renovation of Qtrs.No.D-2 to D-4. as per details given in Schedule of Quantities:

4.0 Eligibility for issue of Tender Document:

4.1 Technical criteria

- a. Proof of registration with Govt./ Semi Govt. Organisations like CPWD, State PWD/ Railways etc. in appropriate class,
- b. Copy of PAN card, and valid VAT clearance certificate.
- c. Copy of affidavit along with copy of valid electrical contract License with whom the civil contractor is associated.
- d. List of equipments, machinery & technical staff available with the Tenderer.
- e. Profit and Loss Account and Balance Sheet of last 3 years.
- f. Latest Bank Solvency Certificate of value not less than 40% of the estimated cost issued not earlier than one year from date of starting of sale of tender.

4.2 Financial Criteria

Tenderers who have satisfactorily executed three similar works or repair/renovation works each of value 40% of estimated cost or two works each of 50 % cost or one work of 80% cost in last seven years are eligible for issue of tender.

5.0 Instructions to Tenderers.

5.1 For obtaining Tender Documents, the application in the official letterhead of the Tenderer containing authorisation of his representative to collect the Tender Documents along with the duly filled in format attached with the NIT and documentary proof of the following shall be submitted in person to the office of Accounts Officer , IOP, Bhubaneswar- 751 005:

- a. Past experience/list of similar work completed/in progress with their costs during last seven years (in the format enclosed – Annex I)
- b. Attested copy of TIN No.
- c. Attested copy of PAN Card
- d. Copy of Valid Contractor's Registration Certificate.
- e. Copy of affidavit along with copy of valid electrical contract License with whom the civil contractor is associated.
- f. List of equipments, machinery & technical staff available with the Tenderer.
- g. Profit and Loss Account and Balance Sheet of last 3 years.
- h. Latest Bank Solvency Certificate of value not less than 40% of the estimated cost issued not earlier than one year from date of starting of sale of tender.

Note: The Contractors shall submit a list of works which are in hand (in progress) in the following form:

Sr. No	Name of the work	Name & particulars of Division where the work is being executed	Amount	Position of the work in progress	Remarks
1	2	3	4	5	6

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5.2 Tender Documents will be issued only on examining the above documents and satisfying that the intended Tenderer fulfills the eligibility criteria.

5.3 The person deputed for purchase of Tender Documents shall carry a photo identification like Passport, Voter's Identity Card, Driving License, PAN Card etc. in addition to the documents listed at para 4.1.,4.2 and 5.1

Companies should send only technically qualified persons for discussions regarding company's capability to execute the work, in case called for.

Note: (1) The tenders will not be sent by post.

(2) Original documents shall be produced for verification as and when called for.

5.4 It will be obligatory on all tenderers not submitting the offer to return the Tender Documents to Accounts Officer , IOP. However, cost of Tender Documents will not be refunded.

5.5 Tender documents are not transferable.

5.6 The authority reserves the right to reject any or all tenders or to award part(s) of works to different agencies without assigning any reason thereof.

5.7 Tenders should be submitted in sealed envelopes in two parts separately, i.e. " Technical Bid" (PART-I) and "Financial Bid" (PART-II) along with another envelope super scribing Tender No. & name of the work , due date for opening , bidder's name and address. The technical bid duly filled in and signed on each page, accepting the terms, conditions and EMD for Rs.1,30,265/- shall be submitted in a separate cover, may be sent to Director Institute of Physics, Bhubaneswar-751 005 delivered in tender box kept in the Extension Building . No tender shall be accepted later than the time schedule specified above. Institute will not be responsible for delay/ loss of document in transit if sent by post. All tenders, in which any of the prescribed conditions are not fulfilled or are incomplete in any respect or tenders not in the prescribed format are liable to be rejected.

5.8 Earnest Money, shall be submitted along with the Tender Documents. The Earnest Money Deposit should be in the form of Fixed Deposit Receipt or Banker's Cheque or Demand Draft drawn on any Nationalised/Scheduled Bank in favour of Director, Institute of Physics, Bhubaneswar- 751 005. Tenders not accompanied by Earnest Money will be summarily rejected.

Note : Cash, Cheque, Bank Guarantee etc. for Earnest Money Deposit will not be accepted.

5.9 Tenders are to be submitted in sealed envelopes consisting of the following:

- Envelope No.1: Earnest Money Deposit.

- Envelope No.2: Technical bid duly completed in all respect and signed on all pages.
- Envelope No.3: Financial Bid duly filled and signed by the Contractor

These three envelopes shall then be placed in another sealed envelope with the name of work and tender notice number written on it and submitted to the tender inviting authority at the following address:

Director,
Institute of Physics,
Po: Sainik School,
Bhubaneswar, Odisha-751 005

The envelope containing the EMD shall be opened first. If EMD is found to be in order then only the envelope containing the tender will be opened. In case the EMD is not deposited or not found in order, the tender shall not be considered at all.

- 5.10 It will be obligatory on the part of the Tenderer to sign the tender document for all the components/parts of the Tender and affix his/his Company's rubber stamp on every page of the Tender.
- 5.11 Tenderers should quote the rates in figures as well as in words in Annex I. The amount for each item should be worked out and the requisite totals given. All corrections shall be attested by dated initials of the Tenderer. Special care should be taken to write the rates in figures as well as in words and the amounts in figures in such a way that no other interpretation is possible. The total amount should be written both in figures and words.
- 5.12 If the amount of an item is not worked out by the Tenderer or if it does not correspond with the rates written either in figures or in words then the rates quoted by the Tenderer will be taken as correct, not the amount. If there exists a discrepancy between the rates written in figures and words, then the rates in words will be taken as correct.
- 5.13 Partnership firms and joint venture firms will be considered only if:
- (a) Partnership Deed/Joint Venture Agreement has been entered into before the purchase of Tender Documents and copy thereof is enclosed with the Tender.
 - (b) The Tender Document is purchased in the name of Partnership Company or the Joint Venture firm.
 - (c) Such Partnership or Joint Venture is legally in order.
- 5.14 The authority does not bind himself to accept the lowest or any tender and reserves to himself the right to accepting the whole or any part of the tender and the tenderer shall be bound to perform the services at the rates quoted and as accepted in the Work Order/Agreement.
- 5.15 Tenders with any condition including conditional rebate shall be rejected. However, tenders with unconditional rebate will be accepted.
- 5.16 Before submitting the tenders, Tenderers are advised to visit the work site viz. IOP Office ,Po: Sainik School , Bhubaneswar – 751 005 for the full understanding of the scope of work.

- 5.17 The successful bidder will be required to furnish by way of Security Deposit for due fulfillment of his contract, such sum as will amount to 5% of the estimated cost of the work put to tender or 5% of the amount of work order whichever is higher. The Security Deposit will be collected by deductions from the running bill of the Contractor at the rates mentioned above and the Earnest Money Deposit, if deposited at the time of tendering, will be treated as a part of the Security Deposit. The Security Deposit will also be accepted in the shape of Banker's Cheque or Demand Draft drawn in favour of Director, Institute of Physics, Bhubaneswar-751 005.
- 5.18 **The Tender shall have a minimum validity of 180 days from date of opening of tender.** If any Tenderer withdraws his tender before expiry of the validity period or makes any modifications in the terms and conditions of the tender which are not acceptable to the Department, then Government shall without prejudice to any right or remedy, be at liberty to forfeit 50% of the Earnest Money absolutely. Modified Tenders, in any case, shall not be accepted.
- 5.19 **CANVASSING IN ANY FORM IN CONNECTION WITH THE TENDER IS STRICTLY PROHIBITED AND SHALL DISQUALIFY THE TENDERER. THE TENDERS SUBMITTED BY TENDERER WHO RESORT TO CANVASSING ARE LIABLE TO BE REJECTED.**
- 5.20 For any clarifications, please contact Engineer-in-charge, IOP, Bhubaneswar.

Director
Institute of Physics
Bhubaneswar



**Institute of Physics
Bhubaneswar**

Section - I

NOTICE INVITING TENDERS

Tender No. NIT/IOP/ 16 /2015-16

Tenders in the prescribed form are hereby invited on behalf of the Director , Institute of Physics, Bhubaneswar-751 005 from contractors on the approved lists of Central PWD, MES Railways state PWDS and those having adequate experience for the following works:

- | | | |
|------|-------------------------|--|
| i) | Description | : (A) Repair/Renovation of Qtrs.No.B-1 to B-12.
(B) Repair/Renovation of Qtrs.No.C-1 to C-4.
(C) Repair/Renovation of Qtrs.No.D-2 to D-4.. |
| ii) | Estimated cost | :Rs.65,13,132/- |
| iii) | Earnest Money | :Rs.1,30,265/- |
| iv) | Cost of tender document | :Rs.1000/- |

2. Printed form of tender consisting of complete specifications the schedule of quantities of the various classes of work to be done, and the set of "condition of contract" to be complied with by persons, whose tender may be accepted, which also will be found printed in the form of tenders, can be purchased from the Accounts officer, Institute of Physics, Bhubaneswar- 751 005 on any working day between 10:00 hours to 16:00 hours on payment on amount mentioned above in cash from 30.09.2015 to 12.10.2015 on production of proof of registrations in appropriate class of contractors, their past experience in the execution of such type of work.

3. Tenders are to be submitted in sealed envelopes consisting of the following:
- Envelope No.1: Earnest Money Deposit.
 - Envelope No.2: Technical bid duly completed in all respect and signed on all pages.

- Envelope No.3: Price Bid duly filled and signed by the Contractor

These three envelopes shall then be placed in another sealed envelope with the name of work and tender notice number written on it and submitted to the tender inviting authority at the following address:

Director,
Institute of Physics,
Po: Sainik School,
Bhubaneswar, Odisha-751 005

The envelope containing the EMD shall be opened first. If EMD is found to be in order then only the envelope containing the tender will be opened. In case the EMD is not deposited or not found in order, the tender shall not be considered at all.

The envelop will be dropped on the Tender Box placed in the Extension Building on 12.10.2015 upto 15:00 hours on and will be opened on the same day at 15.30 Hours in the presence of such tenderers who desire to attend.

4. The time for carrying out the work will be 6 (six) calendar months from the 10th day after the date of written orders to commence the work.

5. Tenders are to be on the prescribed from the Institute of Physics . Tenderers should quote in figures as well as in words the rates and amounts tendered by them. The amount for each item should be worked out and the equisite total given. All Correction shall be attested by the dated initials of the tenderer. The tenderers not tendering for this work after purchase of the tender document must return the tender document and drawings to the office of the undersigned within 15 days from the date of tender. However, the cost of tender documents will not be refunded.

6. When a contractor signs a tender in an Indian language, the total amount tendered should also be written in the same language. In the case of illiterate contractors the rate of the amounts tendered should be attested by witness.

7. Earnest money, as stated in the Notice Inviting Tender should be submitted along with the Tender documents. If the same is not submitted, the Tender will summarily be rejected. The Earnest money deposit should be in the form of Demand Draft issued by any National / Scheduled Bank in Favour of Director, Institute of Physics, Bhubaneswar.

Note: i) Cheque and Bank Guarantees for Earnest Money deposit will not be accepted.

ii) In case of contractors in the approved list of State PWDS, CPWD or MES, evidence showing the appropriate and eligible class to which they belong.

Earnest Money is not Security Deposit

7 a. The earnest money, which a tender for a contract is called upon to furnish along with his tender for the contract, is not a security deposit within the meaning of rule 45 of the Saving Bank Rules for depositors. No account can, therefore be opened for the deposit of such earnest money in the Post Office Saving Bank.

Forfeiture of Earnest Money

7 b. If any tenderer withdraws his tender within the validity period or makes any modifications in the terms and conditions of the tender which are not acceptable to the Department, then the Institute shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% (fifty per cent) of the earnest money absolutely.

7 c. Advanced stamp receipt for refund of EMD should be submitted along with Tender for speedy refund of EMD to unsuccessful tenderers.

8. The contractor whose tender is accepted will be required to furnish by way of security deposit for due fulfillment of his contract, such sum as will amount to 10% of the estimated cost of the work put to tender or 10% of the amount of work order whichever is higher, subject to a maximum of Rs. 5.00 lakhs only.

The Security Deposit will be collected by deductions from the running bill of the contractor at the rates mentioned above and the earnest money deposited if deposited at the time of tenderers will be treated as a part of the Security Deposit. The security amount will also be accepted in cash. Fixed Deposit Receipts and Guarantee Bond of Scheduled Banks and State Bank of India. The Security Deposit shall be endorsed in favour of Director, Institute of Physics, Bhubaneswar-751 005.

9. The competent authority does not bind himself to accept the lowest or any other tender, and reserves to himself the authority to reject any or all of the tenders received without the assignment of a reason. All tenders in which any of the prescribed conditions is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer, shall be summarily rejected.

10. Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.

11. All rates shall be quoted on the proper form of the tender alone.

12. An item rate tender containing percentage below / above will be summarily be rejected. However, where a tenderer Voluntarily offer a rebate for payment within a stipulated period, this may be considered.

13. On acceptance of the tender, the name of the authorized representative(s) of the contractor, who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated to the Engineer-in-Charge.

14. Special care should be taken to write the rate in figures as well as in words, and the amounts in figures only in such a way that interpretation is not possible. The total amount should be written both in figures and in words. In case of figures the words 'Rs' should be written before the figures of rupees and words 'P' after the decimal figures e.g. Rs 1.15 paise and in case of words, the words 'Rupees' should be preceded and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should invariably be upto two decimal places. While quoting the rates in schedule of a quantities, the word 'only' should be written closely following the amount and it should not be written in the next line.

15. The Director does not bind himself to accept the lowest of any tender and reserves to himself the right to accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.

16. Sales Tax on turn over / works contract tax or any other tax on material in respect of this contract shall be payable by the contractor and Institute will not entertain any claim whatsoever in this respect.

17. The tender for works shall remain open for acceptance for a period of ninety days from the dated of opening of tenders. If any tenderer withdraws this tender before the said period to makes notifications in the terms and conditions of the tender which are not acceptable to the department, then the Institute shall, without prejudice to any other right or remedy be at liberty to forfeit the said earnest money absolutely.

18. The contractors exempted from payment of earnest money / Security Deposit and individual cases should attach with tender an attested copy of letter of Head, Director , Institute of Physics exempting them from the payment to earnest money / earnest money and security deposit and should produce the original whenever called upon to do so.

19. The tender for the work shall be witnessed by contractors who himself / themselves has/ have tendered or who may and has / have tendered for the same work. Failure to observe this condition would render tenders of the contactors tendering as well as witnessing tenderer liable to summary rejection.

20. It will be obligatory on the part of the tenderer to tender and sign the tender document for all components / parts.

21. Minimum value of work for interim payment- The minimum value of work done should not be less than Rs.10,00,000/-

22. The contractor shall submit list of works which are in hand (progress) in the following form:

Name of work	Name & particulars of divisions where work is being executed.	Amount of work	Position of work in progress	Remarks
1	2	3	4	5

DIRECTOR
Institute of Physics

CONTRACTORS



**Institute of Physics
Bhubaneswar**

Section – II

Tender No NIT/IOP/ 16 /2015-16

GENERAL DIRECTIONS FOR THE GUIDANCE OF CONTRACTORS

SCOPE OF WORK: INTERNAL & EXTERNAL PAINTING OF LEFT OUT RESIDENTIAL QUARTERS , ACADEMIC BUILDING, BANK AND DISPENSARY ETC. AS PER DETAILS GIVEN IN SCHEDULE OF QUANTITIES (PART-II-FINANCIAL BID)

1. *All works proposed for execution by contract will be notified in a form of invitation to tender posted in public places and signed by Director.*

This form will state the work to be carried out, as well as the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited by the successful tenderer and the percentage, if any to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by Director / Registrar /Chairman, Campus maintenance committee shall also be open for inspection by the contractor at the office of the Director/ Registrar / Chairman, Campus Maintenance committee during office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each member thereof, or in the event of the absence of any partner it must be signed on his behalf by a person holding a power of attorney authorising him to do so, such power attorney to be produced with the tender, and it must be disclosed that the firm is duly registered under the Indian partnership Act.

3. Receipts for payment made on account of work when executed by a firm must also be signed by the several partners. Except where the contractors are described in their tender as a

firm, in which case the receipt must be signed in the name of the firm by one of the partners or by some person having authority to give effectual receipts for the firm.

4. Any person who submits a tender shall fill up the usual printed form, stating at what rate he is willing to undertake each item of the work. Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other condition of any sort including conditional or unconditional rebates will be summarily rejected. No single Tender shall be include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the work to which they refer, written on the envelopes.

The rate(s) must be quoted in decimal coinage. Amount must be quoted in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.

5. Director/ Registrar / Chairman, Campus maintenance committee or his duly authorised assistant, will open tenders in the presence of any intending contractors who may be present at the time, and will enter the amount of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest money forwarded therewith shall thereupon be given to the contractor who shall thereupon for the purpose of indentification sign copies of the specifications mentioned and other documents in Rule I. In the event of a tender being rejected, the earnest money forward with such unaccepted tender shall thereupon be returned to the contractor making the same.

6. The offer inviting tenders shall have the right of rejecting all or any of the tenders, and will not be bound to accept the lowest tender.

7. The receipt of an accountant or clerk for any money paid by the contractor will not be considered as an acknowledgement of payment to the Director and the contractor shall be responsible for seeing that he procures a receipt signed by the Director , or by the accounts officer or by a duly authorised cashier.

8. The memorandum of work tendered for, and the schedule of materials to be supplied by the Institute of Physics and their issue, rates, shall be filled in and completed in the office of the Director before the tender form is issued. If a form is issued to an intending tenderer without having been so filled in and completed he shall request the office to have this done before he completes and delivers his tender.

The tender shall be accompanied by earnest money (unless exempted) of Rs. 1,30,265/- in receipt of a Scheduled Bank issued in favour of _Director, Institute of Physics , Bhubaneswar . The amount being credited to _____ A contractor exempted from depositing earnest money in individual cases, shall attach with the tender an attested copy of the letter exempting him from depositing earnest money and shall produce the original when called upon to do so.

The Tender and the earnest money shall be placed in separate sealed envelopes each marked "Tender" and "Earnest Money" respectively . Both the envelopes shall be submitted together in another sealed envelope. The envelope marked "Tender" of only those tenderers shall be opened whose earnest money placed in the other envelope is found to be in order.

I / We hereby tender for the execution for the Director , Institute of Physics of the works specified in the under written memorandum within the time specified in such memorandum at the rates specified therein and in accordance in all respect with the specifications, designs drawings, and instructions in writing referred to in rule I hereof an in Class II of conditions of contact and with such materials as are provided for by an in all respect in accordance with, such conditions so far as possible.

MEMORANDUM

- a) General Description : (A) Repair/Renovation of Qtrs.No.B-1 to B-12.
(B) Repair/Renovation of Qtrs.No.C-1 to C-4.
(C) Repair/Renovation of Qtrs.No.D-2 to D-4.
- b) Estimated cost : Rs.65,13,132/-
- c) Earnest Money : Rs.1,30,265/-
- d) Security Deposit : 5 % of the estimated cost of the work put to tender OR 5 % of the amount of work order whichever is higher, subject to a maximum of Rs. 5.00 lakhs only.

The security Deposit will be collected by deduction from the running bills of the contractor at the rates mentioned above and the earnest money, if deposited at the time of the tender, will be treated as part of security deposit. The security deposit will also be accepted in cash or in the form of Fixed Deposit Receipts and Bank Guarantee of Scheduled Banks and State Bank of India. The security Deposit shall be endorsed in favour of the Director, Institute of Physics, Bhubaneswar – 751 005 .

- e) Time allowed for the work from the 10th day after the date of written order calendar months to commence.

Should this tender is accepted, in whole or in part, I / We hereby agree (i) to abide by and fulfill all the terms and provision of the said conditions annexed hereto and all the terms and provisions contained in the notice inviting tenders so far as applicable, and / or in default thereof to forfeit and pay to the Director or his successors in office, the sum of money mentioned in the said conditions. A sum of Rs. _____ is hereby forwarded in Treasury Challan. Deposit at Call Receipt of a Scheduled Bank Guaranteed by the Reserve Bank of India as earnest money. If I / We fail to commence the work specified in the above memorandum I / we agree that the said Director or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely otherwise the sadi earnest money shall be retained by him towards security deposit mentioned against clause (d) of the above mentioned Memorandum (ii) to execute all the works referred to in the tender document upon the terms and

conditions contained or referred to therein and to carry out such deviations as may be ordered, upto a maximum of 25 (Twenty five) percent at the rate quoted in the tender documents and those in excess of that limit at the rates to be determined in accordance with the provisions contained in clause 12-A of the tender form.

I / We agree that if I / We fail to commence the work specified in the above memorandum an amount equal to the amount of the earnest money mentioned in the form of invitation of tender shall be absolutely forfeited to the Director and the same may at the option of the Director be recovered out of the deposit in so far as the same may extend in terms of the said Bond and in the event of deficiency out of any other moneys due to me / us or otherwise.

Date: _____ day of _____ 20

*Signature: _____

+ Witness: _____

Address: _____

Occupation: _____

The above tender is hereby accepted by me on behalf of the Director, Institute of Physics.

Date: _____ day of _____ 20

++ _____

+ Signature of witness to contractors signature.

* Signature of contractor before submission of tender.

++ Signature of the officer by whom accepted.



**Institute of Physics
Bhubaneswar**

Section – III

CONDITIONS OF CONTRACT

Definitions:

1. The 'contract' means the documents forming the tender and acceptance thereof and the formal agreement executed between the Director, institute of Physics and the contractor, together with the documents referred to therein including these conditions, the specifications, designs drawings, and instructions, issued from time to time by the Director / Registrar / Chairman, Campus Maintenance committee and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.

2. In the contract the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them.

a) The expression 'works' or 'work' shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent and whether original, altered, substituted or additional including all labour, materials, equipments, machinery constructions equipments, plant, plant operation and maintenance and another items required for the completion of construction.

b) The 'site' shall mean the land / or other places, on into a 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.

c) The 'contractor' shall mean the individual or firm or company whether incorporated or not undertaking the works and shall include the legal personnel representatives of such individual or the persons composing such firm or company or the successors of such firm or company.

d) The 'Director' means the Director of Institute of Physics, Bhubaneswar and his successors.

e) The Registrar means the Registrar, Institute of Physics, Bhubaneswar and the Chairman, Campus Maintenance committee means the authorised representative of the Director, Institute of Physics, who will supervise and be in-charge of the work.

f) 'Contract price' means the sum named in the tender subject to such addition thereto or deduction therefrom as may be made under the provisions herein before contained.

g) 'Temporary work' means all temporary works of every kind required in or about the execution, completion and maintenance of the works.

2(i) 'Approval' means the approval in writing by the Director, Institute of Physics of any materials and cost changes in the contract documents.

'works' imparting the singular number shall include the plural number and vice versa according to context.

Clause 1 : Security Deposit

The person(s) whose tender may be accepted (hereinafter called 'The contractor') shall permit the Institute at the time of making any payment to him for work done and measured under the contract, to deduct such sum at the rate of 10% of the gross value of the work done in each running bill, as along with the Earnest Money if any already deposited by the contractor will amount to 10% of the estimated cost of work put to tender or 10% of the amount of work order whichever is higher, subject to a maximum of Rs. 5.00 lakhs unless / he they has/have deposited the full amount of Security Deposit in the form of Guarantee Bonds of any Scheduled Bank.

CLAUSE 2 : COMPENSATION FOR DELAY

The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be deemed to be the essence of the contract on the part of the contractor and shall be reckoned from the 10th day after the day on which the order to commence the work is issued to the contractor. The work shall through out the stipulated period of the contract be proceeded with all due diligence and the contractor shall pay as compensation an amount equal to one per cent such smaller amount as the Director , Institute of Physics (whose decision in writing) shall be final may decide on the amount of the estimated cost of the whole work as shown in the tender for every day that the work remains uncommenced or unfinished, after the proper dates. To ensure satisfactory progress during execution of the work the contractor shall submit a detailed phased programme based on the departmental time schedule so as to complete the whole work within the stipulated time to the Engineer-in-Charge for approval within 15 days from the date of issue of order to start the work. Such an approved phased programme shall form part of the contract and the contractor shall be bound to maintain an interim schedule of programme accordingly. In event of the contractor failing to comply with this conditions he shall be liable to pay as compensation an amount equal to one per cent or such smaller amount as the Director, Institute of Physics , Bhubaneswar (whose decision in writing shall be final) may decide on the said estimated cost of the whole work for every day that the due quantity of the work remains incomplete. Provided always that the entire amount of compensation to be paid under the provisions of this clause shall not exceed ten per cent of the estimated cost of the work as shown in the tender.

BUFFER PERIOD

Compensation will be recovered from the contractor if the work is not completed within 10 days after due date of completion. The buffer period of 10 days relates to only to the final completion of the work as a whole and does not apply to the interim schedule of progress. In the event of the work being completed beyond the period of 10 days after the date of completion specified in the tender, the entire period inclusive of the buffer period shall be taken into account for calculating the amount of compensation.

CLAUSE 3 : ACTION IN CASE OF DELAYS INFERIOR WORKMANSHIP DAMAGES

AND / BREACHES OF CONTRACT

The Engineer-in-Charge may without prejudice to his right against the contractor in respect of any delay or inferior workmanship or otherwise to any claims for damage in respect of any delay of inferior workmanship or otherwise to any claims for damage in respect of any breaches of the contract and without prejudice to any rights or remedies under any of the provisions of this contract or otherwise and whether the date for completion has or has not elapsed by notice in writing absolutely determine the contract in any of the following cases :

i) If the contractor having been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct, or replace any defective work or that the work is being performed in any inefficient or otherwise improper or unworkman like manner shall omit to comply with the requirements of such notice for a period of 7 days thereafter or if the contractor shall delay or suspend the execution of the work so that either in the judgment of the Engineer-in-Charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion or he has already failed to complete the work by that date.

ii) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or creditor to appoint a receiver or a manager or which entitle the court to make a winding up orders.

iii) If the contractor commits breach of any of the terms and conditions of this contract.

iv) If the contractor commits any acts mentioned in clause 21 thereof.

When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge on behalf of the Director Institute of Physics shall have the powers:

a) To determine or rescind, the contract as aforesaid (of which termination or rescission notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence). Upon such determination or rescission the security deposit of the contractor shall be liable to be forfeited and shall be absolutely at the disposal of Institute.

b) To employ labour paid by the Institute of Physics and to supply material to carry out the works or any part of the work debiting the contractor with the cost of the labour and price of the materials of the amount of which cost and price certified by the Engineer-in-Charge shall be final and conclusive against the contractor and credit him with the value of work done in all respects in the same manner at the same rates as it has been carried out by the contractor under the terms of his contract.

The certificate of the Engineer-in-Charge as to the value of the work done shall be final and conclusive against the contractor provided always that action under the sub-clause shall only be taken after giving notice in writing to the contractor provided also that if the expenses incurred by the department are less than the amount payable to the contractor at his agreement rates, the difference should not be paid to the contractor.

c) After giving notice to the contractor to measure up the work of contractor and to take such part thereof as shall be unexecuted out of his hands and to give it to another contractor to complete in which case expenses which may be incurred in excess of sum which would have been paid to the original contractor if the whole work had been executed by him (of the amount of which excess the certificate in writing of the Engineer-in-Charge shall be

final and conclusive) shall be borne and paid by the original contractor and may be deducted from any money due to him by Institute under this contract or on other account whatsoever or from his security deposit or the proceeds of sales thereof or a sufficient part thereof as the case may be.

In the event of any one a more of the above course being adopted by the Engineer-in-Charge the contractor shall have to claim compensation for any loss sustained by him by reason of his having purchased or procured any material or entered into any engagements or made any advances or account or with a view to the execution of the work or the performance of contract and in case action is taken under any of the provisions aforesaid the contractor shall not be entitled to recover or be paid any sum for any work thereto for actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

CLAUSE 4 : CONTRACTORS TO REMAIN LIABLE TO PAY COMPENSATION IF ACTION NOT TAKEN UNDER CLAUSES. POWER TO TAKE POSSESSION OF OR REQUIRE REMOVAL OF OR SELL CONTRACTORS PLANT.

In any case in which any of the powers conferred upon the Engineer-In-Charge by clause 3 thereof shall have become exercisable and the same shall not be exercised, non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Engineer-In-Charge putting in force all or any of the powers vested in him under the preceding clause he may, if he so desires, after giving notice in writing to the contractor, take possession of (or at the sole discretion of the Engineer-In-Charge which shall be final) use as on hire (the amount of the hire money being also in the final determination of the Engineer-In-Charge) all or any tools, plant, materials and stores, in or upon the works, or the site thereof belonging to the contractor, or the work, or procured by the contractor and intended to be used for the execution of the work or any part thereof paying or allowing for the same in account at the contract rates, or, in the case of these not being applicable at current market rates to be certified by the Engineer-in-Charge, whose certificate thereof, shall be final otherwise the Engineer-In-Charge by notice in writing may order the contractor, or his clerk of the works, foremen or other authorised agent to remove such tools, plant, materials, or stores from the premises (within a time to be specified in such notice); and in the event of the contractor failing to comply with any such requisition, the Engineer-In-Charge may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor and at his risk in all respect and the certificate of the Engineer-In-Charge as to the expense of any such removal and the amount of the proceeds and expense of any such sale shall be final and conclusive against the contract.

CLAUSE 5: EXTENSION OF TIME

If the contractor shall desire an extension of time for completion of the work on the ground of his having been unavoidably hindered in its execution or any other ground he shall apply in writing to the Engineer-In-Charge within 30 days of the date of hindrance on account of which he desires such extension as aforesaid and the Engineer-In-Charge shall, if in his opinion (which shall be final) reasonable ground be shown, therefore, authorise such extension of time, if any as may, in his opinion be necessary or proper the contract not have any further recourse or claim and shall not bring any action for recovery of damages on the above ground.

CLAUSE 6: COMPLETION CERTIFICATE

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-In-Charge and within 10 days (at Head Quarters) 30 days (at out station) of the receipt of such notice the Engineer-In-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a certificate of completion otherwise a provisional certificate of completion indicating defects (a) to be rectified by the contractor and / or (b) for which payment will be made at reduced rates, shall be issued but no certificate of completion provisional or otherwise shall be issued, nor shall work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffoldings, surplus materials, rubbish and all huts and sanitary arrangements required for his / their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and clean off the dirt from all woodworks doors, windows, walls, floors or other parts of any building, in upon or about which the work is to be executed or of which he may have had possession for the purpose or of execution thereof, and not until the work shall have been measured by the Engineer-In-Charge if the contractor shall fail to comply with the requirements of this clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning, of dirt on or before the date fixed for the completion of work, the Engineer-In-Charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

CLAUSE 6(a):

When the annual repair & maintenance work is carried out the splashes and droppings from white washing, colour washing, painting etc. on walls, floors, doors, windows etc. shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done without waiting for the actual completion of all the other items of work in the contract. In case the contractor fails to comply with requirement of this clause, the Engineer-In-Charge shall have the right to get this work done at the cost of the contractor either departmentally or through another agency. Before taking such action, the Engineer-In-Charge shall give two days notice in writing to the contractor.

CLAUSE 7: PAYMENT OF INTERMEDIATE CERTIFICATE TO BE REGARDED AS ADVANCE

No payment shall be made for a work estimated to cost Rupees five thousand or less after the whole of the work shall have been completed and certificate or completion given. But in the case of work estimated to cost more than Rupees five thousand, the contractor shall on submitting the bill thereof be entitled to receive a monthly payment proportionate to the part thereof then executed to the satisfaction of the Engineer-In-Charge, whose certificate of the sum so payable shall be final and conclusive against the contract. But all such intermediate payments shall be regarded as payments by way of advance against the final payments only and act as payments for work actually done and completed and shall not preclude the requiring of bad, unsound and imperfect or unskilled work, to be removed and taken away and reconstructed, or re-erected or be considered as an admission of the due performance of the contract, or any part thereof in any respect of the accruing of any claim, nor shall it conclude, determine or affect in any way the powers of the Engineer-In-Charge under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise in any other way vary or affect the contract. The final bill shall submitted by the contractor within one month of the date fixed for completion of the work or of the date of the certificate of completion furnished by the Engineer-In-Charge and payments shall be made within three months if the amount of the contract plus that of the additional item is upto Rs. 2.00 lakhs, and in 6 months if the same exceeds Rs. 2.00 lakhs, of the submission of such bill, If there shall be any dispute about any item or items of the work then the undisputed item or items of the work only shall be paid within the said period of three months or six months as the case may be. The contractor shall submit a list of the disputed items within

thirty days from the disallowance thereof and if he fails to do this, his claim shall be deemed to have been fully waived and absolutely extinguished.

CLAUSE 8: BILLS TO BE SUBMITTED MONTHLY

A bill shall be submitted by the contractor on or before 10th of each month for all works executed in the previous month and the Engineer-In-Charge shall take or cause to be taken the requisite measurement for the purpose of having the same verified and the claim as far as admissible, adjusted as far as possible before the expiry or thirty days from, the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid the Engineer-In-Charge may depute within seven days of the date fixed as aforesaid a subordinate to measure the work and in the presence of the contractor whose counter signature to the measurement list will be sufficient warrant, and the Engineer-In-Charge may prepare a bill from such list.

**CLAUSE 8A: CONTRACTOR TO BE GIVEN A WEEK TO FILE OBJECTIONS TO THE MEASUREMENTS RECORDS BY
DEPARTMENT**

Before taking any measurement of any work as has been referred to in clause 6, 7 and 8 thereof, the Engineer-In-Charge or a subordinate deputed by him shall give two days notice to the contractor, who shall attend and assist the Engineer in making such measurements and furnish all required particulars. If the contractor fails to attend at the measurements after such notice or fails to counter sign or to record the difference within a week from the date of measurement in the manner required by the Engineer-In-Charge or by the subordinate deputed by him as the case may be shall be final and binding on the contractor and the contractor shall have no right to dispute the same.

CLAUSE 9: BILL TO BE IN PRINTED FORMS

The contractor shall submit all bills on the printed forms to be handed on applications at the office of the Engineer-In-Charge and the charges in the bills shall always be entered at the rates specified in the tender or in the case of any extra work ordered in pursuance of these conditions and not mentioned or provided for in the tender at the rate hereinafter provided for such work.

CLAUSE 9A: PAYMENT OF CONTRACTOR'S BILLS TO BANKS

Payment due to the contractor may, if so desired by him, be made to his bank instead of direct to him provided that the contractor furnishes to the Engineer-In-Charge (1) and authorisation in the form of a legally valid document such as a power of attorney conferring authority on the bank to receive payment and (2) his own acceptance of the correctness of the accounts made out as being due to him by Institute of his signature on the bill or other claims preferred against Institute or before settlement by the Engineer-In-Charge account or claim by payment to the bank. While the receipts given by such a bank shall constitute a full sufficient discharge for the payment, the contractor should wherever possible, present his bills duly receipted and discharged through his bankers.

Nothing herein contained shall be operated to create in favour of the bank any rights or equities viz-a-viz the Director.

CLAUSE 10: STORES SUPPLIED BY INSTITUTE

If the specification or schedule of items provided for the use of any special description of materials to be supplied from the Engineer-In-Charge's stores, or if it is required that the contractor shall use certain stores to be provided by the Engineer-In-Charge as shown in schedule of materials hereto annexed, the contractor shall be bound to procure and shall be supplied such materials and stores as are from time to time required to be used by him for the purpose of the contract only, and the value of the full quantity of materials and stores so supplied at the rates specified in the said schedule of materials may be set off or deducted from any sums then due, or thereafter to become due to the contractor under the contract or otherwise or against or from the security deposit, or the proceeds of sales thereof if the same is held in Institute securities the same or a sufficient portion thereof being in this case sold for the purpose. All materials so supplied to the contractor shall remain the absolute property of Institute , and shall not be removed on any account from the site of the work, and shall be at all times open to inspection by the Engineer-In-Charge. Any such materials remaining unused and in perfectly good condition at the time of completion or termination of the contract shall be returned to the Engineer-In-Charge at a place directed by him if a notice in writing under his hand be shall so required but the contractor shall not be entitled to return any such materials unless with such consent, and shall have no claim for compensation on account of any such materials as supplied to him as aforesaid not being used by him or for any wastage or damage to any such materials. Provided that the contractor shall in no case be entitled to any compensation or damage on account of any delay in supply or non-supply thereof all or any such materials and stores. Provided further that the contractor shall be found to execute the entire work if the materials are supplied by the Institute within the (work if the materials are supplied by government within the) scheduled time for completion of the work plus 50 percent thereof (schedule time plus six months if the time of completion of the work exceeds 12 months) but if a part only of the material has been supplied within the aforesaid period then the contractor shall be bound to do such of the work as may be possible with the materials and stores supplied in the aforesaid period. For the completion of the rest of the work, the contractor shall be entitled to such extension of time as may be determined by the Engineer-In-Charge whose decision in this regard shall be final.

CLAUSE 10A: STORES SUPPLIED BY CONTRACTOR

The Engineer-In-Charge shall have full powers to require the removal from the premises of all materials which, in his opinion are not in accordance with the specifications and in case of default the Engineer-In-Charge is to be at liberty to employ other persons to remove the same without being answerable or accountable, for any loss or damage that may happen or arise to such materials. The Engineer-In-Charge shall also have full powers to require other proper materials to substituted there for and in case of default the Engineer-In-Charge may cause the same to be supplied and all cost which may attend such removal and substitutions are to be borne by the contractor.

CLAUSE 10B:

The contractor on signing an indenture in the form to be specified by the Engineer-In-Charge shall be entitled to be paid during the progress of the execution of the work 75% of the estimate value of

any materials which are in the opinion of the Engineer-In-Charge non-perishable and are in accordance with the contract which have been brought on the site in connection therewith and are adequately stored and / or protected against damage by weather or other causes but which have not at the time of advance been incorporated in the works. When materials on account of which an advance has been made under this sub-clause are incorporated in the work the amount of such advances shall be deducted from the next payment made under any of the clause or clauses of this contract.

CLAUSE 10C: VARIATION IN PRICE OF MATERIALS

If after submission of the tender, the price of any material incorporated in the works (not being a material supplied from the Engineer-in-Charge's stores in accordance with clause 10 thereof) and/or wages of labour increases as a direct result of the coming into force of any fresh law, or statutory rule or order (but not due to any changes in sales tax) and such increase in the price and/or wages prevailing at the time of the last stipulated date for receipt of the tenders including extensions, if any, for the work, and the contractor thereupon necessarily and properly pays in respect of that material (incorporated in the works) such increased price and /or in respect of labour engaged on the execution of the work such increased wages, then the amount of the contract shall accordingly be varied and provided further that any such increase shall not be payable if such increase has become operative after the stipulated date of completion of the work in question.

If after submission of the tender, the price of any material incorporated in the works (not being a material supplied from the Engineer-in-Charge's stores in accordance with Clause 10 thereof) and/or wages of labour is decreased as a direct result of the coming into force of any fresh law or statutory rules or order (but not due to any changes in sales tax) and such decrease in the prices and/or wages prevailing at the time of receipt of the tender for the work. Institute shall in respect of materials incorporated in the works (not being materials supplied from the Engineer-in-Charge's stores in accordance with Clause-10 thereof) and/or labour engaged on the execution of the work after the date of coming into force of such law statutory rule or order be entitled to deduct from the dues of the contractor such amount as shall be equivalent to the difference between the prices of the materials and/or wages as prevailed at the time of the last stipulated date for receipt of tenders including extensions if any for the work and the prices of materials and/or wages of labour on the coming into force of such law, statutory rules or order.

The contractor shall, for the purpose of this condition, keep such books of account and other documents as are necessary to show the amount of any increase claimed or reduction available and shall allow inspection of the same by a duly authorised representative of the Institute, and further shall, at the request of the Engineer-in-Charge may require any documents so kept and such other information as the Engineer-in-Charge may require.

The contractor shall, within a reasonable time of his becoming aware of any alteration in the price of any such materials and/or wages of labour, given notice thereof to the Engineer-in-Charge stating that the same is given pursuant to this condition together with all information relating thereto which he may be in position to supply.

CLAUSE 10(CC):

If the prices of materials (not being materials supplied or services rendered at fixed prices by the Department in accordance with Clause 10 & 34 thereof) and / or wages of labour required for execution of the work increases, the contractor shall be compensated for such increase as per provision detailed below and the amount of the contract shall accordingly be varied, subject to the condition that such compensation for escalation in prices shall be available only for the work done during the stipulated period of the contract including such period for which the contract is validity extended under the provisions of Clause 5 of the contract without any action under Clause 2 and also subject to the condition that no such compensation shall be payable for a work for which the stipulated period of completion is 18 months or less. Such compensation for escalation in the prices of materials and labour, when due, shall be worked out based on the following provisions:

1. The base date for working out such escalation shall be the last stipulated date of receipt of tenders including extension, if any

2. The cost of work on which the escalation will be payable shall be reckoned as below:

a) Gross value of the work done upto this quarter:

(A)

b) Gross value of work done upto the last quarter:

(B)

c) Gross value of work done since previous quarter (a-b):

(C)

d) Full assessed value of Secured advance fresh paid in this quarter:

(D)

e) Full assessed value of Secured advance recovered in this quarter:

(E)

f) Full assessed value of Secured advance for which escalation is payable in this quarter(d-e):

(F)

g) Advance payment made during this quarter:

(G)

h) Advance payment recovered during this quarter:

(H)

i) Advance payment for which escalation is payable in this quarter (g-h):

(I)

j) Extra items paid as per clause 12 & 12A based on prevailing market rates during this quarter Then $X=C+F+I-J$ (j)

$$Y=0.85X$$

k) Less cost of material supplied by the department as per clause 10 and recovered during the quarter: (K)

l) Less cost of services rendered at fixed charges as per clause 34 and recovered during the quarter: Cost of work for which escalation is applicable: $W=Y(K+L)$ (L)

3. The components of materials, labour, P.O.L., etc. shall be predetermined for every work and incorporated in the conditions of contract attached to the tender papers and the decision of the Engineer-In-Charge in working out such percentage shall be binding on the contractor.
4. The compensation for escalation for materials and P.O.L. shall be worked out as per the formulae given below:

$$i) \quad V_M = W \times \frac{X}{100} \times \frac{(MI - MI_O)}{MI_O}$$

V_M = Variation in material cost i.e. increase or decrease in the amount in rupees to be paid or recovered

W = Cost of work done worked out as indicated in sub para 2 above.

X = Component of materials expressed as percent of the total value of work.

MI & MI_O = All India whole sale index for all commodities for the period under reckoning as published by the Economic Adviser to Government of India, Ministry of Industry and the Commerce, for the period under consideration and that valid at the time of receipt of tenders, respectively.

$$ii) \quad V_F = W \times \frac{Z}{100} \times \frac{(FI - FI_O)}{FI_O}$$

V_F = Variation in cost of fuel, oil and lubricants increase or decrease in rupees to be paid or recovered.

W = Value of work done, worked out as indicated in sub para 2 above.

Z = Component of P.O.L. expressed as a percent of total value of work as indicated under the special conditions of contract.

FI & FI_O = Average index number of wholesale price for group (fuel, power light and lubricants) as published weekly by the Economic Advisor to Government of India, Ministry of Industry for the period under reckoning, and that valid at the time of receipt of tenderers respectively.

- 5) The following principles shall be followed while working out the indices mentioned in para 4 above.
- The compensation for escalation shall be worked out at quarterly intervals and shall be with respect to the cost of work done during the three calendar months of the said quarter. The first such payment shall be made at the end of three months after the month (excluding) in which the tender was accepted and thereafter at three months interval. At the time of completion of the work, the last period for payment might become less than 3 months, depending on the actual date of completion.
 - The index (MI/FI etc) relevant to any quarter for which such compensation is paid shall be arithmetical average of the indices relevant to the three calendar months. If the period up to date of completion after the quarter covered by the last such installment of the payment, is less than three months, the index MI and FI shall be the average of the indices for the months falling within that period.
 - The base index, MI_O , FI_O etc. shall be one relating to the month in which the tender was stipulated to be received.
- 6) The compensation for escalation for labour shall be worked out as per the formula given below:

$$i) \quad V_L = W \times \frac{Y}{100} \times \frac{(LI - LI_O)}{LI_O}$$

V_L = Variation in labour cost i.e. amount of increase or decrease in rupees to be paid or recovered.

W = Value of work done, worked out as indicated in sub-para 2 above.

Y = Component of labour expressed as a percentage of the total value of the work.

L_0 = Minimum daily wage in rupees of an unskilled adult male mazdoor, as fixed under any lay, statutory rule or order as on the last date on which tenders for the work were to be received.

LI = Minimum wage in rupees of an unskilled adult mazdoor, as fixed under any law, statutory rule or order as applicable on the last day of the quarter previous to the one during which the escalation is being paid.

- 7) The following principles will be followed while working out the compensation as per sub-para 6 above.
- a) The minimum wage of an unskilled male mazdoor, mentioned in sub-para 6 above shall be the higher of the following two figures; namely those notified by Government of India, Ministry of labour and those notified by the local administration, both relevant to the place of work and the period of reckoning.
 - b) The escalation for labour also shall be paid at the same quarterly intervals when escalation due to increase in cost of materials and / or P.O.L. is paid under this clause. If such revisions of minimum wages takes place during any such quarterly intervals, the escalation compensation shall be payable for work done in all quarters subsequent to the quarter in which the provision of minimum wages take place.
 - c) Irrespective of variations in minimum wages of any category of labour, for the purpose of this clause, the variation in the rates for an unskilled adult male mazdoor alone shall form the basis for working out the escalation compensation payable on the labour component.
- 8) In the event of the price of materials and / or wages of labour required for execution of the work decrease/s , there shall be downward adjustment of the cost of work so that such price of materials and / or wages of labour shall be deductible from the cost of work under this contract and in this regard the formula herein before stated under this clause 10(CC) shall mutatis motandis apply, provided that
- (i) No such adjustment for the decrease in the price of materials and / or wages of labour aforementioned would be made in case of contracts in which the stipulated period of completion of the work is six months or less.
 - (ii) The Engineer-in-Charge shall be otherwise be entitled to lay down the principles on which the provision of this sub-clause shall implemented from time to time and the decision of Engineer-in-Charge in this behalf shall be final and binding. Provided always that the provision of the proceeding clause 1 (c) shall not be applicable for contract where provisions of this clause are applicable but in case where provision of this clause are not applicable the provisions of clause 10 (c) will become applicable.

CLAUSE 10(DD)

The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work etc. as Institute's property and such materials shall be disposed off to the best advantage of Institute according to the instructions in writing issued by Engineer-in-Charge.

CLAUSE 11 WORKS TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATION DRAWINGS ORDERS ETC

The contractor shall execute the whole and every part of the work in the most substantial and workman like manner and both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the designs, drawings and instructions in writing in respect of the work assigned by the Engineer-in-Charge and the contractor shall be furnished free of charge one copy of the specifications, and of all such designs; drawings and instructions in force from time to time or any

other printed publication on General specification referred to elsewhere in the contract. In case of any class of work for which there is no such specification then contractor shall carry out the work in all respects in accordance with instructions of Engineer-in-Charge.

CLAUSE 12 **ALTERATIONS IN SPECIFICATIONS AND DESIGNS**

The Engineer-in-Charge shall have power to make any alterations, in omission from, additions to or substitutions for the original specification, drawings, designs and instructions, that may appear to him to be necessary during the progress of the work, and the contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Engineer-in-Charge and such alterations, omissions, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respect on which he agreed to do the main work.

The time for completion or the work shall be extended in the proportion that the altered addition or substituted work bears to the original contract work and the certificate of the Engineer-in-Charge shall be conclusive as to such proportion. Over and above this further period to the extent of 25 % of such extension shall be allowed to the contractor. The rates for such additional altered or substituted work under this clause shall be worked out in accordance with the following provisions in their respective order.

- h) If the rates for the additional, altered or substituted works are specified in the contract for the work, the contractor is bound to carry out the additional, altered or substituted work at the same rates as are specified in the contract for the work.

- ii) If the rates for the additional, altered or substituted work are not specifically provided in the contract or the work, the rates will be derived from the rates for a similar class of work as are specified in the contract for the work.

- iii) If the rates for the altered, additional, or substituted work cannot be determined in the manner specified in sub clauses (i) & (ii) above then the contractor shall within 7 days of the date of receipt order to carry out the work, inform the Engineer-in-Charge of the rates which it is his intention to charge for such class of work, supported by analysis of the rate or rates claimed and the Engineer-in-Charge shall determine the rate or rates on the basis of prevailing market rates and pay the contractor accordingly. However, the Engineer-in-Charge, by notice in writing will be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner as he may consider advisable. But under no circumstances, the contractor shall suspend the work on the plea of non-settlement of rates of items falling under the clause.

- iv) Except in case of items relating to foundations provisions contained in sub-clauses (i) to (iii) above shall not apply to contract or substituted items as individually exceed the percentage set out in the tender documents (referred to herein below as deviation limit) subject to the following restriction:
 - a) The deviation limit referred to above is the net effect (algebraical sum) of all additions and of all additions and deductions ordered.
 - b) In no case shall the additions / deductions (arithmetical sum) exceed twice the deviation limit.
 - c) The deviation ordered on items of any individual trade included in the contract shall not exceed plus / minus 50% of the value of that trade in the contract as a whole or half the deviation limit whichever is less.
 - d) The value of addition of items of any individual trade not already included in the contract shall not exceed 10% of the deviation limit.
The rate of any such work except the items relating to foundations which is in excess of the deviation limit shall be determined in accordance with the provisions contained in clause 12a

CLAUSE 12A:

In the case of contract or substituted items which individually exceeds the quantity stipulated in the contract by more than the deviation limits, except the items relating to foundation, works which the contractor is required to do under clause 12 above, the contractor shall, within 7 days from the receipt of order, claim revision of the rates supported by proper analysis in respect of such items for quantities in excess of the deviation limits notwithstanding that the rates for such items exist on the tender for the main work or can be derived in

accordance with the provisions of sub-clause (ii) of clause 12, and the Engineer-in-Charge may revise their rates, having regard to the prevailing market rates and the contractor shall be paid in accordance with the rates so fixed. The Engineer-in-Charge shall however, be at liberty to cancel his order to carry out such increase quantities of work by giving notice in writing to contractor and arrange to carry it out in such a manner as he may consider advisable. But, under no circumstances the contractor shall suspend the work on the plea of non-settlement of rates of items falling under this clause.

All the provisions of the proceeding paragraphs shall equally apply to the decrease in the rates of items for quantities in excess of the deviation limit notwithstanding the fact that the rates for such items exists in the tender for the main work or can be derived in accordance with the provisions of sub-clause (ii) of the proceeding clause 12, and the Engineer-in-Charge may revise such rates having regard to the prevailing market rates.

CLAUSE 13: NO COMPENSATION FOR ALTERATION IN OR RESTRICTION OF WORK TO BE CARRIED OUT:

If at any time after the commencement of the work the Director, Institute of Physics shall be for any reason whatsoever not require the whole thereof as specified in the tender to be carried out the Engineer-in-Charge shall give notice in writing of the fact to the contractor who shall have to stain to any payment of compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out neither shall have any claim for compensation by reason of any alternations having been made in the original specification, drawings, designs and instructions which shall involve any curtailment of the work as originally contemplated.

Provided that the contractor shall be paid the charge on the cartage only of materials actually and bonafide brought to the site of the work by the contractor and rendered surplus as a result of the abandonment of curtailment of the work or any portion thereof and then taken back by the contractor, provided however that the Engineer-in-Charge shall have in all such cases the option of taking over all or any such materials at their purchase price or at local current rates whichever may be less. In the case of such stores having been issued from Institute stores, supervision charges and stores shall be refunded in addition to the issue rates of materials.

CLAUSE 14: ACTION AND COMPENSATION PAYBLE IN CASE OF BAD WORK

If it shall appear to the Engineer-in-Charge or his subordinate In-charge of the work that any work has been executed with unsound, imperfect or unskillful workmanship or with materials of any inferior description or that any material or articles provided by him for the execution of the work or unsound or of a quality inferior to that contracted for or otherwise not in accordance with the contract, the contractor shall on demand in writing which shall be made within six months of the completion of the work from the Engineer-in-Charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified, forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable material or articles at his own proper charge and cost, and in the event of his failing to do so within a period to be specified by the Engineer-in-Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the rate of one percent on estimated amount put to tender for every day not exceeding ten days while his failure to do so shall continue and in the case of any such failure the Engineer-in-Charge may rectify or remove and re-execute the work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expense in all respects of the contractors.

CLAUSE 15: WORK TO BE OPEN TO INSPECTION

All work under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of Engineer-in-Charge and his authorised subordinate and the contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-Charge or his subordinate to visit the works shall have been given to the contractors either himself be present to receive order and instructions, or have a responsible agent duly accredited in writing present for that purpose. Orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

CLAUSE 16: NOTICE TO BE GIVEN BEFORE WORK IS COVERED UP

The contractor shall give not less than seven days notice in writing to the Engineer-in-Charge or his subordinate in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured an correct dimensions thereof be taken before the same is so covered up or placed beyond the reach of measurement any work without the consent in writing of Engineer-in-Charge or his subordinate In-charge of the work shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurement without such notice having been given or Engineer-in-Charge's consent being obtained the same shall 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.

CLAUSE 17: **CONTRACTOR LIABLE FOR DAMAGE DONE AND FOR IMPERFECTIONS NOTICED WITHIN THE PRESCRIBED MAINTENANCE PERIOD AFTER THE CERTIFICATE**

If the contractor or his working people or servants shall break , deface, injure or destroy any part of building in which they may be working, or any building, road, road curb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees grass or grassland or cultivated ground contiguous to the premises on which the work or any part is being executed or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve months (8 months in the case of any work other than road work costing Rs. 1,00,000/- and below) after a certificate final or otherwise of its completion shall have been given by the Engineer-in-Charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-Charge cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time there after may become due to the contractor, or from his security deposit of the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of twelve months (six months in the case of any work other than road work costing Rs. 10,00,000/- and below) after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed which ever is later. Provided that in the case of road work if in the opinion of the Engineer-in-Charge, half of the security deposit is sufficient, to meet all liabilities of the contract or under this contract, half of the Security Deposit will be refundable after six months and the remaining half after twelve months of the issue of the said certificate of completion or till the final bill has been prepared and passed whichever is later.

CLAUSE 18: **CONTRACT TO SUPPLY ALL PLANT LADDERS SCAFFOLDING ETC**

The contractor shall provide at his own cost all materials (except such materials, if any, as may in accordance with the contract be supplied from the Engineer-in-Charge's stores) plants tools appliances, implements, ladders, cordage tackle, scaffolding of the temporary works requisite or proper execution of the work whether original, altered or substituted and whether included in the specification or other documents forming part of contract or referred to in these conditions or not or which may be necessary for the purpose of satisfying of complying with the requirements of the Engineer-in-Charge as to any matter as to which is entitled to require together with carriage thereof to and from the work The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting weighing and assisting of the measurement or examination at any time and from time to time of the work or materials. Failing this so doing the same may be provided by the Engineer-in-Charge at the expense of the contractor and the expense may be deducted from any money due to the contractor under the contract and or from his security deposit or proceeds of sale thereof or of a sufficient portion thereof.

CLAUSE 18A: **WORKMEN'S COMPENSATION**

In every case in which by virtue of the provision of section 12, Sub-section (1) of the Workmen's Compensation Act 1923 Government is obliged to pay compensation to a workmen employed by the contractor in execution of the work Institute will recover for the contractor the amount, of the compensation so paid and without prejudice to the rights of the Government under section 12, sub-section (2) of the said Act, Institute shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by or otherwise, Institute shall not be bound to contest any claim against it under section 12, sub-section (1) of the said Act, except on the written request of the contractor and upon his giving to Institute full security for all costs for which Institute might become liable in consequence of the contesting such claim.

CLAUSE 19A: **LABOUR**

No labour below the age of fourteen years shall be employed on the work.

CLAUSE 19B: PAYMENT OF WAGES TO LABOURERS FAIR WAGE CLAUSE

- a) The contractor shall pay not less than fair wages to labourers engaged by him on the work.

Explanations: "Fair Wage" mean whether for time or piece work notified at the time of inviting tenders for the work and where such wages have not been so notified the wages prescribed by the Central Public Works Department for the district in which the work is done. It will be notified / prescribed by C.P.W.D. in consultation with the officers of the Industrial Relations Machinery located in the respective areas and will not be less than the minimum rates of wages fixed by the Government for that class of employee engaged on the same type of work in the same area.

- b) The contractor shall notwithstanding the provisions of any contract to the contrary, cause to be paid fair wages to labourers indirectly engaged on the work, including any labour engaged by his subcontractors in connection with the said work, as if the labourers had been immediately employed by him.
- c) In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this agreement the contractor shall comply with and cause to be complied with, the Central Public Works Department Contractor's Labour Regulations made by Government from time to time in regard to payment of wages, wage period, deductions from wages, recovery of wages not paid and deductions unauthorisedly made maintenance of wage books, wage slips publications of scale of wages and other returns and all other matters of a like nature.
- d) The Engineer-in-Charge concerned shall have the right to deduct from moneys due to the contractor by sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the condition of the contract for the benefit of the workers, non payment of wages or deduction made from or their terms of the contract or non observance of the regulations.
- e) Under the provisions of the Minimum Wages Act 1948 and the minimum wages (Central) Rules, 1950 the contractor is bound to allow or cause to be allowed to the labourers directly or indirectly employed in the works one day's rest for six days continuous work and pay wages at the same rates as for duty. In the event of default, the Engineer-in-Charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holiday to any labourer and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge.
- f) Vis-a-vis the Central Government, the contractor shall be primarily liable to all payments to be made under and for the observance of the regulations aforesaid without prejudice to this right to claim indemnity from his sub-contractors.
- g) The regulations aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be breach of this contract.

CLAUSE 19C:

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this agreement, the contractor shall at his own expenses arranged for the safe provisions as per C.P.W.D. Safety Code framed from time to time and shall at his own expenses provide for all facilities in connection therewith. In case the contractor fails to make arrangements and provide necessary facilities as aforesaid he shall be liable to pay a penalty of Rs. 50/- for each default to and in addition the Engineer-in-charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from contractor.

CLAUSE 19D:

The contractor shall submit by the 4th and 19th of every month, to the Engineer-in-Charge a true statement showing, in respect of the second half of the preceding months and the first half of the current month, respectively (1) the number of labourers employed by him on the

work, (2) their working hours, (3) the wages paid to them (4) the accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damages and injury caused by them and (5) the number of female workers who have been allowed maternity benefit according to Clause 19 (f) and the amount paid to them failing which the contractor shall be liable to pay to Institute a sum not exceeding Rs. 50/- for each default or materially incorrect statement. The decision of the Engineer-in-Charge shall be final in deducting from any bill due to the contractor the amount levied a fine.

CLAUSE 19E: HEALTH AND SANITARY ARRANGEMENT FOR WORKERS

In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this agreement, the contractor shall comply with or cause to be complied with all rule framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by the Institute of Physics and its contractor.

CLAUSE 19F:

**LEAVE AND PAY DURING LEAVE
SHALL BE REGULATED AS FOLLOWS**

**MATERNITY BENEFIT RULES
EMPLOYED BY CONTRACTORS**

1. Leave

i) In case of delivery, maternity leave not exceeding 8 weeks, 4 weeks, 4 weeks upto and including the day of the delivery and 4 weeks following that day.

ii) In the case miscarriage-
upto 3 weeks from the date of miscarriage.

2. Pay

In case of delivery – leave pay during maternity leave will be at the rate of the woman's average daily earnings calculated on the total wage earned on the days when full time work was done during a period of 3 months immediately preceding the date on which she gives notice that she expects to be confined or at the rate of Rs 1/- a day whichever is greater.

ii) In case of miscarriage leave pay at the rate of average daily earnings calculated on the total wages earned on the days when full time work was done during a period of 3 days when full time work was done during a period of 3 months immediately preceding the date of such miscarriage.

3. Conditions for the grant of maternity leave

No maternity leave benefit shall be admissible to a woman unless she has been employed for a total period not less than 6 months immediately preceding the date of which she proceeds on leave.

4. The contractor shall maintain a register a maternity (benefit) in the prescribed form as shown hereinafter and the same shall be kept at the place of work.

CLAUSE 19(G)

In the event of the contractors committing a default of breach of any of the provisions of the Central Public Works Departments Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangement for the workers as amended from time to time of furnishing any information or submitting or filling any statement under provisions of the above regulations and rules which is materially incorrect, he / they shall without prejudice to any other liability pay to the Institute a sum not exceeding Rs 50/- for every default , breach of furnishing, making submitting, filing such materially incorrect statements and in the event of the contractor's defaulting continuously in this respect the penalty may be enhanced to Rs. 50/- per day for each day of default subject to a

maximum of 5 percent of the estimated cost of the work put to tender. The decision of the Engineer-in-Charge shall be final and binding on the parties.

Should it appear to the Engineer-in-Charge that the contractor(s) is /are not properly observing and complying with the Model Rules for the protection of health and sanitary arrangements for the work people employed by the contractor(s) (hereinafter referred to as 'the said rules') the Engineer-in-Charge shall have power to give notice in writing to the contractor(s) requiring that the said rules be complied with and the amenities prescribed therein be provided to the work people within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and observe the said rules and to provide the amenities to the work people as aforesaid the Engineer-in-Charge shall have the power to provide the amenities herein before mentioned at the cost of the contractor(s). The contractor(s) shall erect, make and maintain at his / their own expense and to approved standards, all necessary hut and sanitary arrangements required for his / their work people in the connection with the execution of the works and if the same shall not have been erected or constructed, according to approved standards and if the contractor (s) shall fail to remodel or reconstruct such huts and sanitary arrangements according to approved standards within in the period specified in the notice, the Engineer-in-Charge shall have the power to remodel or reconstruct such huts and sanitary arrangements according to approved standards at the cost of the contractor (s).

CLAUSE 19(H)

The Contractor(s) shall at his / their own cost provide his / their labour with a sufficient number of huts (hereinafter referred to as the camp) of the following specifications on a suitable plot of land to be approved by the Engineer-in-Charge.

1(a) The minimum height of each hut at the eye level shall be 7' (2.14meters) and the floor area to be provided will be at the rate of 30 sq. ft. (2.79 sq. m) for each member of the worker's family staying with the labourer.

(b) The contractor(s) shall in addition construct suitable cooking places having a minimum area of 6'X5' (1.83x1.52 m) adjacent to the hut for each family.

(c) The contractor(s) shall also construct temporary latrines and urinals for the use of labourers each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women.

(d) The contractor(s) shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitably screened.

2(a) All the huts shall have walls of sub-dried or burnt bricks laid in mud mortar or other suitable local materials as may be approved by the engineer-in-Charge, in case of sun-dried bricks, the walls should be plastered with mud gobri on both sides. The floor may be katcha but plastered with mud gobri and shall be at least 6" (150mm) above the surrounding ground. The roofs shall be laid with thatched or any other materials as may be approved by the Engineer-in-Charge and the contractor shall ensure that throughout the period of their occupation the roofs remain water-tight.

- (b) The contractor(s) shall provide each hut with proper ventilation.
- (c) All doors, windows, and ventilators shall be provided with suitable leaves for security purposes.
- (d) There shall be kept an open space of at least 8 yards (7.32 meters) between the rows of huts which may be reduced to 20ft. (6.10 meters) according to the availability of site with the approval of the Engineer-in-Charge back to back construction will be allowed.

3. **Water supply**

The contractor(s) shall provide adequate supply of water for the use of labourers. The provisions shall not be less than 2 gallon (9.1 litres) of pure and wholesome water per head per day for drinking purposes and 3 gallons (13.6 litres) of clean water per head per day for bathing and washing purposes. Where piped water supply is available, supply shall be at stand post and where the supply is from wells or river, tanks, which may be of metal or masonry, shall be provided. The contractor(s) shall also at his / their own cost make arrangements for laying pipe lines for water supply to his / their labour camp from the existing main wherever available, and shall pay all fees and charges, therefore.

- 4. The site selected for the camp shall be high ground, remote from jungle.

5. **Disposal of Excreta**

The contractor(s) shall make necessary arrangements for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the local health authorities. If trenching or incineration is not allowed, the contractor(s) shall make arrangements for the removal of the excreta through the Municipal Committee / authority and inform it about the number of labourers employed so that arrangements may be made by such committee / authority for the removal of excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality / authority. The contractor shall provide one sweeper for every 8 seats in case of dry system.

6. **Drainage**

The contractor(s) shall provide sufficient arrangements for draining away sewage water so as to keep the camp neat and tidy.

- 7. The contractor(s) shall provide sufficient arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.

8. **Sanitation**

The contractor(s) shall make arrangements for conservancy and sanitation in the labour camps according to the rules of the local public Health and Medical authorities.

CLAUSE 19(I)

The Engineer-in-Charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors employ upon the work who may be incompetent or misconduct himself and the contractor shall forthwith comply with such requirements.

CLAUSE 20

The contractor shall comply with all the provisions of the Minimum Wages Act, 1948 and rules framed thereunder and other labour laws.

CLAUSE 21 : WORK NOT TO BE SUBLET CONTRACT MAY BE RESCINDED AND SECURITY DEPOSIT FOR SUBLETING BRIBING OR IF CONTRACTOR BECOMES INSOLVENT

The contractor shall not assign or sublet without the written approval of the Engineer-in-Charge. And if the contractor shall assign or sublet this contract, or attempt to do so or become insolvent or commence any insolvency proceedings or make any composition with his opediors, or attempt so to do or if any bribe, gratuity, gift, loan perquisited, reward or advantage pecuniary or otherwise shall either directly or indirectly be given promised or offered by the contractor, or any of his servants or agents to any public officer or persons in the employ of Institute in any way relating to this officer or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-Charge on behalf of the Director shall have power to adopt any other courses specified in clause 3 as he may best deem suited in the interest of Institute in the event of any of those courses being adopted, the consequences specified in the said clause 3 shall ensure.

CLAUSE 22 : SUM PAYBLE BY WAY OF COMPENSATION TO BE CONSIDERED AS REASONABLE COMPENSATION WITHOUT REFERENCE TO ACTUAL LOSS

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of Institute without reference to the actual loss or damage sustained, and whether or not any damage shall have been sustained.

CLAUSE 23 : CHANGES IN CONSTITUTIONS

Where the contractor is a partnership firm, the previous approval in writing of the Engineer-in-Charge shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern such approval as aforesaid shall like-wise be obtained before partnership firm would have the right to carry out the work hereby undertaken by the contractor. If previous approval as aforesaid in contravention of clause 21 hereof the same action may be taken and the same consequence shall ensure as provided in the said clause 21.

CLAUSE 24 : WORK TO BE UNDER DIRECTION OF ENGINEER-IN-CHARGE

All the works to be executed under the contract shall be executed under the direction and subject to the approval in all respect of the Engineer-in-Charge, who shall be entitled to direct at what point or points and in what manner they are to be commenced and from time to time carried on.

CLAUSE 25 : SETTLEMENT BY ARBITRATION

Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions herein before mentioned or as to the quality of workmanship or materials used on the work or arising out of the terms or conditions of one contract whether during the progress of the work or after the completion or abandonment thereof shall be referred to the sole arbitration of the person appointed by Director IOP in respect of the contract entered into by any subordinate authority under him. However, if the contract is entered into by Director IOP the Arbitrator shall be appointed by the Department of Atomic Energy.

It will be no objection to any such appointment that the arbitrator so appointed is a Government servant, that he had to deal with the matters to which the contract relates or that in the course of his duties as Government servant he had expressed view on all or any of the matters in dispute or difference. The arbitrator to whom the matter is originally referred being transferred or vacating his office or being unable to act for any reason, the authority as aforesaid at the time of such transfer, vacation of office or inability to act shall appoint another persons to act as arbitrator in accordance with the terms of the contract. Such persons shall be entitled to proceed with the reference from the stage at which it was left by his predecessor. It is also a term of this contract that no person other than a person appointed by such authority as aforesaid should act as arbitrator and if for any reason, that is not possible, the matter is not to be referred to arbitration at all. In all arbitration matters wherein the total amount of either the claims or the counter claims in dispute is Rs. 50,000/- (Rupees fifty thousand only) or more than arbitrator would have to give reasons for awarding the claims or counter claims. In an arbitration invoked at the instance of either party to the contract, the arbitrator would be free to consider also the counter claims of the other party even though they are not mentioned in the reference to arbitration.

Subject as aforesaid the provision of the Arbitration Act 1940 of any statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceeding under this clause.

It is also term of the contract that the party invoking arbitration shall specify the dispute or disputes to be referred to arbitration under this clause together with the amounts claimed in respect of each such dispute.

It is also a term of the contract that if the contractor(s) do / dose not make any demand for arbitration in respect of any claims in writing within 90 days of receiving the intimation from the Institute, that the bill is ready for payment, the claim of the contractor(s) will be deemed to have been waived and absolutely barred and the Institute shall be discharged and released of all liabilities under the contract in respect of these claims.

The arbitrator(s) may from time to time with consent of the parties enlarge the time, for making and publishing the award.

CLAUSE 26 : PATENT RIGHTS

The contractor shall fully indemnify the Director, Institute of Physics against any action, claim or proceeding relating to infringement or use of any alleged patent or design rights and shall pay any royalties which may be payable in respect of any articles or part thereof included in the contract. In the event of any claims made under or action brought against Institute in respect of any such matters as aforesaid the contractor shall be immediately notified thereof and contractor shall be at liberty at his own expenses, to settle any dispute or to conduct any litigation that may arise therefrom, the contractor shall not be liable to indemnify the Director Institute of Physics if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge in this behalf.

CLAUSE 27 : LUMPSUM IN ESTIMATES

When the estimate on which a tender is made incudes lumpsum in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates, as are payable under this contract for such items, or if the part of the work in question is not in the opinion of the Engineer-in-Charge, capable of measurement, the Engineer-in-Charge may at his discretion pay the lumpsum amount entered in the estimate and the certificate in writing of the Engineer-in-Charge, shall be final and conclude against the contractor with regard to any sum or sums payable to him under the provision of the clause.

CLAUSE 28 : ACTION WHERE NO SPECIFICATION

In the case of any class of work for which there is no such specification as is mentioned in rule 1, such work shall be carried out in accordance with the instructions and requirements of the Engineer-in-Charge.

CLAUSE 29 : CLAIMS AGAINST CONTRACTOR

1. Wherever any claim, against the contractor for payment of a sum of money arises out of or under the contract. Institute shall be entitled to recover such sum by appropriation, in part or whole from the security deposit of the contractor, and to sell any Institute promissory notes etc. forming the whole or part of such security. In the event of the security being insufficient or if no security has been taken from the contractor, then the balance or the total sum recoverable, as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the contractor under this or any other contract with Institute. Should this sum be not sufficient to cover the full amount recoverable the contractor shall pay the Institute on demand the balance remaining due.

2. Institute shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc. to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract and found not to have been executed, the contractor shall be liable to refund the amount of overpayment and it shall be lawful for Institute to recover the same from him in the manner prescribed in sub-clause (1) of this clause or in any other manner legally permissible and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such underpayment shall be duly paid by Institute to the contractor.

Provided that Institute shall not be entitled to recover any sum overpaid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the Chairman, Campus Maintenance Committee on the one hand and the contractor on the other under any terms of the contract permitting payment for work after assessment by the Director.

3. Any sum of money due and payable to the contractor (including Security Deposit returnable to him) under this contract may be appropriated by the Institute and set off against any claim of the Institute for the payment of sum of money arising but of or under any other contract made by the contractor with the Institute.

CLAUSE 30 : RETURN OF SURPLUS MATERIAL

Notwithstanding anything contained to the contrary on any or all the clauses of this contract, where any materials for the execution of the contract are procured with the assistance of Govt. either by issue from Institute stocks or purchase made under orders or permits or licences issued by Institute, the contractor shall hold the said material economically and solely for the purpose of the contract and not dispose off them without the permission of the Institute and return, if required by the Engineer-in-Charge, all surplus unserviceable materials that may be left with him after completion of the contract or at its termination for any reason whatsoever being paid or credited such price as the Engineer-in-Charge shall determine having due regard to the condition of the materials. The price allowed to the contractor however shall not exceed the amount charged to him excluding the storage charges if any. The decision of the Engineer-in-Charge shall be final and conclusive. In the event of breach of the aforesaid condition or the contravention of the terms of the licence of permit and / or for criminal breach of trust be liable to

Institute for all moneys advantages of profits resulting or which in the usual course would have resulted to him by reason of such breach.

CLAUSE 31 : CONTRACTOR'S STAFF

The contractor shall employ adequate technical staff during the execution of this work such as qualified engineers, coverseers, supervisors, licensed electrician / wiremen plumbers etc having adequate experience. These staff should be available at site whenever required by the Engineer-in-Charge or his authorized representative to take instructions.

The contractor shall comply with the provision of the Apprentices Act 1961 and the Rules and orders issued thereunder from time to time. If he fails to do so his failure will be a breach of the contract and the haed, Technical Services Division may, in his discreation, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provision of the said act.

CLAUSE 32

The whole work may be split up between two or more contractors or accepted in part and not in entirely, if considered expedient.

CLAUSE 33(i) : TAXES, DUITES, ROYALTIES, ETC

Sales tax, sales tax on turnover / works contract or any other tax on materials in respect of this contract shall be payable by contractor and Institute shall not entertain any claim whatsoever in this respect.

CLAUSE 33(ii)

If pursuant to any law such notifications or order, any royalty cess, fee or the like becomes payable by the contractor, to the state Government / Local authorities in respect of any materials used by the contractor in the works then in such a case it shall be lawful for the Government of India and it will right and be entitled to recover the amount paid in the circumstances as aforesaid, from dues of the contractor.

CLAUSE 34 : TERMINATION OF CONTRACT ON DEATH

Without prejudice to any of the rights or remedies under this contract, if contractor dies, the Engineer-in-Charge on behalf of the Director shall have the option of terminating the contract without comp

ensation to the contractor.

CLAUSE 35 :

The contractor shall not be permitted to tender for works in Institute of Physics (responsible for award and execution of contracts) in which his near relative is posted as Accountant or as an officer in any capacity between the grades the Engineer-in-Charge and Assistant Engineer (both inclusive). He shall intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relative to any gazetted officer in the Department of Atomic Energy. Any breach of this condition by the contractors would render him liable to be removed from the approved list of contractors of this department.

Note : By the term “near relative” in meant wife, husband, parents, and grandparents, children and grandchildren, brother and sisters, aunts, uncles and cousin and their corresponding in laws.

CLAUSE 36 :

No Engineer of gazetted rank or other gazetted officer employed in Engineering or administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of two years of his retirement from Government services without the previous permission of Government of India. This contract is liable to be cancelled if either the contractor or any of his employee is found at any time to be such person who had not obtained the permission of Government of India as aforesaid before submission of the tender or engagement in the contractor's service as the case may be.

CLAUSE 37: LEVY/TAXES PAYABLE BY CONTRACTOR

- i) Sales Tax or any other tax on materials in respect of this contract shall be payable by the contractor and Institute shall not entertain any claim whatsoever in this respect.
- ii) The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri stone, kankar, etc from local authorities.

- iii) If pursuant to or under any law, notification or order any royalty, cess or the like become payable by the Government of India and does not any time become payable by the contractor to the State Government. Local authorities in respect of any material used by the contractor in the works then in such a case, it shall be lawful to the Government of India and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.

CLAUSE 38: CONDITIONS FOR REIMBURSEMENT OF LEVY/TAXES IF LEVIED AFTER RECEIPT OF TENDERS

- i) All tendered rates shall be inclusive of all taxes and levies payable under respective statutes. However, pursuant to the Constitution (46th Amendment) Act 1982, if any further tax or levy is imposed by Statute, after the last stipulated date for the receipt of tender including extensions, if any, and the contractor thereupon necessarily and properly pays such tax/levies the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not in the opinion of the Superintending Engineer (whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.
- ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorised representative of the Institute and/or the Engineer-in-Charge and further shall furnish such other information/document as the Engineer-in-Charge may require from time to time.
- iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy, pursuant to the Constitution (Forty Sixth Amendment) Act 1982, give a written notice thereof to the Engineer-in-Charge, that the same is given pursuant to this condition, together with all necessary information relating thereto.

CLAUSE 39: TERMINATION OF CONTRACT ON DEATH OF CONTRACTOR

Without prejudice to any of the rights or remedies under this contract if the contractor dies, the Divisional Officer on behalf of the Director, Institute of Physics shall have the option of terminating the contract without compensation to the contractor.

CLAUSE 40

The contractor shall comply with the provisions of the contract labour (Regulations and Abolition) Act 1970 (No. 37 of 1970) and the rules and orders issued there under from time to time. If he fails to do

so his failure will be breach of the contract and the head, Technical Services Division may in his discretion cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provision of the act.

SAFETY CODE

i) Suitable scaffolds should be provided for workmen for all work that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well suitable foot-holds and hand-holds shall be provided on the ladder and ladder shall be given an inclination not steeper than $\frac{1}{4}$ to 1 ($\frac{1}{4}$ horizontal and vertical)

ii) Scaffolding or staging more than 3.66 metres (12 ft) above the ground of floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached bolted, braced and otherwise secured at least 0.91 metres (3 ft) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and end thereof with only such opening 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 platform, gangways and stairways should be constructed that they should not sag unduly or unequally and if the height of the platform or the gangway on the stairway is more than 3.66 mtr. (12 ft) above ground level or floor level, they should be suitably fenced as described in (ii) above.

iv) Every opening in the floor of building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 0.91 metre (3 ft)

v) Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be 9.14 metres (30 ft) in length while the width between side rails in rung ladders shall be in no case less than 292 mm (11 $\frac{1}{2}$ ") for ladder upto and including 3.05 meters (10 ft) in length. For longer ladders this width should be increased at least 6mm for each additional 305mm of length. Uniform step spacing shall not exceed 305mm(12"). Adequate precautions shall be taken 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. The contractor shall provide all necessary fencing and lights to protect the public from accident, and shall be bound to bear the expense 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 damages and cost which may be awarded in any such suit, action or proceedings to any such persons or which may with the consent of the contractor be paid to compromise any claim by any such person.

vi) EXCAVATION AND TRENCHING

All trenches, 1.22 meters (4 ft) or more in depth shall at all times be supplied with atleast one ladder for each 30.48 meter (100 ft) in length of fraction thereof. Ladder shall be extended from the bottom of the trench to atleast 0.91 meter (3 ft) above the surface of the ground. The sides of the trenches which are 1.02 meter (6 ft) or more in depth shall be stepped back to give suitable slope or

securely held by timber bracing, so as to avoid danger or sides to collapse. The excavated materials shall not be placed within 1.52 meter (6 ft) 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 circumstance, undermining or undercutting shall be done

vii) DEMOLITION

Before any demolition work is commenced and also during the process of 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 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 risk of fire or explosion or flooding. No floor, roof or other part of the building shall be overloaded with debris or materials as to render it unsafe.
- viii) All necessary personnel safety equipment as considered adequate by the Engineer-in-Charge 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 contractor should take adequate steps to ensure proper use of equipment by those concerned.

Those engaged in welding works shall be provided with welder's protective eye sight lids.

- ix) The contractor shall not employ man below the age of 18 years and women on the work or painting with products containing lead in any form. Wherever men above the age of 18 year employed on the work of lead painting, the following precautions should be taken.
 - i) No paint containing lead or lead products shall be used except in form of paste or readymade paint.
 - ii) 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.

iii) 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.

iv) When the work is done near any place where there is risk of drawing 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.

v) Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards and conditions.

1. a. These shall be of good mechanical construction, sound materials 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 a means 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 should be in charge of any hoisting machine including and scaffolding which are signals to operator.

3. In case of every hoisting machine and every chain ring, hook, shackle shivel and pulley block used in hoisting or as a means of suspension of 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 hoisting machine have 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 Electrical Engineer-in-Charge. As regards contractors machines the contractors shall notify the safe working load of the machine to the Engineer-in-Charge whenever he brings machinery to site of work get it verified by the Electrical Engineer concerned.

- xi) 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 and will reduce to the minimum the risk of accidental descent of the load, adequate precautions should be taken to reduce to the minimum the risk of the part of suspended load becoming accidentally displaced. When worker employed on electrical installations which are already energised insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The workers should not wear any ring, watches and carry keys or other materials which are good conductors of electricity.
- xii) All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe conditions 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.
- xiii) These safety provision 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.
- xiv) 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, Engineer-in-Charge of the Department or their representatives.
- xv) Notwithstanding the above clause from (i) (xiv) there is nothing in these to exempt the contractor from the operation of any other Act or rules in forces in the Republic of India.

MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS

EMPLOYED BY CONTRACTORS

1. Application :

These rules shall apply to all building and construction works in charge of Bhabha Atomic Research Centre.

2. Definitions :

1. "Work place" means a place at which, at an average 50 or more workers are employed in connection with construction work.
2. "Large work place" means a place at which, at an average 500 or more workers are employed in connection with construction work.

3. First Aid :

- a) At every work place, there shall be maintained in a readily accessible place first aid appliances including an adequate supply of sterilized dressings and sterilized cotton wool. The appliances shall be kept in good order and, in large work place they shall be placed under the charge of responsible person who shall be readily available during working hours.
- b) At large work places, where hospital facilities are not available within easy distance of the work, first aid posts shall be established and run by a trained compounder.
- c) Where large work places are remote from regular hospitals an indoor ward shall be provided with one bed for every 250 employees.
- d) Where large work places are situated in cities, town or in their suburbs and no beds are considered necessary owing to the proximity of city or town hospitals, suitable transport shall be provided to facilitate removal of urgent cases to the hospitals. At other work places, some conveyance facilities, such as a car, shall be kept readily available to take injured person or persons suddenly taken seriously ill to nearest hospital.

4. Drinking water :

- a) In every work place, there shall be provided and maintained of suitable places easily accessible to labour, a sufficient supply of cold water fit for drinking.
- b) Where drinking water is obtained from an intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.
- c) Every water supply of storage shall be at a distance of not less than 15.24 metres (50 feet) 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, the well shall be properly chlorinated before water is drawn from it drinking. All such wells shall be entirely closed and be provided with a trapdoor which shall be dust and water proof.

d) 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 in a month.

5. Washing and bathing places :

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

6. Scale of accommodation in latrines and urinals :

There shall be provided within the precincts or every work place latrines and urinals in an accessible place and the accommodation, separately for each of them, shall not be less than the following scale :

	<u>No. of seats</u>
a) Where the number of person dose not exceed 50	2
b) Where the number of persons exceeds 50, but does not exceed 100	3
c) For every additional 100	3 per 100

In particular, cases, the Engineer-in-Charge shall have the powers to vary the scale, where necessary.

7. Latrines and Urinals for Women :

If women are employed, separate latrines and urinals screened from those for men and marked in the vernacular in conspicuous letters 'For Women Only' shall be provided on the scale laid in Rules 6. Those for men shall be similarly marked 'For Men Only' A poster showing the figure of a man and a woman shall also be exhibited at the entrance of latrines for each sex. There shall be adequate supply of water close to the urinals and latrines.

8. Latrines and urinals :

Except in work places 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. The receptacles shall be tarred inside and outside at least once a year.

9. Construction of latrines :

The inside wall shall be constructed of masonry or some suitable heat-resisting non-absorbent materials and shall be cement washed inside and outside at least once a year. The date of cement washing shall be noted in a register maintained for this purpose and kept available for inspection latrines will not be of a standard lower than borne hole system and should have thatched roofs.

10. Disposal of Excreta :

Unless otherwise arranged for by the local sanitary authority arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator approved by the Assistant Director of Public Health or the Municipal Medical Officer of Health, as the case may be in whose jurisdiction the work place is situated. Alternatively, excreta may be disposed off by putting a layer of night soil at the bottom of pucca tank prepared for the purpose and covering it with a 6" layer of waste or request and then covering it up with a layer of each for a fortnight (when it will turn into manure).

11. Provision of shelters during rest :

At every work place there shall be provided free of cost, two suitable sheds one for meals and the other for rest separately for men and women for the use of labour. The height of the shelter shall not be less than 3.35 (11 feet) from floor level to the lowest part of the roof. The shed should be roofed with at least thatched and mud flooring will be provided with a drawy wall around not less than 0.76 m (2 ½ feet). Sheds should be kept clean and the space should be on the basis of at least 0.462 m (5 square feet) per head.

12. Creaches :

a) At every work place at which 50 or more women worker are ordinarily employed there shall be provided two huts for the use of children under age of 6 years, belonging to such women. One hut shall be used for infants, games and play and other as their bedroom. The huts shall not be constructed in a lower standard than the following :

- i) Thatched roofs,
- ii) Mud floors and walls
- iii) Planks spread over the mud floor and covered with matting.

The huts shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision for sweepers to keep the place clean. There shall be two dais in attendance. Sanitary utensils shall be provided to the satisfaction of the Health Officer of the area concerned. The use of the hut shall be restricted to children, their attendants and mothers of the children.

- b) Where the number of women workers is more than 25 but less than 50, the contractor shall provide at least one hut and one dai to look after the children of women workers.
- c) The size of creache of creaches shall vary according to the number of women workers.
- d) The creache or creaches shall be properly maintained and necessary equipment like toys, etc. shall be provided.

13. Canteen :

A cooked food canteen on a moderate scale shall be provided for the benefit of workers wherever it is considered expedient.

14. The above rules shall be incorporated in contractors and in notice inviting tenders and shall form an integral part of the contract.

LABOUR REGULATIONS :

SHORT TITLE :

1. These regulations may be called the “Contractors Labour Regulations”.

2. DEFINITIONS

In these regulations unless otherwise expressed or indicated, the following words and expressions shall have the meaning here by assigned to them respectively that is to say :

i) "Labour" means workers employed by a contractor directly or indirectly through a sub-contractor or other persons or by an agent on his behalf on a payment not exceeding Rs. 400/- per month and will not include supervisory staff like overseers etc.

ii) "Fair wages" means wages whether for time or piece work notified at the time of inviting tenders for the work and where such wages have not been so notified, the wages prescribed by this Central Public Works Department for the District in which the work is done. It will be notified prescribed by the CPWD in consultation with the officer of the industrial relations machinery located in the respective areas and will not be less than the minimum rates of wages fixed by the Government for that class of employees engaged on the same type of work, in the same area.

iii) "Contractors" shall include every person whether a sub-contractor or headmen or agent, employing labour on the work taken on contract.

iv) "Wages" shall have the same meaning defined in the payment of wages act and includes time and piece rate wages.

2 a) Normally working hours of an adult employees should not exceed 9 hours a day and in case of child 4 ½ hours a day. The working day shall be so arranged that inclusive of intervals for rest if any, it shall not spread over more than 12 hours on any day.

b) When an adult worker is made to work for more than 9 hours on any day for more than 48 hours in any week he shall be paid overtime for the extra hours put in by him at double the ordinary rate of wages. Children shall not be made to work extra hours.

c) Every worker shall be given a paid weekly holiday normally on Sunday in accordance with the provision of the minimum wages (Central) Rules, 1950 as amended from time to time irrespective of whether such worker is governed by minimum wages Act, 1948 or not. However, as the all inclusive minimum daily rates of wages fixed under the notification of Government of India, Ministry of labour employment and Rehabilitation dated 19.05.1969 are inclusive of wages for the weekly day of rest, the question of extra payment for the weekly holiday of rest would not arise.

3. DISPLAY OF NOTICES REGARDING WAGES ETC.

The contractor shall –

- a) before the commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clean and legible condition in conspicuous places on the work, notices in English and in local Indian language spoken by the majority of the workers giving the rate of wages which have been certified by the Engineer-in-Charge of Regional Labour Commissioner, as fair wages and the hours or work for which such wages are earned and
- b) send a copy of such notices to the certifying officer.

4. PAYMENT OF WAGES

- i) Wages due to every worker shall be paid to his direct.
- ii) All wages shall be paid in current coin or currency or in both.
- iii) Arrears claimed after 3 months after the completion of the work shall not be entertained.

5. FIXATION OF WAGE PERIODS :

- i) The contractor shall fix wage periods in respect of which the wages shall be payable.
- ii) No wage period shall exceed one month.
- iii) Wages of every worker employed on the contract shall be paid (a) in case of establishment in which wage period is one week within 3 days from the end of the wage period and (b) in case of other establishments before the expiry of the 7th day or 10th day from the end of the wage period according as the number of workers employed in such establishments does not exceed 1000 or exceeds 1000.
- iv) When the employment of any worker is terminated by or on behalf of the contractor the wages earned by him shall be paid before the expiry of the day succeeding the one on which his employment is terminated.
- v) All payment of wages shall be made on a working day except when the work is completed before the expiry of the wages period, in which case final payment shall be made within 48 hours of the last working day at work site and during the working time.

Note : The term “Working Day” means a day on which the work on which the labour is employed, is in progress.

6. WAGE BOOK AND WAGE SLIPS ETC.

The contractor shall maintain a wage book of each worker in such form as may be convenient at the place of work by the same including the following particulars.

- a) Name of the worker.
- b) Rate of daily or monthly employed.
- c) Nature of work on which employed.
- d) Total number of days worked during each wage period.
- e) Dates and periods for which worked overtime.
- f) Gross wages payable for the work during each wage period.
- g) All deductions made from the wage with an indication in each case of the ground for which the deduction is made.
- h) Wages actually paid for each wage period.
- i) Signature or thumb impression of the worker.

ii) The contractor shall also issue wage slip containing the aforesaid particulars to each worker employed by him in the work at least a day prior to day of disbursement of wages.

iii) The contractor shall issue an Employment card in the prescribed form III to each worker on the day of work on entry into his employment. If the worker has already any such card with him from 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 workers.

iv) The contractor shall issue an Attendance-cum-wage card as per form IV enclosed to each worker on day of work or entry into his employment.

7. REGISTER OF UNPAID WAGES

The contractor shall maintain a register of unpaid wages in such form as may be convenient at the place of work but the same shall include the following particulars.

- a) Full particulars of the labourers whose wages have been paid

- b) Reference number of the muster roll and wage register.
- c) Rate of wages.
- d) Wage period.
- e) Total amount paid.
- f) Reasons for not making payment.
- g) How the amount of unpaid wages was utilized.
- h) Acquittance with dates.

8. REGISTER OF ACCIDENTS :

The contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars.

- a) Full particulars of the labourers who met with accidents.
- b) Rate of wages.
- c) Sex.
- d) Age.
- e) Nature of accident and cause of accident.
- f) Time and date of accident.
- g) Date and time when admitted in hospital.
- h) Date of discharge from the hospital.
- i) Period of treatment and result of treatment.
- j) Percentage of loss of earning capacity and disability as assessed by Medical Officer.
- k) Claim required to be paid under Workmen's Compensation Act.
- l) Rates of payment of compensation.
- m) Amount paid with details of the person to whom the same was paid.
- n) Authority by whom the compensation was assessed.
- o) Remarks.

9. FINES AND DEDUCTION WHICH MAY BE MADE FROM WAGES :

- i) The wages of worker shall be paid to him without any deduction of any kind except the following :
- a) Fines.
 - b) Deductions for absence from duty i.e. from the place or the places whereby the terms of his employment he is required to work. The amount of deductions shall be in proportion to the period for which he was absent.
 - c) Deduction for damages to or loss of good expressly entrusted to the employed person for custody, or for loss of money or any other deduction on which he is required to account, where such damage or loss is directly attributable to his neglect or default.
 - d) Deduction for recovery of advance for adjustment of overpayment of wages advance granted shall be entered in a register.
 - e) Any other deduction, which the Central Government may from time to time allow.
- ii) No fine should be imposed on any worker save in respect of such acts and omissions on his part as have been approved by the Chief Labour Commissioner.
- iii) No fine shall be imposed on a worker on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.
- iv) The total amount of fine which may be imposed in any one wage period on a worker shall not exceed an amount equal to three paise in rupee of the wage payable to him in respect of wage period.
- v) No fine imposed on any worker shall be recovered from him by installments, or after the expiry of sixty days from the date on which it was imposed.
- vi) Every fine, shall be deemed to have been imposed on the day of the act or omission in respect of which it was imposed.

10. REGISTER OF FINES ETC

The contractor shall maintain a register of fines and a register of deductions for damage or loss in form Nos. 1 & 2 respectively which should be kept at the place of work.

The contractor shall maintain both the English and the local Indian language, a list approve by the Chief Labour Commissioner clearly stating the acts and omissions for which penalty or fine may be imposed on a workmen and display it in a good condition in a conspicuous place of the work.

11. PRESERVATION OF REGISTERS :

The wage book, the wage slips, the register and unpaid wages, the register of accidents, the register fines deduction required to be maintained under those regulations shall be preserved for 12 months after the date of last entry made them and shall be made available for inspection by the Engineer-in-Charge, Labour Welfare Officer or any other officer authorized by the Department of Atomic Energy in this behalf.

12. POWER OF LABOUR WELFARE OFFICERS TO MAKE INVESTIGATIONS OR ENQUIRY :

The Labour Welfare Officer or any other person authorised by the Central Government on their behalf shall have power to make enquiries with a view of ascertaining & enforcing due and proper observance of the fair wage clause and provisions of these regulations. He shall investigate into any complaint regarding the default made by the contractor or sub-contractor in regard to such provision.

13. REPORT OF LABOUR WELFARE OFFICER :

The Labour Welfare Officer or other person authorised as aforesaid shall submit a report of result of his investigation or enquiry to the Engineer-in-Charge indicating the extent, if any to which the default has been committed with a note that necessary deductions from the contractor's bill be made and the wages and other dues be paid to the labourers concerned. In case an appeal is made by the contractor under Clause 14 of these regulations actual payment to labourers will be made by the Engineer-in-Charge after the Regional Labour Commissioner has given his decision on such appeal.

a) The Engineer-in-Charge shall arrange payment to the labourers concerned within 45 days from the receipt of the report from the Labour Welfare Officer or the Regional Labour Commissioner as the case may be.

14. APPEAL AGAINST THE DECISION OF LABOUR WELFARE OFFICER :

Any persons aggrieved by the decision and recommendations of the Labour Welfare Officer or other person so authorised may appeal against such decision to the Regional Labour Commissioner concerned within 30 days from the date of decision, forwarding simultaneously a copy of his appeal to the Engineer-in-Charge but subject to such appeal, the decision of the officer shall be final binding upon the contractor.

15. PROHIBITION REGARDING REPRESENTATION THROUGH LAWYER ;

i) A workman shall be entitled to be represented in any investigation or enquiry under these regulation by :

An officer of a registered trade union of which he is a member.

An officer of a federation of trade unions to which the trade union referred to in clause (a) is affiliated.

Where the employer is not a member of any registered trade union by an officer of a registered trade union connected with, or by any other workman, employed, in the industry in which the worker is employed.

ii) An employer shall be entitled to be represented in any investigation or enquiry under these regulations by:

An officer of an association of employers of which he is a member.

An officer of a federation of an association of employers to which the association referred to in clause (a) is affiliated.

Where the employer is not a member of any association of employers, by an officer of association of employers connected with, or by any other employer, engaged in the industry in which employer is engaged.

iii) No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under this regulation.

16. INSPECTION OF BOOK AND SLIPS :

The contractor shall allow inspection of the wage books and the wage slips, the register of unpaid wages, the register of accidents, and the register of fines and deductions to any of his workers or to his agent at a convenient time and place after the due notice is received to the Labour Welfare Officer or any other person, authorised by the Central Government on his behalf.

17. SUBMISSION OF RETURNS :

The contractor shall submit periodical returns as may be specified from time to time.

18. AMENDMENTS :

The Central Government may from time to time, add to or amend the regulations and on any questions as to the applied interpretation or effect of those regulations, the decision of the Chief Labour commissioner or Deputy Chief Labour Commissioner to the Government of India, or any other person authorised by the Central Government in that behalf shall be final.

FORM – I

REGISTER OF FINES REGULATION 10(i) (EMPLOYER)

S.	Name Date &	Father's/ Husband's Name fine	Sex Date on	Department Remarks	Nature & date of the offence for	Whether workman showed	Rate of
----	----------------	--	----------------	-----------------------	--	------------------------------	------------

imposed realised

which fine

cause

imposed

against

fine of not

if so enter dt.

FORM – II

REGISTER OF DEDUCTIONS FOR DAMAGES OR LOSS CAUSED TO THE EMPLOYER

BY THE NEGLIGENCE OR DEFAULT OF THE EMPLOYED PERSONS

Regulation 19 (i) (Employer)

S.	Name	Father's/ Number of	sex Date on	Department	Damage Remarks	Whether	Date
No.		Husband's			or lose	workers	&
amount installment			which total		caused	showed	
	Name deduction if any			realised			
					With date	cause	
	imposed					against	
						deduction if	
						so enter dt.	

FORM – III

EMPLOYMENT CARD REGULATIONS 6(iii)

Name and sex of worker : Age or
date of birth :

Father's name :
Identification marks :

Address :

Particulars of next of kin (wife and children, if any of the dependent next of kin in case of worker has no wife of child :

Name :

Full address of dependent :

(specify village, district and state)

S.	Name address of employer Actual number of location of work or sub contractor)	Particulars of Leave taken (no. of days the worker is employed site and description of work done.	Total period for which No. (specify whether a contractor days worked should
----	--	---	--

1	2	3	4
5		6	

Back side of the card (see next page)

FORM – 44

EMPLOYMENT CARD REGULATIONS 6 (i)
Back side of the card

S.No. earned by as on during reverse shown under	Nature of work Remark done by the worker	Wage Signature of period employer	Wage rate (with particulars of unit in case of piece work)	Total wage the worker the period column 5
---	--	--	--	--

N.B. : If the worker is employed both on pieces and rates, relevant entries in each case should be made separately.

ATTENDANCE CUM WAGE CARD (REGULATION 6 (iv))

Card No. _____

Dated

Name of the contractor : _____

Name of work : _____

Name of the worker : _____

Address : _____

Designation : _____

Rate of wages

Date person attendance	Remarks	Signature of Making
------------------------	---------	---------------------

reverse of the card

On

Wage period	Date on which Date of payment overtime worked	Gross wages Signature of worker	Deduction if any	Actual wages paid
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REGISTER OF MATERNITY BENEFIT (CLAUSE 91F-(4) OF THE CONDITIONS OF CAONTRACT)

Name & address of the contractor (s) : _____

Name & Location of the work : _____

Name of the employee on which notice confinement given	Father's/ Husband's Name	Date of delivery	Nature of employment miscarriage	Period of actual appointment	Date of
--	--------------------------	------------------	----------------------------------	------------------------------	---------

1	2	3	4
5	6		

Date on which maternity leave commenced and ended to the employee			
In case of delivery		In case of miscarriage	
Commenced	Ended	Commenced	Ended
Amount		Rate of	Aamount
paid		leave pay	paid

7	8	9	10
12	13	14	11

REGISTER OF MATERNITY BENEFIT (CLAUSE 19-F-(4) OF THE CONDITIONS OF CONTRACT
PAGE 2

Specimen form of the register regarding Maternity benefit admissible to Contractor's labour in Central Public Works Department Works

Name of work :

Name of the contractor :

1. Name of woman and her husband's name :
2. Designation :
3. Date of appointment :
4. Date with months and years in which she is employed :
5. Date of discharge / dismissed if any :
6. Date of production of certificate in respect of pregnancy :
7. Date on which the woman informs about the expected delivery :
8. Date of delivery / miscarriage / death :
9. Date of production of certificate in respect of delivery / miscarriage :
10. Date with the amount of maternity death, benefit paid in advance of expected delivery :

11. Date with the amount of subsequent payment of maternity benefit :
12. Name of the person nominated by the woman to receive the payment of the maternity benefit, after her death.
13. If woman dies, the date of her death, the name of the person to whom maternity benefit amount was paid, the month there of and the date of payment.
14. Signature of the contractor authenticating centres in the register.
15. Remarks column for the use of Inspection Officer.

Charge	Contractor	Engineer-in-
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Section – IV

ADDITIONAL CONDITIONS

TENDER NO_NIT/IOP/ 16 /2015-16

1. MATERIALS OBTAINED FROM DISMANTLMENT

The contractors in the course of their work, would understand that all materials obtained in the work of dismantling excavation etc. will be considered Institute property and issued to the contractor (if they require the same for their own use) at rates approved by the Director . If these materials are not require by them they will be disposed off to the best advantage of Institute.

2. DELAY IN OBTAINING MATERIALS BY THE DEPARTMENT

The Institute have undertaken to supply materials as specified be Schedule 'A' hereto annexed at rates stated therein. There may be delay in obtaining the materials by the Department and the contractor is therefore required to keep himself in touch with the day-to-day position, regarding the supply of materials from the Engineer-in-Charge, and to so adjust the progress of the work that their labour may not remain idle nor may thereby any other claim due to or arising from delay in obtaining the materials. It should be clearly understood that no claim whatsoever shall be entertained by the Govt. on account of delay in supplying materials.

3. CARE OF WORK

From the commencement to the completion of the works the contractor shall take full responsibility for care there off and 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 the contractor shall at his own cost repair and make good the same, so that the completion of the works shall be in good order and condition and in conformity in every respect with the requirements of the contractors and the Engineer's instructions.

4. QUALITY OF MATERIALS AND WORKMANSHIP AND TEST

All materials and workmanship shall be the respective kind described in the contract and in accordance with the Engineer instructions and all be subject from time to time such test as the Engineer may direct at the place of manufacturer or fabrication or on the site or at all or any of such places. The contractor shall provide such assistances, instruments, machines, labour and material used and shall supply samples of materials as are normally required for examining, measuring and testing all works and the quality or quality of materials before incorporating in the work for test as may be selected and required by the Engineer. The cost of such tests shall be borne by the contractor.

5. PERIOD OF MAINTENANCE AND GUARANTEE

The period of maintenance shall be a period of 12 months of such other periods as mentioned in Tender form and will commence from the date of completion of the work after testing and handing over to department and final certificate is issued in accordance with the conditions of contract.

After completion of installation and testing the contractor should furnish a certificate in the proforma in Appendix – II at the time of taking over to installation by the department. During the period guarantee all defects in materials or workmanship shall be rectified or replaced free of cost to department.

If it becomes necessary for the contractor to renew or replace any defective part of the installation or plant / equipment for purpose of rectification under this clause the provisions of this clause shall apply to the portion of the plant installation so replaced or renewed until the expiration of six months from the date of such replacement / renewal or until the end of above mentioned period of twelve month whichever is late.

6. GOVERNMENT REGULATION

The contractor shall conform to the provision of any Government Act which relate to works and to the regulations and bye-laws of any local authorities. The contractors shall give all notices required by the said acts or laws etc. and pay all fees payable to such authorities and allow for these contingencies in his restorations etc. and all other fees payable to the local authorities.

7. REMOVAL OF SURPLUS / REJECTED MATERIALS AND DEBRIS

The contractor shall undertake to have site clean from rubbish to the satisfaction of the Engineer-in-Charge. All surplus materials, rejected materials debris, including excess earth from excavation of trenches or foundation etc. will be removed to the place fixed by the Engineer-in-Charge and nothing extra will be paid.

8. INCONVENIENCE TO DEPARTMENTS ACTIVITIES

The contractor shall not deposit materials on any site which will seriously inconvenience any of the department's activities. The Engineer-in-Charge may require the contractor to remove any materials which are considered by him to be of danger or inconvenience to the activities of the department or cause them to be removed at the contractors cost.

9. GIVING OF NOTICES AND PAYMENT OF FEES

a) The contractor shall give 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 or 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 regulation of all public bodies and companies whose property or rights are effected or may be effected in any way by the works or any temporary works. All quarry fees, royalties, octroi duties, including town duty and ground rent for stocking materials, if any, should be paid by the contractor. If refunds of such payments are however admissible in respect of Government contracts under the rules of Municipal or local authorities the contractor may obtain such refunds by following the prescribed procedure laid down by those authorities. The assistance of Bhabha Atomic Research Centre shall in such cases be restricted only to the extent of issue of a certificate that materials so imported have become the property of Govt. in Bhabha Atomic Research Centre. The contractor shall be entitled to such refunds whenever so obtained and should take into account while quoting his item rates in the tender.

b) The contractor shall conform in all respect with the provisions of any such statute ordinance or law as aforesaid and the regulations or bye-laws of any local or other duly constituted authority which may be applicable to the work or to any temporary works and with such rules and regulations of public bodies and companies as aforesaid and shall keep the department indemnified against all penalties and liability of every kind of breach of such statute ordinance or law regulation or bye-law.

10. ACCESS TO SITE

The Engineer-in-charge or any persons authorised by him shall at all times have access to the work and to the site and to all workshops and places where work in being prepared or where materials manufactured articles, or machinery are being obtained for the works and the contractor shall afford every facility or every assistance in obtaining the right to such access.

11. PLANT ETC. TO BE OR EXCLUSIVE USE FOR THE WORKS

All constructional plant, temporary works and materials provided by the contractors shall then be brought to site to be deemed to be exclusively intended for them and completion of the works 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 of writing to the Engineer-in-Charge which shall not be unreasonably withheld.

12. DEPARTMENT NO LIABLE FOR DAMAGES TO PLANT ETC.

a) The department shall not at any time be liable for the loss of or injury to any of the said constructional plant and temporary work or materials.

b) If any plant or equipment or machinery is purchased out of advances taken from the department such plant, equipments or machinery shall have to be issued by the contractor at least to the extent of such advances and pledge in the name of the Department until all such advances shall have been paid back to the Department.

c)

13. URGENT REPAIRS

If by reason of any accident or failure or other event occurring to in or in connection with the work or any part thereof either during the period of maintenance any remedial or other work or repair shall in the opinion of the Engineer-in-charge be urgently necessary for security and the contractor is unable or unwilling at once to do such work or repair. The Engineer-in-charge may be him own, or other workmen do such work as may be considered necessary. If the work or repair so done is work which in the opinion of the Engineer-in-charge the contractor was liable to do at his own expense under the contractor all costs and charges properly incurred by the Engineer-in-charge in doing so shall on demand be paid by the contractor or may be deducted any money due or which may become due to the contractor provided always that the Engineer-in-charge shall also soon after the occurrence of any such emergency as may be reasonably practicable notify the contractor thereof in writing.

14. CONTRACTOR'S MACHINERY, PLANT, EQUIPMENT AND DRAWINGS

The contractor shall furnish with the tender list of plant and equipment that be proposed to bring to site at his own cost for the execution of work to enable Institute to access his mode of execution of work.

15. Supply of construction drawings will be placed by the department to suit the time schedule enclosed hereinafter. In case of delay in supply of drawings contractor will be eligible for suitable extension of time only in the event of such delay has in the opinion of the Engineer-in-charge, whose decision shall be final affected the progress.

16. The contractor, his employee and agents shall not disclose any information or drawings furnished to him by Govt. All drawings, reports and other information prepared by the contractor / by Govt. or jointly by both for the execution of the contract shall not be disclosed without the prior approval of the Engineer-in-charge. No photographs of the works or plane within the site premises shall be taken without the prior approval of the Engineer-in-charge.

17. The contractor may be allowed to carry out work in shifts with the prior approval of the Engineer-in-charge.

18. **PAYMENT TERMS**

On delivery of equipment at site and on due to certification by the Engineer-in-charge, 80% of the value of equipment / material will be released forthwith. Out of the balance 10% will be paid if the materials, equipments, if found acceptable after due inspection and so certified by the Engineer-in-charge. The remaining 10% of the value of the equipment shall be released on satisfactory commissioning of the equipment and one due certification by the Engineer-in-charge.

On satisfactory execution of the equipment and on due certification by the Engineer-in-charge 90% of the value of the erection will be released and the remaining 10% on satisfactory commissioning of equipment.

The contractor shall submit the quotation by giving the breakup cost of items so as to enable the owner to make interim payment after receipt of materials and at different stages of work.

19. **CONTRACT LABOUR (REGULATION AND ABOLITION) ACT 1970**

i) As soon as the letter of indent of work order is placed on successful tenderer, he should obtain a valid licence from the regional labour commissioner, under the contractor Labour (Regulation and Abolition) Act 1970 and General Rule 1971 before commencement of work.

ii) The contractor should be submitted by 7th of every month for the previous months. Specimen proforma in indicated in Appendix 'B'.

iii) The tenderers are required to note that as specified under clause of section III – Conditions of contract, the contractor has to comply with, the provisions of the Contract Labour (Regulation and Abolition) Act 1970 and rules and orders issued thereunder from time to time. As per para V(a) under Clause 25 of said Act and Central rules. It is obligatory of the part of the contractor to pay wages to the labour employed by him on the work at the same rates of wages as paid by the Principal Employer (in the case IOP) in respect of labour directly engaged by the Principal Employer in the vicinity. The rates of wages currently payable as notified by the Principal Employer (i.e. IOP) to the casual employees employed by him Bhubaneswar are as follows:

<u>Sl. No.</u>	<u>Category of casual Labours</u>	<u>Wages per day</u>
		(01.04.2015)
1.	Highly skilled	Rs. 424.00

2.	Skilled	Rs. 385.00
3.	semiskilled	Rs.328.00
3.	Unskilled	Rs. 290.00

The wage rates shown above are all inclusive rates and include also the wages for the weekly day of rest. Accordingly, the wage shall be allowed 6 days in a week. The tenderers may bear in this in mind while working out their rates for submitting tenders.

19(A) The contractor has to follow strictly the Govt. Labour Acts which are in force at present and introduce from time to time such as act enforced by the Regional Provident Fund Commissioner, Directorate of ESIS & Enforcement officer or Contract Labour Act and all necessary agreement for labour security insurance will have to made by the contractor at his own cost.

19(B) FOLLOWING SHALL BE REQUIRED TO BE FULFILLED BY CONTRACTORS.

- 1) Every Contractor employing 20 or more workmen on any day should obtain licence from Asstt. Labour Commissioner, Sion, Mumbai. They should also obtain Registration under BOCW Act if they are engaged in construction activities. (Rule 12)
- 2) Every Civil Contractor employing 10 or more workmen should obtain a Registration under Building and Other Construction Workers Act from Asstt. Labour Commissioner, Sion, Mumbai.
- 3) Notice of commencement of contract work should be given to Labour Enforcement Officer by the Contractor in Form VI-A. (Rule 81(3))
- 4) Notice of completion of contract work should be given to Labour Enforcement Officer by the Contractor Form VI-A. (Rule 81(3))
- 5) Notices showing rates of wages, hour of work, wage periods, date of payment of wages, date of payment of unpaid wages, names and addresses of Inspectors in English, Hindi and in local language should be displayed at Worksite. (Rule 81(i) (i))
- 6) A copy of the above Notice is to be sent to Labour Enforcement Officer.
- 7) Maintain a Register of workmen in Form XIII. (Rule 74)
- 8) Issue Employment Card to workmen in Form XIV. (Rule 76)
- 9) Issue a Service Certificate to workmen in Form XV on termination of employment for any reason whatsoever. (Rule 77)

- 10) Maintain Muster Roll of workmen in Form XVI. (Rule 78(1)(a)(i))
- 11) Maintain Register of wages in Form XVII.
Contractors may maintain a Combined Register of wages-cum-Muster Roll, if the wage period is a fortnight or less.
- 12) Provide Wage slip to workmen in Form XIX. (Rule 78(1)(b))
- 13) Maintain a Register of Deduction for Damage/Loss in Form XX. (Rule 78(1)(a)(ii))
- 14) Maintain a Register of Fines in Form XXI. (Rule 78(1)(a)(ii))
- 15) Maintain a Register of Advances in Form XXII. (Rule 78(1)(a)(ii))
- 16) Maintain a Register of Overtime in Form XXIII.(Rule 78(1)(a)(iii))
- 17) Send Half Yearly Return in Form XXIV to ALC/LEO. (Rule 82(1))
- 18) A First Aid Box with essential medical items to be maintained. (Rule 58)
- 19) Every Contractor should ensure disbursement of wages to his workmen in the presence of authorized representative of BARC. (Rule 72)
- 20) Every Contractor shall display an abstract of the Act and Rules in English, Hindi and in the language spoken by the majority of the workers. (Rule 79)

Section – V

SPECIAL INSTRUCTIONS

TENDER NO NIT/IOP/16/2015-16

1. General

The following condition of contract shall be read in conjunction with general conditions of contract enclosed herein before. The following clauses shall be considered in extension and not in limitation of the obligation of the contract. In case of discrepancy between these additional conditions of contract and the general conditions of contract (proceeding) the stringent of the conditions shall take precedence.

2. Location / Scope

The location of work is indicated in “Tender Notice”. The scope of work is indicated in the schedule of quantities or in a brief write up attached to schedule of quantities in case of any specific requirements. The tenderer is advised to visit the site of work with the prior permission of Engineer-in-Charge in order to acquaint himself with all the connected information of the proper execution of the work.

3. Site Investigation

The contractor shall satisfy himself as to the nature and location of the work general and local conditions, particularly those bearing upon transportation, disposal, handling and storage of material, availability of labour, water electric power, roads and uncertainties of weather of similar physical conditions of the site the conformation and conditions of ground, the character quality and quantity of surface and sub-surface materials to be encountered including the sub-soil water levels, equipments and facilities needs preliminary to and during the progress of the work and all other matter which can in any way, effect the work or the cost thereof under this contract.

4. Staking Out Base Lines And Leaves

The contractor shall layout his work from base lines and grades established by the Department and shall be responsible for all measurements in connection therewith. The contractor shall at his own expense furnish all stakes, templates, platforms, equipment, ranges and labour that may be required in setting of layout of any part of the work. The contractors shall be held responsible for the proper execution of the work to such lines and grades as may be established or indicated on the drawings and in specifications. The contractor shall take bench marks and stakes existing at the site for layout lines and level. The contractor is to construct and maintain proper benches at the inter-sections of all main walls, columns etc., in order that the lines and level may be accurately checked at all times. The odolite, levels prismatic compass, chain steel and metallic tapes and all other surveying instruments found necessary for the work shall be provided by the contractors for use at site in connection with this work.

5. Drainage In The Vicinity Of The Building

The contractor shall be entirely responsible for the provision and maintenance of efficient drainage arrangements in the work site to load of all water whatever pumps from the excavation or on account of rains, springs or any other sources whatsoever, flooding or ponding of water in the work at site shall not be permitted under any circumstances whatsoever and the contractor shall take all precautions to prevent the same by providing suitable pump other dewatering arrangements. The cost of repairing damages, if any to the work under execution or to any Institute property in / around the site shall be entirely borne by the contractor, when such damages are due to his non-compliance with the above conditions.

6. Traffic Interference And Inconvenience To The Public

The contractor shall conduct his operation so as to interfere as little as possible with the traffic. When interference to traffic is inevitable, notice of such interference shall be given to the Engineer-in-Charge well in advance (at least 2 days). The contractor shall take all precautionary and other measures such as providing warning signals, temporary diversions, etc. All as directed by the Engineer-in-Charge. The contractor shall exercise full care to ensure that no damage is caused by him or his workmen, during the operation to the existing water supply and power lines. The cost of any such damage and risks arising out of this shall be entirely borne by the contractor.

The contractor shall not deposit materials on any site which will seriously inconvenience the public. The Engineer-in-Charge may require the contractor to remove any materials which are considered to be danger or inconvenience to the public or cause them to be removed at the contractor's cost.

7. Commencement And Completion Of Work In Proper Schedule

The entire work shall be completed within the stipulated period indicated, including monsoon period, from the tenth day after the date on which the written order to commence the work is issued.

Time being the essence of the contract, a broad based time schedule showing the important phase of work shall be prepared by the contractor in consultation with Engineer-in-Charge. It will be necessary for the contractor to adhere to this programme of work and further he will have to prepare and submit a detailed programme of work showing the various activities of work taking into consideration the programme of other agencies. The programme shall be submitted by the contractor within a fortnight of the acceptance of the tender for the approval of the Engineer-in-Charge which will then form part of the contract and the work will have to be carried out in all respect as per the approved time schedule.

The contractor shall furnish to the Engineer-in-Charge a weekly progress report in duplicate indicating the following :

No.	Item of Work	Schedule for the week	Actual progress	Reasons for shortfall	Steps taken to make up Shortfall
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8. Co-operation With Other Contractors

The contractor shall afford all facilities and give complete co-operation for the execution for various other works, if required to be carried out simultaneously by other agencies while his own work is in progress. The co-ordination will be affected in consultation with the Engineer-in-Charge of the work.

Other contractors are also likely to be authorised by the owners to work in the same area during the construction stage for work such as (i) Civil (ii) Air-conditioning (iii) Electrical (iv) Services and (v) Public Health and other Miscellaneous works.

9. Specifications And Drawings

- a) The drawings furnished to the contractor shall be interpreted by the use of given dimensions and nomenclature only, and the drawing shall not be scaled. Drawing to a large scale shall have precedence over those to a smaller scale.

- b) Prior to the execution of the work the contractor shall check all drawings, specifications and shall immediately report all errors, discrepancies and / or omissions discovered therein to the Engineer-in-Charge and obtain appropriate orders on the same. Any adjustment made by the contractor without prior approval of the Engineer-in-Charge shall be at his own risk. Each description of item in the schedule of quantities shall be read in conjunction with relevant drawings and the specifications and the contractor's rate shall be deemed to be for such complete work unless otherwise specified by contractor while tendering.
- c) Cost of all shop drawings, fabrication, drawings or frame work drawings and details to be furnished by the contractor shall be deemed to be included in his tendered rates for the work. Approval of shop drawings shall not be construed as authorising additional work or increased cost to the department.
- d) Prior to submission for approval, the contractor shall be responsible for thoroughly checking all drawings to ensure that they comply with the intent and the requirements of the contract specifications and they fit in with the overall building layout. Drawings found to be in accurate or otherwise in error will be returned for correction by the contractor.
- e) For all drawings to be submitted by the contractor, for the approval of the Engineer-in-Charge, the contractor shall submit 6 (six) copies of each drawings for approval.
- f) The approval of the drawings by the Engineer-in-Charge shall not be construed as a complete dimensional check, but will indicate only that the general method of construction and detailing is satisfactory. The contractor shall be responsible for the dimension and design of adequate connection, supports, details and satisfactory construction of the work.

10. Contractor's Stores And Site

Suitable area near the site of work shall be allocated to the contractor free of cost for storing the equipment, plant, materials, etc. for his site office and cement godown. He will, however, be solely responsible for watching or guarding his property and materials issued to him by the owner. Contractor shall cover all materials at site with requisite insurance against theft, larceny, decoits, fire, tempest and flood. He, however, will have to dismantle the sheds and vacate the land after the receipt of due notice from the Engineer-in-Charge if the same is obstructing any work.

11. Transportation Of Equipment And Materials

It shall be the contractor's responsibility to transport all equipment and materials of the job at his own expense. The contractor shall use only established roadways or construct and use such temporary roadways as may be necessary and approved by the Engineer-in-Charge. When it is necessary to cross curvings or side walks protection against damage shall be provided by the contractor. Any damage caused to roads, curves sidewalks, etc. shall be repaired by the contractor at his own expense.

12. Temporary Buildings

Warehouse, shed, workshop and office facilities as required by the contractor shall be provided by him at his own expense prior approval of the Engineer-in-Charge shall be obtained in respect of location and layout and details of these buildings after the work is over all these temporary facilities shall be removed by the contractor at his own expense, to the satisfaction of the Engineer-in-Charge within (10) ten days from the date of completion. No. land for erecting temporary huts for housing the contractor labours will be made available by the department.

The contractor will have to make his own arrangement for the same.

13. Inspection

The work shall be conducted under the general direction of the Engineer-in-Charge and is subject to inspection by his appointed representative to ensure strict compliances with the terms of contract. No failure of the Engineer-in-Charge or his designated representative during the progress of work to discover or to reject materials or work not in accordance with the requirements of this contract shall be deemed in acceptance thereof, or a waiver of defects therein, and no payment by the Engineer-in-Charge of partial or entire occupancy of the premises shall be construed to be an acceptance of work or materials which are not strictly in accordance with the requirements of this contract. No chances whatsoever to any provision of the specifications shall be made without written authorisation from the Engineer-in-Charge.

14. Water and Power Supply To Contractors

- a) Only piped water required for the work will be made available to the contractor at the site at the place to be determined by the Engineer-in-Charge. The contractor shall make his own arrangements for drawing water from the watermain. All piping, plumbing etc. shall be installed and properly maintained by the contractor for his use of work at his own cost, the same shall be removed on completion of the work and he shall make good the work, if any, disturbed or damaged by his installation, etc. at his own cost. The water used for the work shall be supplied free of charge.
- b) The Engineer-in-Charge mentioned herein, will mean Departmental representative of Maintenance Division, IOP, In-charge of temporary power system or his authorised representatives at site. The guide lines for temporary power supply at site and general safety procedures are enclosed separately.

15. Removal Of Workmen And Supervisory Staff

The contractor shall employ in or about execution of the work only such persons as are careful, skilled and experienced in their several trades and the Engineer-in-Charge shall be liberty to object to and require the contractor to remove from the works any persons employed by the contractor in or about the execution of works who in the opinion of the Engineer-in-Charge misconducts himself or is incompetent, or negligent in the proper performance of his duties and all such persons shall not again be employed upon the works without the permission of the Engineer-in-Charge.

16. Schedule Of Quantities

Schedule of probable quantities in respect of the work and specifications is enclosed. The schedule of probable quantities liable to alternation by omission, deduction or addition at the discretion of the Engineer-in-Charge.

17. Tender Rates

The rates quoted by the tenderer in the schedule shall be inclusive of Sales Tax on turnover, Octroi duty and works contract tax or any other duties levied by the Govt. or other public bodies. Unless otherwise stated in the schedule of quantities rates for all items shall be for complete work including supplying and fixing of all materials etc.

The contractor when called for by the department, should furnish detailed analysis in support of the rates quoted by him against each item of tender. The department reserves the right to utilise the analysis thus supplied and in setting and deviations of claims arising on this contract.

In this connection, the tenderers any, however, note that under the provisions of Section 194(2) of Mumbai Municipal Corporation Act, if any article on which Octroi is paid, is imported into the city under a written declaration signed by the importer that such article is being imported into the city for the purpose of supply to Govt. work, the Octroi is admissible for refund on production property of Govt. In the case of materials incorporated in this work, the necessary certificates will be furnished by the Department to enable the contractor to obtain refund of Octroi. This may be taken into consideration by the tenderers when quoting their rate.

18. Supply Of Materials

- i) The materials and their quantity to be supplied by the department will be as per Schedule A. These shall be issued from the department stores.
- ii) The contractor shall bear all incidental charges for cartage, storage and safe custody of materials. No reimbursement of the expenses will be made by the department.
- iii) The contractor should note that the difference in the quantity on materials actually issued to the contractor and theoretical quantity including its variation of not returned by the contractor, shall be recovered at twice the issue rate including storage charges without prejudice to the provision to the relevant conditions regarding the return of materials. And in the event of it being discovered that the quantity of materials used is less than the quantity ascertained as herein before provided (allowing variation on minus side) cost of materials not so used shall be recovered from the contractor on the basis of stipulated issue rate including storage charges and cartage to site without prejudice to the right of the Engineer-in-Charge to reject such work or to allow him at reduced rates for such items or to insist on him to redo the same without any extra cost.
- iv) Recovery for supply of material shall be made progressively from the running accounts bills based on actual consumption at site.

19. Withdrawal Of Tender

The tender should be valid for a minimum period of 90 days from the date of opening of tenders. Should the tenderer withdraw or modify his tender within the period of 90 days his earnest money deposit will be liable for fore future.

20. Measurements

Where mode of measurement is not specified the measurement will be taken at site as per latest I.S. Code or practice for measurements. The contractor or his representative shall accompany the Engineer-in-charge or his representative, when required to do so and assist in taking measurements, and shall agree to the measurements recorded on the spot. All measuring tapes shall be of steel and scaffolding and ladders that may be required for taking measurements shall be supplied by the contractor. If the contractor fails to accompany the Engineer or other person who has been duly authorised by the Engineer-in-Charge to take measurement then he shall be bound by the measurements recorded by the Engineer-in-Charge or his representative.

21. Samples

Samples of all the materials to be incorporated in the works shall be submitted to the Engineer-in-Charge for the approval without any extra cost. The approved samples will be kept with the Engineer-in-Charge till the completion of the work. Materials not conforming strictly to the samples are liable to be rejected.

22. Contractors staff

The tenderer shall furnish along with his tender the list of Engineers and supervisory staff with their qualifications and experience he proposes to employ for execution of the work covered by this contract.

23. List Of Works Carried Out By Tenderers

The tenderers shall also submit along with the tender a list of works and also the approximate cost of each work carried out by him in the past for different Govt. department or Public bodies.

24. Security Regulations

The contractor has to follow strictly regulation prevailing at the area where work site is situated from time to time especially in regard to working hours, movement of materials and entry permits. Any breach of regulations will be seriously viewed.

1. The contractor shall make application to the Engineer-in-Charge every day for issue of entry permits / photo passes for casual labourers to be deployed as the works.
2. On recommendation by the Engineer-in-Charge, the contractor shall collect the required number of tokens from the Security Department and distribute the same among the authorised labour forces. He shall also be responsible for accounting the surrendering of tokens issued by the Security department at the end of Day's work. The token can be issued only for a short duration in the morning hours. In the event of loss or misplacement of tokens a penalty of Rs.2/- per token will be levied.
3. The contractor shall make an application for the photo passes to be issued by the Security Department for his regular supervisory staff.
4. No person other than those holding tokens or photo passes shall normally be permitted to enter site. In case the contractor desire to bring any other personnel to the work site. He shall obtain permission of Security Department well in advance through Engineer-in-Charge.
5. All materials and articles brought by the contractor to the work sites shall have to be declared at the security gate. Similarly to materials shall be taken out from the department premises without proper gate pass, which will be issued by the Engineer-in-Charge to the contractor on written request. It is to be noted that loading of contractor's materials or vehicles and trucks shall be done in the presence of Department materials till the Security check is over.
6. For work on Sunday, holidays and late hours even though permission will be accorded by the Engineer-in-Charge, the contractor will have to make application to the Security Department also and keep them informed well in advance.

Any breach of above security regulations and rules in force from time to time be viewed seriously.

25. Information Regarding accidents

The contractor is also to promptly report the case(s) of accident (s) involving injuries to this worker (s) to his local security post/Security officer and Engineer-in-Charge.

26. Requirement Of Electrical Power

Tenders should submit along with their tenders the total approximate requirement of Electrical power that may be required by them for the execution of the work.

27. Bank Guarantee

If on acceptance of the tender the contractor desires to give a Bank Guarantee Bond in lieu of Deposit, stipulated in the tender the contractor should note that the same shall be given in the form as shown in Appendix 'A'.

28 One Copy Of The Drawings To Be Kept At Site

One copy of each of the drawings furnished to the contractor shall be kept by the contractor at site and the same shall be at reasonable.

29. Proper Drawings And Instructions

The Engineer-in-Charge shall have full powers and authority to supply to the contractors from time to time during the progress of work such further drawings and instructions as shall be necessary

for the purpose of proper and adequate execution and maintenance of the work and the contractor shall carry out the work and be bound by the same.

30. Work To The Satisfaction Of The Engineer-In-Charge

Save in so far as it is legally or physically impossible the contractor shall execute, complete and maintain the works in strict accordance with entire satisfaction of the Engineer-in-Charge and shall comply with and adhere strictly to the instructions and directions of Engineer-in-Charge on any important matter concerning the work. The contractor shall take instructions and directions from the engineer-in-Charge or his authorised representatives.

31. Watching And Lightings

The contractor shall in connection with the works, provide and maintain at his own cost all lights, guards, fencing and watching where and when necessary or as required by the Engineer-in-Charge or by any duly constituted authority for the protection of the workers or for the safety and convenience of the public or others.

32. Foreign Exchange

No foreign exchange will be made available by the owner for any of the equipment covered in the tender specifications. However where it is unavoidable imported items can be included. The tenders should clearly indicate materials, quantity, rate and amount of such imported items.

33. Return Of Drawings

After the completion of the work, the drawings will be returned by the tenders to the owner. Final payment will be made only after the drawings have been received by the owner.

34. Components Of Items For Completion Of Works

Any items of work required for completion of the work as per the specifications and drawings even though not indicated specifically either in the tender schedule, specifications and drawings should be quoted by the contractor separately given unit rates for such items along with the main tender. In the case of such information not being furnished along with the tender documents, it will be deemed to have been included in the rates quoted in the tender schedule and no claims whatsoever, will be entertained subsequently for such items.

35. Special Tools

The contractor shall hand over a list of special tools required and also the tools required for maintenance and overhauling of equipments supplied. Installed and commissioned by him.

36. Maintenance Schedule

He shall also submit two copies of recommended schedule for maintenance of equipments supplied by him. This maintenance schedule should be based on manufacturers recommendations.

37. Test Certificates

4 copies of test certificate for each individual equipments supplied by him should be submitted before commissioning of equipments.

38. Final Drawings

4 copies of final completion drawings along with their negative (tracing) should be submitted.

39. IT IS TO BE NOTED THAT TILL CLAUSES 33 TO 38 ARE COMPLETED WITH PAYMENT TOWARDS FULL AND FINAL SETTLEMENT, - NAMELY FINAL BILL WILL NOT BE MADE.

I. Confidentiality:-

No party shall disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as “**Proprietary**” in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party.

This clause shall apply to the sub-contractors, consultants, adviser or the employees engaged by a party with equal force.

II. “Restricted information” categories under Section 18 of the Atomic Energy Act, 1962 and “Official Secrets” under Section 5 of the Official Secrets Act, 1923 :-

Any contravention of the above-mentioned provisions by any contractor, consultant, adviser or the employees of a contractor will invite penal consequences under the aforesaid legislation.

III. Prohibition against use of IOP’s name without permission for publicity purposes:-

The contractor or sub-contractor, consultant, adviser or the employees engaged by the contractor shall not use IOP’s name for any publicity purpose through any public media like press, Radio, T.V. or Internet without the prior written approval of IOP.



INSTITUTE OF PHYSICS

BHUBANESWAR-751 005

(An Autonomous research institute of Dept. of Atomic Energy, Govt.of India)

Tender No.NIT/IOP/16/2015-16

(A)REPAIR/RENOVATION OF QTRS.NO.B-1 TO B-12 (B) REPAIR/RENOVATION OF QTRS.NO.C-1 TO C-4 (C) REPAIR/RENOVATION OF QTRS.NO.D-2 TO D-4.

PART-II

FINANCIAL BID

SCHEDULE OF QUANTITIES

Name of the Work :- (A) Repair/Renovation of Qtrs.No.B-1 to B-12.

(B) Repair/Renovation of Qtrs.No. C-1 to C-4.

(C) Repair/Renovation of Qtrs.No. D-2 to D-4.

(A) Repair/Renovation of Qtrs.No.B-1 to B-12.						
Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
1	Dismantling old internal / external plaster or skirting raking out joints and cleaning the surface for plaster including disposing of the debris outside colony.	1016.24	Sqm			
2	Cement Plaster in single coat with cement mortar 1:4 [1 cement:4 coarse sand] at all floors heights, slopes on plane or other surfaces including and locations, to correct line, level, plane and plumb including preparing the surface, scaffolding, curing etc. complete for the following as per specifications and drawings.					
	a) 6 mm thick plaster for ceiling, exposed concrete surfaces etc. including providing and adding bonding agent of Dr. FIXIT PIDICRETE MPB or other approved equivalent manufactures including applying a slurry coat of cement and Dr.FIXIT PIDICRETE MPB (1:1 volume mix) with a brush before plaster is applied internal brick/ concrete surface.	100.00	Sq. M			
	b) 15mm. Thick plaster for internal brick/concrete surfaces	448.12	Sq. M			
3	Sand faced cement plaster as specified below in cement mortar 1:4 at all heights and locations including scaffolding, preparing the surfaces, finishing and rendering with sponge to correct line, level and plumb, curing etc. complete as per specifications.					
	a) 20mm. Thick in two coats for brick/concrete surfaces (external/internal) (back coat and finishing coat of 10mm. thick each) including providing & adding approved water proofing agent @ 2% by weight of cement or as per manufactures instructions.	468.12	Sq. M			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
4	Applying anti-corrosive chemicals of approved make on the reinforcement where these are exposed to air after cleaning the surface thoroughly etc complete in all respect.	38.74	sqm			
5	Half brick masonry with common burnt clay F.P.S. (Non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level. Cement Mortar 1:3 (1 cement: 3 coarse sand)work with modular bricks of class designation 75 in foundation and plinth in Cement Mortar 1:6 (1 cement : 6 coarse sand)	37.28	sqm			
6	Providing and laying vitrified floor tiles of size 300 x 300 mm or more , thickness as specified by the manufacture of 1st quality confirming to Is: 15622 of Marbonite of M/s H & R Johnson, Kajaria, Nitco or approved equivalent make in all colours laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc. using water proofing chemical to prevent leakage/ seepage etc.complete and also includes the chipping of the existing floor.	200.40	Sqm			
7	Providing and fixing 1st quality ceramic glazed wall tiles of size 200 x 300 mm confirming to IS: 15622 (thickness as specified by the manufacture of Marbonite of M/s H & R Johnson, Kajaria, Nitco or equivalent. 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 dadoes over 12 mm thick bed of cement Mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete and also including dismantling of the existing wall tiles.	234.20	Sqm			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
8	Repainting of old painted surface with two coats of acrylic distemper washable of ICI Dulux/ Asian Paints/ Nerocal or other approved equivalent make & shade over one coats of approved cement primer (alkali resistance) consist of thoroughly scrapping oilbound distemper/ acrylic emulsion/ white wash surface, filling of the cracks with approved crack filling compound, applying approved putty to entire surface to fill up crevices, middepression etc. thoroughly scrapping the surface, applying 2nd coat of approved cement primer carrying out full stucco putty work, apply two coats of acrylic distemper washable paint including necessary covering materials and removal of splashing & droppings from floors, walls including scaffolding,ladder as required & disposing of debris outside colony etc. complete all as directed by the Engineer-in-Charge.	1,926.80	Sqm.			
9	Repainting of old painted wooden/steel surfaces with two coats of synthetic enamel paint using first quality synthetic enamel paint of approved make and shade over one coat of approved wood/steel primer including preparing surfaces, filling with putty scaffolding and cleaning etc. including removing old paint by scrapping, blowlamp etc. complete all as directed by the Engineer-in-charge.	840.40	Sqm.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
10	Providing and applying three finished coats of acrylic based emulsion exterior coating of Apex ultima of M/s. Asian Paints / Excel of M/s. Nerolac/ Heatshield of M/s. Dr. FIXIT / Weathershield Max of M/s. ICI delux or other approved equivalent make and shade over the sand face / rough cast plaster / RCC jali/ RCC fins at locations as required, including preparation in proportion of one litre of Apex Ultima or other makes with 400 ML. of potable water, thoroughly mixed and applied at an interval of 4-6 hours for each successive coats and ensure consumption of 0.27 ltr /Sqm for 3 coats, including preparation of surface, cleaning and filling the cracks and crevices with Latex caulking crack filling etc. complete generally as per the manufacturer's specification and as directed by the EIC.					
10.1	a) Over sand faced palstered surfaces Note: 1) The surface shall be cleaned with water jet with high pressure water pump spray of at least 100kg/ sq.cm and brushing / rubbing with coir to remove all foreign materials etc. before painting work. 2) Lower consumption less than as mentioned will be recovered @ 260/ltr	2,230.50	Sqm.			
11	Providing and repairing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position: sal wood (only new wood to be measured for payment)	4.80	cum			
12	Providing and fixing panelled or panelled and glazed shutters for doors, windows, including ISI marked M.S.pressed butt hinges bright finished of required size with necessary screws, including panelling etc complete in respect as directed by the Engineer-in-charge.					
12.1	35 mm thick shutters	16.94	sqm			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
13	<p>Providing and fixing approved quality machine cut, mirror polished 18 mm uniform thick Granite stone slab for frame in single piece 100 to 200 mm wide in position at all floors and locations laid over 20 mm thick cement mortar 1:3 bedding/backing in correct line, level and plumb, closed jointed, machine grouting, cement slurry, curing including cutting of stones to get rounded exposed edges, wastage, final hand polishing, rounding of free exposed stone edges etc. complete as per specifications and as directed by the Engineer-in-Charge.</p> <p>a) 18 mm thick jet black granite stone door frame for toilet including providing and fixing 90 mm long stainless steel screws 3 nos. in each vertical stone with rawl plug by drilling and finishing with approved putty with suitable pigment etc. complete.</p>	120.70	sqm			
14	<p>Providing and fixing to existing door frames 30 mm thick fibreglass reinforced plastic (F.R.P.) flush door shutter in different plain and wood finish made with fire retardant grade unsaturated polyester resin, moulded to 3mm thick FRP laminate all around, with suitable wooden blocks inside at required places for fixing of fittings and polyurethane foam (PUF) / Polystyrene foam to be used as filler material throughout the hollow panel, casted monolithically with testing parameters of F.R.P. laminate confirming to table -3 of IS: 14856 : 2000, complete as per direction of Engineer-in-Charge.</p>	37.64	sqm			
15	<p>Dismantling G.I.pipes (external work) including excavation and refilling trenches after taking out the pipes, manually by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge. 15mm to 40 mm nominal bore Code No-15.44.1 of DSR-2012</p>	162.00	metre			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
16	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per the direction of Engineer in Charge. Internal work- exposed on wall					
	20 mm nominal outer dia. Pipes.	148.00	metre			
17	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings. This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per the direction of Engineer in Charge. External work-					
	25 mm nominal outer dia. Pipes.	30	metre			
	32 mm nominal outer dia. Pipes.	36	metre			
18	Providing and fixing gun metal gate valve with C.I.wheel of approved quality (screwed end): 32 mm nominal bore					
	25 mm nominal bore	6.00	each			
	32 mm nominal bore	6.00	each			
19	Providing and fixing ball valve (brass) of approved quality, High or Low pressure, with plastic floats complete:					
	25 mm nominal bore	12.00	each			
20	Providing and fixing unplasticised PVC connection pipe with brass unions: 45 cm length					
	15mm nominal bore	36.00	each			
21	Providing and fixing C.P.brass bib cock of approved quality confirming to IS:8931. 15mm nominal bore	36.00	each			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
22	Providing and fixing approved White Orissa pattern W.C. comprising of orissa pattern W.C. of Johnson, M/s CERA,Hindware, Parryware or other approved equivalent make with 'P' and 'S' trap in white glazed vitreous chinaware of size 580 mm x 440 mm confirming to IS, with 10 litre low level white P.V.C flushing cistern with manually controlled device (handle lever), confirming to IS: 7231, with all fittings and fixtures complete including cost of removing the existing one and making good to the surrounding with cement mortar/ concrete to the existing finish and depositing serviceable materials at dept store & disposing of debris outside colony etc complete all as per specifications and as directed by Engineer-in-charge.	12.00	each			
23	Providing cleaning the surface from loose particles, cement laitance then prepare the surface by cement plaster where the surface will be damaged to make the smooth surface before application of APP Membrane work including labour, materials, transportation, taxes etc complete.	1300	SQM			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
24	Providing, cleaning the surface from loose particles, debris and unused materials from the basement then preparation, providing and laying TORCHSHIELD (3mm) of Dr. Fixit from Pidilite Industries Ltd or equivalent product of M/s. Sika India Ltd. of Polymer modified bitumen based as well as dimensionally stable non-woven polyester/ fiber glass carrier to obtain high tensile strength, tear and puncture resistance with thermal expansion using gas burner to bond from lower end towards higher end with overlap margin for minimum 100mm before the application one coat solvent based bitumen TORCHSHIELD or equivalent M/s. Sika India Ltd. Primer @ 0.60 kg/sqm. including the cost of labour, materials, transportation, taxes, etc. complete as per direction of Engineer in charge.	1300	SQM			
Non Scheduled Items						
25	Supplying fitting and fixing of Mosquito proof nets of Netlon or approved equivalent make complete including fixing them with fastening male-female tape over the windows and ventilators etc complete with cost and conveyance of all materials and labour required for the work etc complete in all respect as per the direction of the Engineer-in-Charge.	133.68	Sqm	400.00	53472.00	

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
ELECTRICAL WORK						
1	<p>Concealed wiring in PVC conduit: Supply Installation, testing & commissioning of 1100V FRLS grade PVC insulated multi stranded copper conductor wires, for light point/ fan point/ exhaust fan point/ call bell point, in surface / recessed medium class PVC conduit(25mm to 40mm)/ Flexible Nylon conduit, with, suitable size GI junction box and earthing the point with FR PVC insulated copper conductor single core cable etc as required, as per IB/IS specification, on ceiling/ concrete or brick wall at a minimum depth of 3inch from the surface, complete with all accessories, bends, Tees, suitable pull boxes/ junction boxes of suitable size as per the site condition wherever required & with necessary leads at both ends by approved copper lug, complete as per the instructions of Engineer-in charge.</p> <p>Note: 1. Connection shall be done with crimped type tinned copper lugs and washers.</p> <p>2. Cutting of concrete/ Brick wall, ceiling etc are to be done properly using suitable cutting machine without damaging periphery area for laying of conduits & fixing of switch boards, DBs, JBs etc.</p> <p>3. After laying of conduits, and fixing of switch boxes, JBs etc the cutting area has to be repaired good to finish as like as prior to cutting of the same.</p> <p>4. All PVC insulated copper conductor FRLS grade shall be ISI marked.</p> <p>5. Make of wires: Finolex/ L&T or approved equivalent of the same.</p>					
1.1	01 nos. of 06 Sqmm wires in suitable PVC conduit	500	Mtrs.			
1.2	01 nos. of 04 Sqmm wires in suitable PVC conduit	360	Mtrs.			
1.3	01 nos. of 2.5 Sqmm wires in suitable PVC conduit	840				
1.4	01 nos. of 1.5 Sqmm wires in suitable PVC conduit	1950	Mtrs.			
1.5	01 nos. of 01 Sqmm wires in suitable PVC conduit	2400	Mtrs.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
2	<p>OUTLET SWITCH & SOCKET BOXES:</p> <p>Fabrication, supply, installation, Testing and commissioning duly concealed in concrete/brick wall/Ceiling of outlet switch boards made out of 16 SWG thick galvanized MS sheet with top cover 3mm thick Bakelite Hylam (Preferably of National make, white color) laminated sheet duly fixed by SS screws. Necessary wiring inside the board has to be carried out using suitable copper PVC insulated single core flexible wire. One suitable nut and bolt has to be provided on the side wall of the board for earth connection. All complete as per the instructions of EIC-IOP.</p> <p>Note:</p> <ol style="list-style-type: none"> All Switches, Sockets, ceiling rose & Angle holder should be of Anchor (Model-Penta) make or approved equivalent of the same. All fan regulators are to be electronic stepped type (5A socket type) and make of the same is to be Anchor or approved equivalent of the same. The 32A DP Switch is to be of Anchor/ Cona make or approved equivalent of the same. All wires to be used should be of Finolex/ L&T make or approved equivalent of the same. All terminals of the wires to be connected inside the board should be provided with suitable copper lugs/ sockets. Sample of all materials is to be got approved from EIC, IOP before execution. Nomenclature as required for each board is to be mentioned on the same. 					
2.1	The switch box will contain 01 no. of 5Amp, 250Volt Switch 01 no. of 5Amp. 250Volt two way switch	2	Nos.			
2.2	The switch box will contain 02 no. of 5Amp. 250Volt two way switch	2	Nos.			
2.3	The switch box will contain 01 no. of 5Amp, 250Volt Switch 01 no. of 5Amp. 250Volt two way switch	2	Nos.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
2.4	The switch box will contain 01 no. of Bell push Switch	2	Nos.			
2.5	The switch box will contain 01nos. of 5 Amp, 250Volt Batten Holder	24	Nos.			
2.6	The switch box will contain 01nos. of 5 Amp, 250Volt Angle Holder	60	Nos.			
2.7	The switch box will contain 01 no. of 15Amp, 250Volt Switch 01 no. of 15Amp, 250Volt Socket	12	Nos.			
2.8	The switch box will contain 04nos. of 5 Amp, 250Volt Switches 02 no. of 5Amp, 250Volt Socket	12	Nos.			
2.9	The switch box will contain 01no.s of 250Volt Call bell, Ding Dong type, preferably of Cona make or approved equivalent of the same.	12	Nos.			
2.10	The switch box will contain 03nos. of 5 Amp, 250Volt Switch 01nos. of 5 Amp, 250Volt Socket	12	Nos.			
2.11	The switch box will contain 02nos. of 5 Amp, 250Volt Switch	12	Nos.			
2.12	The switch box will contain 01nos. of 5 Amp, 250Volt Ceiling Rose	48	Nos.			
2.13	The switch box will contain 02 no. of 5Amp, 250Volt Switch 02 no. of 5Amp, 250Volt Socket	12	Nos.			
2.14	The switch box will contain 04nos. of 5 Amp, 250Volt Switches 01 no. of electronic, step type, socket size fan regulator 01 no. of 5Amp, 250Volt Socket	24	Nos.			
2.15	The switch box will contain 01nos. of 5 Amp, 250Volt Switch	12	Nos.			
2.16	The switch box will contain 01 no. of 5Amp, 250Volt Switch 01 no. of 5Amp, 250Volt Socket	12	Nos.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
3	<p><u>Junction Box:</u> Fabrication, supply, installation, Testing and commissioning of duly concealed in concrete/brick wall/Ceiling of outlet JB (5" x 5" x 3" Box size) made out of 16 SWG thick galvanized MS sheet with top cover 3mm thick Bakelite Hylam (Preferably of National make, white color) laminated sheet duly fixed by SS screws. One bolted type 20A 03 pole terminal connector is to be provided for connection of live wires inside the box. One suitable nut and bolt has to be provided on the side wall of the board for earth connection. All complete as per the instructions of EIC-IOP.</p>	48	Nos.			
8	<p><u>Ceiling light</u> Supplying, installation, testing and commissioning of the Ceiling light fittings (11 W) with all accessories and Bulb complete. Philips make FCS 18 2 x PLS/2P11 W-240 V or approved equivalent of the same.</p>	6	Nos.			
9	<p><u>TUBE LIGHT FIXTURES:</u> Supply, installation, testing commissioning of tube light fixtures and fittings complete with all accessories, tube / lamp, choke, starter, etc. on surface of slab/ beam/ false ceiling by 2 numbers (minimum) of 6mm Anchor fasteners or on wall by means of 25 x 3mm GI strip bend to shape and with 2 nos. of wood screws, nylon plug etc. suitable supporting frame fixed with rag bolts grouted on the wall/ anchor fastener on the beam/ column & other fixing accessories etc., provision & connection with 01 sq.mm multi-stranded copper conductor PVC insulated FRLS grade wires/ 1.5sq.mm copper conductor PVC insulated FRLS grade earth wire etc. with the fixture from the existing point, painting with two coats of red oxide & two coats of enameled paint, 6mm thick GI supports all as per drawing, specifications & as per the instruction of EIC.</p> <p>Note: Sample fixture/ fitting shall be got approved from department with complete technical data.</p>					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	All fittings should be supplied with the electronics heavy duty ballast and tube as per requirement Extension MS rod/Ms Pipe duly painted with white enamel paint					
9.1	Fluorescent fixtures with Electronics choke/ Copper choke with starter & 01 x 36W tube/ lamp suitable for 230/ 250V, 50Hz supply system. (Make – PHILIPS, Cat no.TMC 501 1xTLD 36W1 or approved equivalent of same)	24	Nos.			
10	<u>CEILING FANS:</u> Supply, Installation, testing & commissioning of 1200 mm sweep ceiling fans, double ball bearing, capacitor with aluminium canister complete with down rod/motor, safety chain/ wire and all accessories, suitable for 230V/ 250V, 50Hz supply system, including continuous earthing and final connection with 01sq.mm multi-stranded copper conductor PVC insulated FRLS grade wires. Make: Crompton Greaves/ Bajaj/ USHA, BEE 05 Star rated or approved equivalent of the same.	24	Nos.			
13	<u>DISTRIBUTION BOARDS:</u>					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	<p>Supply, Installation, testing & commissioning of following medium voltage (415V) TP&N distribution boards single door complete with necessary SFU, MCCB, MCBs, etc. suitable for wall mounting with M.S. frame work of 40x40x5mm angle mounting with M.S. enclosure fabricated out of 16SWG thick M.S. CRCA sheet with concealed hinged door, cam type locking arrangement etc. Suitable tinned copper bus bars have to be provided for all phases, neutral and earth connections both for incoming and outgoing connections. Cable end box, wire way box, including interconnections with appropriate size of PVC insulated copper conductor, phase barriers, earth of DB, enameled danger board, name plate, neoprene gasket for joints & door has to be provided. Necessary metal treatment, two coats of red oxide paint & two coats of enameled paint has to be provided. The front door (MS sheet) should have necessary cutouts for knobs/ operating levers of MCB's. Phase distribution drawing etc. all as per drawings specifications etc. relevant IS & instruction of Engineer-in-charge-IOP (G.A. & fabrication drawing to be got approved before fabrication)</p> <p>Note:</p> <ol style="list-style-type: none"> 1.MCB's shall be minimum 10KA breaking capacity & Preferably of Legrand make or approved equivalent of the same. 2. All SFUs should be of L&T/ Siemens make and Fuses to be provided with that. 3. All tinned copper bus bars should be minimum of 200A rating or as mentioned in the drawing. 4. All wires to be used for wiring are should be FRLS, Finolex make or approved equivalent of the same. 5. Bolted type terminal blocks of suitable rating are to be provided for all types of input and output connections. 6. All input & output connection has to be provided with suitable cable sockets (Aluminium for Aluminium cable and Copper for copper cable) 					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	7. If factory made DB is available of legrand or approved equivalent make suitable for this requirement same can be supplied and installed.					
13.1	Incoming DB (Preferably Legrand Make model no.607712, 12way SPN DB or approved equivalent of the same) 1. 25 A DP MCB for Incomer – 01 no. 2. 20A SP MCB for outgoing -01no. 3. 10A SP MCB for outgoing – 06nos.	12	Nos.			
15	EARTHING CONNECTION: Supply, laying/fixing, testing & commissioning of tinned copper earth wire fixed to wall side of trench/slab/column/beam/shaft with thick GI spacers and GI saddles or in ground at 750mm below including excavation in ground with protective baked bricks, excavation in ground refilling and back filling of trench, interconnection of earth wire /strip with GI nut bolts and washers and solder jointing, painting with two coats of black bituminous compound for earth wire/strip in ground and green enamel paint for earth wire/strip on surface as per the specifications and as per the instruction of Engineer-in-charge. Jointing of the earth wire shall be solder joints with tinned copper cable sockets					
15.1	Two numbers of 08 SWG copper wire	40	Mtrs.			
16	EARTH STATION: Supply, installation, testing & commissioning of tinned copper plate electrode earth station, 2.5 mtr. below ground level conforming to latest IS specifications complete with all required materials like coke/charcoal, salt, brass, nut bolts & washers, watering arrangements (GI funnel), G.I. pipe-25mm (B class), masonry chamber, heavy duty cast iron cover plates and excavation in all types of soil in ground, refilling and removal of excess earth within a radius of 500mtr etc. as per instruction of EIC, drawing & specification. Note:					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	<p>1. Measurement of resistance of earth station and resistance of complete scheme of earthing shall be measured, recorded & got approved by EIC.</p> <p>2. The copper plate should be of electrolytic grade.</p> <p>3. Two nos. of 25 x 6 mm tinned copper flat is to be bolted to the earth plate and to be brought up to the top of pit.</p>					
16.1	600 x 600 x 3.15 mm tinned copper plate electrode earth station	4	Set			
17	<p><u>Water Tight/ Bulk head light fitting:</u></p> <p>Supply, installation, testing and commissioning of water tight CFL fitting with 09W CFL lamp suitable for fixing on wall outside of the house. Make: Philips/ Bajaj/ Wipro or approved equivalent of the same.</p>	24	Nos.			
18	<p><u>Dismantling of existing old wiring:</u></p> <p>The scope of job involves the following:</p> <p>1. Disconnection of all connected wires/ cables in the Old C-type quarter.</p> <p>2. All the fans & light fittings has to disconnected/ removed and to be handed over to EIC, IOP.</p> <p>3. Removal of the wires from the conduit and to hand over the same to EIC, IOP.</p> <p>4. Removal of the existing switch boards/ DBs from the wall and to hand over the same to IOP, EIC.</p> <p>5. All the materials after removal has to be handed over EIC, IOP within a lead of 500 meters as per his instruction.</p> <p>If required hand held machine may be used for cutting of the wall for removal of the boards from the wall. After removal of the boards/ DBs the same cutting area is to be properly filled with sand, cement, brick, chips, for good to finishing of the same area.</p>	1x12	job			
TOTAL AMOUNT(A) = Rs.						

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
(B) Repair/Renovation of Qtrs.No. C-1 to C-4.						
Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
1	Dismantling old internal / external plaster or skirting raking out joints and cleaning the surface for plaster including disposing of the debris outside colony.	950	Sqm			
2	Cement Plaster in single coat with cement mortar 1:4 [1 cement:4 coarse sand] at all floors heights, slopes on plane or other surfaces including and locations, to correct line, level, plane and plumb including preparing the surface, scaffolding, curing etc. complete for the following as per specifications and drawings					
	a) 6 mm thick plaster for ceiling, exposed concrete surfaces etc. including providing and adding bonding agent of Dr. FIXIT PIDICRETE MPB or other approved equivalent manufactures including applying a slurry coat of cement and Dr.FIXIT PIDICRETE MPB (1:1 volume mix) with a brush before plaster is applied internal brick/ concrete surface.	100.00	Sq. M			
	b) 15mm. Thick plaster for internal brick/concrete surfaces.	350.00	Sq. M			
3	Sand faced cement plaster as specified below in cement mortar 1:4 at all heights and locations including scaffolding, preparing the surfaces, finishing and rendering with sponge to correct line, level and plumb, curing etc. complete as per specifications.					
	a) 20mm. Thick in two coats for brick/concrete surfaces (external/internal) (back coat and finishing coat of 10mm. thick each) including providing & adding approved water proofing agent @ 2% by weight of cement or as per manufactures instructions.	461.26	Sq. M			
4	Applying anti-corrosive chemicals of approved make on the reinforcement where these are exposed to air after cleaning the surface throughly etc complete in all respect.	38.74	sqm			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
5	Providing and laying rectified glazed ceramic floor tiles of size 300 x 300 mm or more , thickness as specified by the manufacture of 1st quality confirming to Is: 15622 of Marbonite of M/s H & R Johnson, Kajaria, Nitco or approved equivalent make in all colours laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) including grouting the joints with white cement and matching pigments etc. using water proofing chemical to prevent leakage/ seepage etc.complete and also includes the chipping of the existing floor.	30.00	Sqm			
6	Providing and fixing 1st quality ceramic glazed wall tiles of size 200 x 300 mm confirming to IS: 15622 (thickness as specified by the manufacture of Marbonite of M/s H & R Johnson, Kajaria, Nitco or equivalent. make in all colours, shades expect burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dadoes over 12 mm thick bed of cement Mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete and also including dismantling of the existing wall tiles.	80.00	Sqm			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
7	Repainting of old painted surface with two coats of acrylic distemper washable of ICI Dulux/ Asian Paints/ Nerocal or other approved equivalent make & shade over two coats of approved primer (alkali resistance) consist of thoroughly scrapping oilbound distemper/ acrylic emulsion/ white wash surface, applying a coat of approved cement primer, filling of the cracks with approved crack filling compound, applying approved stucco putty to entire surface to fill up crevices, middepression etc. thoroughly scrapping the surface, applying 2nd coat of approved cement primer carrying out full stucco putty work, apply two coats of acrylic distemper washable paint including necessary covering materials and removal of splashing & droppings from floors, walls including scaffolding,ladder as required & disposing of debris outside colony etc. complete all as directed by the Engineer-in-Charge.	892.20	Sqm.			
8	Repainting of old painted wooden/steel surfaces with two coats of synthetic enamel paint using first quality synthetic enamel paint of approved make and shade over one coat of approved wood/steel primer including preparing surfaces, filling with putty scaffolding and cleaning etc. including removing old paint by scrapping, blowlamp etc. complete all as directed by the Engineer-in-charge.	280.34	Sqm.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
9	Providing and applying three finished coats of acrylic based emulsion exterior coating of Apex ultima of M/s. Asian Paints / Excel of M/s. Nerolac/ Heatshield of M/s. Dr. FIXIT / Weathershield Max of M/s. ICI delux or other approved equivalent make and shade over the sand face / rough cast plaster / RCC jali/ RCC fins at locations as required, including preparation in proportion of one litre of Apex Ultima or other makes with 400 ML. of potable water, thoroughly mixed and applied at an interval of 4-6 hours for each successive coats and ensure consumption of 0.27 ltr /Sqm for 3 coats, including preparation of surface, cleaning and filling the cracks and crevices with Latex caulking crack filling etc. complete generally as per the manufacturer's specification and as directed by the EIC.					
9.1	a) Over sand faced palstered surfaces Note: 1) The surface shall be cleaned with water jet with high pressure water pump spray of at least 100kg/ sq.cm and brushing / rubbing with coir to remove all foreign materials etc. before painting work. 2) Lower consumption less than as mentioned will be recovered @ 260/ltr	500.00	Sqm.			
10	Providing and repairing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position: sal wood (only new wood to be measured for payment)	1.00	cum			
11	Providing and fixing panelled or panelled and glazed shutters for doors, windows, including ISI marked M.S.pressed butt hinges bright finished of required size with necessary screws, including panelling etc complete in respect as directed by the Engineer-in-charge.					
11.1	35 mm thick shutters	16.94	sqm			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
12	Providing and fixing of Fibre Glass Reinforced Plastic (FRP) Door Frames of three legged of cross-section 90mm x 45mm having single rebate of 32mm x 15mm to receive shutter of 30mm thickness. The laminate doorframe molded with fire resistance grade unsaturated polyester resin and chopped mat. Doorframe laminate shall be 2mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fiberglass from all sides. M.S. stay shall be provided at the bottom to steady the frame.	45.00	metre			
13	Providing and fixing to existing door frames 30 mm thick fibreglass reinforced plastic (F.R.P.) flush door shutter in different plain and wood finish made with fire retardant grade unsaturated polyester resin, moulded to 3mm thick FRP laminate all around, with suitable wooden blocks inside at required places for fixing of fittings and polyurethane foam (PUF) / Polystyrene foam to be used as filler material throughout the hollow panel, casted monolithically with testing parameters of F.R.P. laminate confirming to table -3 of IS: 14856 : 2000, complete as per direction of Engineer-in- Charge.	13.00	sqm			
14	Providing cleaning the surface from loose particles, cement laitance then prepare the surface by cement plaster where the surface will be damaged to make the smooth surface before application of APP Membrane work including labour, materials, transportation, taxes etc complete.	500	SQM			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
15	Providing, cleaning the surface from loose particles, debris and unused materials from the basement then preparation, providing and laying TORCHSHIELD (3mm) of Dr. Fixit from Pidilite Industries Ltd or equivalent product of M/s. Sika India Ltd. of Polymer modified bitumen based as well as dimensionally stable non-woven polyester/ fiber glass carrier to obtain high tensile strength, tear and puncture resistance with thermal expansion using gas burner to bond from lower end towards higher end with overlap margin for minimum 100mm before the application one coat solvent based bitumen TORCHSHIELD or equivalent M/s. Sika India Ltd. Primer @ 0.60 kg/sqm. including the cost of labour, materials, transportation, taxes, etc. complete as per direction of Engineer in charge.	500	SQM			
Non Scheduled Items						
16	Supplying fitting and fixing of Mosquito proof nets of Netlon or approved equivalent make complete including fixing them with fastening male-female tape over the windows and ventilators etc complete with cost and conveyance of all materials and labour required for the work etc complete in all respect as per the direction of the Engineer-in-Charge	30.12	Sqm	360.00	10843.20	
ELECTRICAL WORKS						

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
1	<p>Concealed wiring in PVC conduit: Supply Installation, testing & commissioning of 1100V FRLS grade PVC insulated multi stranded copper conductor wires, for light point/ fan point/ exhaust fan point/ call bell point, in surface / recessed medium class PVC conduit(25mm to 40mm)/ Flexible Nylon conduit, with, suitable size GI junction box and earthing the point with FR PVC insulated copper conductor single core cable etc as required, as per IB/IS specification, on ceiling/ concrete or brick wall at a minimum depth of 3inch from the surface, complete with all accessories, bends, Tees, suitable pull boxes/ junction boxes of suitable size as per the site condition wherever required & with necessary leads at both ends by approved copper lug, complete as per the instructions of Engineer-in charge.</p> <p>Note: 1. Connection shall be done with crimped type tinned copper lugs and washers.</p> <p>2. Cutting of concrete/ Brick wall, ceiling etc are to be done properly using suitable cutting machine without damaging periphery area for laying of conduits & fixing of switch boards, DBs, JBs etc.</p> <p>3. After laying of conduits, and fixing of switch boxes, JBs etc the cutting area has to be repaired good to finish as like as prior to cutting of the same.</p> <p>4. All PVC insulated copper conductor FRLS grade shall be ISI marked.</p> <p>5. Make of wires: Finolex/ L&T or approved equivalent of the same.</p>					
1.1	01 nos. of 06 Sqmm wires in suitable PVC conduit	300	Mtrs.			
1.2	01 nos. of 04 Sqmm wires in suitable PVC conduit	600	Mtrs.			
1.3	01 nos. of 1.5 Sqmm wires in suitable PVC conduit	560	Mtrs.			
1.4	01 nos. of 01 Sqmm wires in suitable PVC conduit	600	Mtrs.			
2	OUTLET SWITCH & SOCKET BOXES:					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	<p>Fabrication, supply, installation, Testing and commissioning duly concealed in concrete/brick wall/Ceiling of outlet switch boards made out of 16 SWG thick galvanized MS sheet with top cover 3mm thick Bakelite Hylam (Preferably of National make, white color) laminated sheet duly fixed by SS screws. Necessary wiring inside the board has to be carried out using suitable copper PVC insulated single core flexible wire. One suitable nut and bolt has to be provided on the side wall of the board for earth connection. All complete as per the instructions of EIC-IOP.</p> <p>Note:</p> <ol style="list-style-type: none"> All Switches, Sockets, ceiling rose & Angle holder should be of Anchor (Model-Penta) make or approved equivalent of the same. All fan regulators are to be electronic stepped type (5A socket type) and make of the same is to be Anchor or approved equivalent of the same. The 32A DP Switch is to be of Anchor/ Cona make or approved equivalent of the same. All wires to be used should be of Finolex/ L&T make or approved equivalent of the same. All terminals of the wires to be connected inside the board should be provided with suitable copper lugs/ sockets. Sample of all materials is to be got approved from EIC, IOP before execution. Nomenclature as required for each board is to be mentioned on the same. 					
2.1	The switch box will contain 01 no. of 15Amp, 250Volt Socket	4	Nos.			
2.4	The switch box will contain 01 no. of 15Amp, 250Volt Switch 01 no. of 15Amp, 250Volt Socket	12	Nos.			
2.5	The switch box will contain 04nos. of 5 Amp, 250Volt Switches 01 no. of electronic, step type, socket size fan regulator 01 no. of 5Amp, 250Volt Socket	12	Nos.			
2.6	The switch box will contain	27	Nos.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	01nos. of 5 Amp, 250Volt Ceiling Rose					
2.7	The switch box will contain 01nos. of 5 Amp, 250Volt Angle Holder	32	Nos.			
2.8	The switch box will contain 01nos. of 5 Amp, 250Volt Switch	10	Nos.			
2.10	The switch box will contain 01no.s of 250Volt Call bell, Ding Dong type, preferably of Cona make or approved equivalent of the same.	4	Nos.			
2.13	The switch box will contain 01 no. of 5Amp, 250Volt Switch 02 no. of 5Amp. 250Volt two way switch	1	Nos.			
2.15	The switch box will contain 04 nos. of 5 Amp, 250Volt Switches, 01 no. of 5Amp, 250Volt Socket	4	Nos.			
2.20	The switch box will contain 02 nos. of 5Amp, 250Volt Switch 02 no. of 5Amp. 250Volt two way switch	1	Nos.			
2.22	The switch box will contain 01 no. of 5Amp, 250Volt Switch 01 no. of 5Amp, 250Volt Socket	8	Nos.			
2.24	The switch box will contain 01 no. bell push switch	4	Nos.			
2	The switch box will contain 02 no. of 5Amp. 250Volt two way switch	1	Nos.			
3	<u>MCB BOX:</u> Fabrication, supply, installation, Testing and fixing on concrete/brick wall/ plywood partition of local control MCB box made out of 16 SWG thick galvanized MS sheet with top cover also galvanized MS sheet duly fixed by SS screws. Necessary cut outs to be provided on the top cover for the operating lever of the MCB and suitable size gland holes at two ends has to be made for the MS conduits/ Armored cables or The readymade factory made MCB boxes of make Legrand or approved equivalent. MCB shall be minimum of 10 KA breaking capacity. All complete as per the instructions of Engineer-in-charge- IOP Make: MCB of Legrand or approved equivalent of same. All input & output connection has to be provided with suitable sockets.					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
3.1	The MCB box with one no. 20A DP MCB	4	Nos.			
4	<u>Junction Box:</u> Fabrication, supply, installation, Testing and commissioning of duly concealed in concrete/brick wall/Ceiling of outlet JB (5" x 5"x 3"Box size) made out of 16 SWG thick galvanized MS sheet with top cover 3mm thick Bakelite Hylam (Preferably of National make, white color) laminated sheet duly fixed by SS screws. One bolted type 20A 03 pole terminal connector is to be provided for connection of live wires inside the box. One suitable nut and bolt has to be provided on the side wall of the board for earth connection. All complete as per the instructions of EIC-IOP.	7	Nos.			
5	<u>Security light Junction Box:</u> Fabrication, supply, installation, Testing and commissioning of duly concealed in concrete/brick wall, of water proof junction box (8"x 6"x4") Box made out of 16 SWG thick galvanized MS sheet. Top cover also should be of same GI sheet duly fixed with SS Screws. One suitable nut and bolt has to be provided on the side wall of the JB for earth connection. One 04 way bolted terminal block of 32A current rating is to be provided in the box. Three nos. of suitable gland holes are to be provided for input and output conduits. All complete as per the instructions of EIC-IOP.	2	Nos.			
9	<u>TUBE LIGHT FIXURES:</u>					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	<p>Supply, installation, testing commissioning of tube light fixtures and fittings complete with all accessories, tube / lamp, choke, starter, etc. on surface of slab/ beam/ false ceiling by 2 numbers (minimum) of 6mm Anchor fasteners or on wall by means of 25 x 3mm GI strip bend to shape and with 2 nos. of wood screws, nylon plug etc. suitable supporting frame fixed with rag bolts grouted on the wall/ anchor fastener on the beam/ column & other fixing accessories etc., provision & connection with 01 sq.mm multi-stranded copper conductor PVC insulated FRLS grade wires/ 1.5sq.mm copper conductor PVC insulated FRLS grade earth wire etc. with the fixture from the existing point, painting with two coats of red oxide & two coats of enameled paint, 6mm thick GI supports all as per drawing, specifications & as per the instruction of EIC.</p> <p>Note: Sample fixture/ fitting shall be got approved from department with complete technical data. All fittings should be supplied with the electronics heavy duty ballast and tube as per requirement Extension MS rod/Ms Pipe duly painted with white enamel paint</p>					
9.1	<p>Fluorescent fixtures with Electronics choke/ Copper choke with starter & 01 x 36W tube/ lamp suitable for 230/ 250V, 50Hz supply system. (Make – PHILIPS, Cat no.TMC 501 1xTLD 36W1 or approved equivalent of same)</p>	15.00	Nos.			
10	<p>CEILING FANS: Supply, Installation, testing & commissioning of 1200 mm sweep ceiling fans, double ball bearing, capacitor with aluminium canister complete with down rod/ motor, safety chain/ wire and all accessories, suitable for 230V/ 250V, 50Hz supply system, including continuous earthing and final connection with 01sq.mm multi-stranded copper conductor PVC insulated FRLS grade wires.</p>	12	Nos.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	Make: Crompton Greaves/ Bajaj/ USHA, BEE 05 Star rated or approved equivalent of the same.					
12	<p><u>GEYSER</u></p> <p>Supply, Installation, Testing & Commissioning of mini instantaneous electric water heater relevant ISI marked 3KW, 3 liter capacity, superior grade stainless steel tank, Moulded PUF insulation for less energy consumption, Sleek & ABS body, Copper heating element, with safety devices like pressure relief Valve, Snap action automatic thermostat, thermal cut out, fusible plug and non return device and reset knob, working on 230/ 250V single phase supply including MS supports fabricated out of 25 x 5 mm thick MS flat with 2 coat of red oxide and 2 coats of enamel paint fixed on wall with 3 no.s of no.10 nettle fold wood screw in wall with nylon/ Phil plug and all mounting accessories including connection with suitable lugs. The scope of work includes supply with 3 core x 4 Sqmm copper wire between geyser & connector box and suitable C.P. brass pipe with nut bolts, coupling to the inlet and outlet of water heater and pipe line and all as per specifications, standards, drawings & instructions of EIC.</p> <p>Make: Crompton Greaves, model – V-Guard make, Model STRIN HOT, Classic-03ltr or approved equivalent of the same.</p>	4	Nos.			
13	<u>DISTRIBUTION BOARDS:</u>					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	<p>Supply, Installation, testing & commissioning of following medium voltage (415V) TP&N distribution boards single door complete with necessary SFU, MCCB, MCBs, etc. suitable for wall mounting with M.S. frame work of 40x40x5mm angle mounting with M.S. enclosure fabricated out of 16SWG thick M.S. CRCA sheet with concealed hinged door, cam type locking arrangement etc. Suitable tinned copper bus bars have to be provided for all phases, neutral and earth connections both for incoming and outgoing connections. Cable end box, wire way box, including interconnections with appropriate size of PVC insulated copper conductor, phase barriers, earth of DB, enameled danger board, name plate, neoprene gasket for joints & door has to be provided. Necessary metal treatment, two coats of red oxide paint & two coats of enameled paint has to be provided. The front door (MS sheet) should have necessary cutouts for knobs/ operating levers of MCB's. Phase distribution drawing etc. all as per drawings specifications etc. relevant IS & instruction of Engineer-in-charge-IOP (G.A. & fabrication drawing to be got</p> <p>Note:</p> <ol style="list-style-type: none"> 1.MCB's shall be minimum 10KA breaking capacity & Preferably of Legrand make or approved equivalent of the same. 2. All SFUs should be of L&T/ Siemens make and Fuses to be provided with that. 3. All tinned copper bus bars should be minimum of 200A rating or as mentioned in the drawing. 4. All wires to be used for wiring are should be FRLS, Finolex make or approved equivalent of the same. 5. Bolted type terminal blocks of suitable rating are to be provided for all types of input and output connections. 6. All input & output connection has to be provided with suitable cable sockets (Aluminium for Aluminium cable and Copper for copper cable) 					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	7. If factory made DB is available of legrand or approved equivalent make suitable for this requirement same can be supplied and installed.					
13.1	Individual DB (Preferably Legrand Make model no.607715, 04way TPN DB or approved equivalent of the same) 1. 50A TPN MCB for Incomer – 01 no. 2. 20A SP MCB for outgoing -04no. 3. 10A SP MCB for outgoing – 06nos.	4	Nos.			
13.2	Main Incoming DB 1. 100A TPN SFU for Incomer – 01 no. 2. Three phase energy meter, preferably of L&T make, EM301, 3Ph, 4wire, current 10Amp to 40Amps, L&G-TVE102/3, Class0.1 – 04 nos. 3. 63A TPN MCB for outgoing – 04 nos. 4. 10A DP MCB for outgoing – 02 nos. 5. Indicating Lamp for 3phase (RYB) 6. Volt meter with selector Switch and Fuse.	1	Nos.			
15	<u>EARTHING CONNECTION:</u> Supply, laying/fixing, testing & commissioning of tinned copper earth wire fixed to wall side of trench/slab/column/beam/shaft with thick GI spacers and GI saddles or in ground at 750mm below including excavation in ground with protective baked bricks, excavation in ground refilling and back filling of trench, interconnection of earth wire /strip with GI nut bolts and washers and solder jointing, painting with two coats of black bituminous compound for earth wire/strip in ground and green enamel paint for earth wire/strip on surface as per the specifications and as per the instruction of Engineer-in-charge. Jointing of the earth wire shall be solder joints with tinned copper cable sockets					
15.1	Two numbers of 08 SWG copper wire	40	Mtrs.			
16	<u>EARTH STATION:</u>					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	<p>Supply, installation, testing & commissioning of tinned copper plate electrode earth station, 2.5 mtr. below ground level conforming to latest IS specifications complete with all required materials like coke/charcoal, salt, brass, nut bolts & washers, watering arrangements (GI funnel), G.I. pipe-25mm (B class), masonry chamber, heavy duty cast iron cover plates and excavation in all types of soil in ground, refilling and removal of excess earth within a radius of 500mtr etc. as per instruction of EIC, drawing & specification.</p> <p>Note:</p> <ol style="list-style-type: none"> 1. Measurement of resistance of earth station and resistance of complete scheme of earthing shall be measured, recorded & got approved by EIC. 2. The copper plate should be of electrolytic grade. 3. Two nos. of 25 x 6 mm tinned copper flat is to be bolted to the earth plate and to be brought up to the top of pit. 					
16.1	600 x 600 x 3.15 mm tinned copper plate electrode earth station	2	Set			
17	<p><u>Water Tight/ Bulk head light fitting:</u></p> <p>Supply, installation, testing and commissioning of water tight CFL fitting with 09W CFL lamp suitable for fixing on wall outside of the house. Make: Philips/ Bajaj/ Wipro or approved equivalent of the same.</p>	5	Nos.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	<p>M.V. PVCA/XLPA CABLES: Supply, installation testing & commissioning of 1.1KV grade PVC/XLP insulated, inner sheath tapped, outer sheath PVC extruded, GI strip/armored, multi stranded/ Aluminum conductor power cable as per IS 1554 specifications, fixed on wall/column/slab/in existing hume pipes/ trenches by 5mm thick GI spacer fixed/coach screws/anchor fasteners in brick/stone wall /column/slab with 2mm thick GI saddle, all fixing accessories etc. complete including painting of saddle /flat/angle iron etc. The space between two supports shall be generally 600mm or in ground at a depth of 900mm, below ground including excavation in all types of soil excluding hard rock if any cutting of existing footpath, roads etc, sand bedding, laying of baked bricks as per IS on side & top, temporary reinstatement, back filling, de-watering if necessary, consolidation, disposal, of excess earth with in the radius of 500mtr. Etc. all as per the instructions of Engineer-in-charge-IOP.</p> <p>The tinned copper earth wires to be laid along with the cables should be painted with two coats of black bituminous compound for earth wire in ground and green enamel paint for earth wire on surface & Jointing of the earth wire shall be solder joints with tinned copper cable sockets & GI nuts & bolts.</p> <p>Note: Scope includes all types of masonry work required making good to its original finish of holes through wall, roads, slopes etc. after laying of the cable. Make of cables: Finolex/ NICCO/ CCI/ Polycab or approved equivalent of the same.</p>					
	1 no x 3 ½ core x 35 Sqmm Al. PVCA cable and 01 nos. of 8 SWG tinned copper earth wire.	65	Mtrs.			
	<u>RCC Hume Pipe:</u>	25	Mtrs.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	Supply, installation, testing, and commissioning of 150mm dia RCC hume pipe in 900mm/ 1200 mm below ground level including excavation in all types of soil/ hard rock including existing road cutting, foot path, drainage etc and making good to its original finish after laying and covering the ends by wooden bushes at both ends and bituminous compound, all as per specifications, drawings & as per instructions of Engineer-in-charge.					
	<u>PVC Pipe:</u> Supply, installation, testing, and commissioning of 50mm dia PVC pipe with all accessories (sockets, bends, angles etc) in Brick/ Concrete wall/ below ground level including the cutting of the said wall/ excavation of ground etc and drawing of the 35Sqmm PVCA cable in it and making good to its original finish after laying and covering the ends by wooden bushes at both ends and bituminous compound, all as per specifications, drawings & as per instructions of Engineer-in-charge.	7	Mtrs.			
	<u>END TERMINATION OF ARMOURED CABLES:</u> End termination and connection of the following cables by crimping with supply of all jointing materials like tinned copper cable sockets, cable glands, gland earthing insulation tape, flux, duplicate interconnection between gland earthing strip and the nearest earthing bus terminals as per the drawing, specifications, Aluminum cable tag is to be provided with each end termination and all as per the instruction of the Engineer in charge. Make of lugs/sockets: Dowels/Jainson.					
	3 ½ core x 35 Sqmm Al. PVCA/XLPE cable	2	Nos.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	<p><u>Security Lights:</u></p> <p>Supply, Installation, Testing and commissioning of 125W, 230V, 50Hz, MV, Light fitting complete with lamp, Ballast etc. Preferably: PHILIPS make, Model: HR x 066 1 x HPLN – 125W or approved equivalent of the same on Roof top parapet wall (Brick/ Concrete) with required GI pipe bend at 45°, GI clamps, metal Anchor fasteners etc. complete as instructed by EIC, IOP.</p>	2	Nos.			
18	<p><u>Dismantling of existing old wiring:</u></p> <p>The scope of job involves the following:</p> <ol style="list-style-type: none"> 1. Disconnection of all connected wires/ cables in the Old C-type quarter. 2. All the fans & light fittings has to disconnected/ removed and to be handed over to EIC, IOP. 3. Removal of the wires from the conduit and to hand over the same to EIC, IOP. 4. Removal of the existing switch boards/ DBs from the wall and to hand over the same to IOP, EIC. 5. All the materials after removal has to be handed over EIC, IOP within a lead of 500 meters as per his instruction. <p>If required hand held machine may be used for cutting of the wall for removal of the boards from the wall. After removal of the boards/ DBs the same cutting area is to be properly filled with sand, cement, brick, chips, for good to finishing of the same area.</p>	1x4	job			
TOTAL AMOUNT (B) = Rs.						

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
(C) Repair/Renovation of Qtrs.No. D-2 to D-4.						
Sl. No.	Description of items	Qty	Unit	Unit Rate (Rs.)		Amount (Rs.)
				In figure	In word	
1	Cement concrete for the following works of specified mix using graded stone aggregate of 20mm. maximum size including necessary form work, machine mixing, transporting, placing in position consolidation, finishing, curing etc. complete as per specification drawings and as directed by the Engineer-in-Charge.					
a)	C.C. 1:4:8 in foundation	2.88	Cu. M			
b)	C.C. 1:2:4 in Subbase floor & coping	2.40	Cu. M			
c)	C.C. 1:3:6 in plinth protection	4.38	Cu. M			
2	Providing and construction of Brick masonry 250mm thick using well burnt bricks of approved class designation 7.5 [classification as per IS 1077-1992 and minimum average compression strength not less than 7.50 N/mm ²] of approved manufacturer C.M 1:5 in foundation and plinth including trench etc. to correct line, level and plumb including raking out joints/ simultaneous flush pointing with cement mortar 1:5, curing etc. all complete as per specifications and drawings and as directed by the Engineer-in-Charge.	2.00	Cu. M			
3	Half brick masonry with common burnt clay F.P.S. (Non modular) bricks of class designation 7.5 in superstructure above plinth level upto floor V level. Cement Mortar 1:4 (1 cement: 4 coarse sand) work with modular bricks of class designation 7.5	21.00	sqm			
4	Dismantling old internal / external plaster or skirting raking out joints and old brick walls and cleaning the surface for plaster including disposing of the debris outside colony.	660	Sqm			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
5	Cement Plaster in single coat with cement mortar 1:4 [1 cement:4 coarse sand] at all floors heights, slopes on plane or other surfaces including and locations, finished smooth with Neeru to correct line, level, plane and plumb including preparing the surface, scaffolding, curing etc. complete for the following as per specifications and drawings.					
	a) 6 mm thick plaster for ceiling, exposed concrete surfaces etc. including providing and adding bonding agent of Dr. FIXIT PIDICRETE MPB or other approved equivalent manufactures including applying a slurry coat of cement and Dr.FIXIT PIDICRETE MPB (1:1 volume mix) with a brush before plaster is applied internal brick/ concrete surface.	50.00	Sq. M			
	b) 15mm. Thick plaster for internal brick/concrete surfaces.	350.00	Sq. M			
6	Sand faced cement plaster as specified below in cement mortar 1:4 at all heights and locations including scaffolding, preparing the surfaces, finishing and rendering with sponge to correct line, level and plumb, curing etc. complete as per specifications and drawings.					
	a) 20mm. Thick in two coats for brick/concrete surfaces (external/internal) (back coat and finishing coat of 10mm. thick each) including providing & adding approved water proofing agent @ 2% by weight of cement or as per manufactures instructions.	260.00	Sq. M			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
7	Providing & Laying at all floors & locations premium quality, Vitrified tile marbonate stain free of M/s H & R Johnson of 600 x 600 mm size, having 8.5 mm thickness (or shall be as per manufactrurers specification) in flooring / skirting/ dado / clading at all floors and locations in approved pattern and colour laid over cement mortar bedding/ backing , close jointed and grouted with white cement slurry and approved pigment as per manufactrurer's specifications, finished to level, line, slope and plumb, cutting of tiles, wastage, making openings/ cut out if necessary, final clenaing of surfaces, curing etc. complete all as per specification & as directed by Engineer-in-Charge. (i) In flooring laid over 20 mm thick cement mortar 1:4 (1 cement : 4 sand) bedding.					
	(i) In flooring laid over 20 mm thick cement mortar 1:4 (1 cement : 4 sand) bedding.	200.00	sqm			
	(ii) In skirting laid over 12 mm thick cement mortar 1:3 (1 cement : 3 sand) backing .	50.00	sqm			
8	Providing & Laying at all floors & levels 6 mm (min.) thick of or as per specification of approved approved manufacturer first quality matt finish / non- slippery ceramic tile flooring / dado/ cladding as per approved pattern of M/s H & R Johnson (I) ltd laid in cement mortar bedding / backing , close jointed and grouted with matching cement slurry to match the colour of the tiles, and approved pigment as per manufactrurer's specifications, finished to level, line, slope and plumb, cutting of tiles, wastage, making openings/ cut out if necessary, final cleaning of surfaces, curing etc. complete all as per specification & as directed by Engineer-in-Charge. (i) In flooring with 200 x 200 mm size	22.00	sqm			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
9	Providing and fixing 1st quality ceramic glazed wall tiles of size 200 x 300 mm confirming to IS: 15622 (thickness as specified by the manufacture of Marbonite of M/s H & R Johnson, Kajaria, Nitco or equivalent. make in all colours, shades expect burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dadoes over 12 mm thick bed of cement Mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete and also including dismantling of the existing wall tiles.	180.00	Sqm			
10	Repainting of old painted surface with two coats of acrylic emulsion paint of ICI Dulux/ Asian Paints/ Nerocal or other approved equivalent make & shade over two coats of approved primer (alkali resistance) consist of thoroughly scrapping oilbound distemper/ acrylic emulsion/ white wash surface, applying a coat of approved cement primer, filling of the cracks with approved crack filling compound, applying approved Birla Wall care white cement based putty to entire surface to fill up crevices, middepression etc. thoroughly scrapping the surface, applying 2nd coat of approved cement primer carrying out full putty work, apply two coats of acrylic emulsion paint including necessary covering materials and removal of splashing & droppings from floors, walls including scaffolding,ladder as required & disposing of debris outside colony etc. complete all as directed by the Engineer-in-Charge.	930.00	Sqm.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
11	Repainting of old painted wooden/steel surfaces with two coats of synthetic enamel paint using first quality synthetic enamel paint of approved make and shade over one coat of approved wood/steel primer including preparing surfaces, filling with putty scaffolding and cleaning etc. including removing old paint by scrapping, blowlamp etc. complete all as directed by the Engineer-in-charge.	466.00	Sqm.			
12	Providing and applying three finished coats of acrylic based emulsion exterior coating of Apex ultima of M/s. Asian Paints and shade over the sand face / rough cast plaster / RCC jali/ RCC fins at locations as required, including preparation in proportion of one litre of Apex Ultima or other makes with 400 ML. of potable water, thoroughly mixed and applied at an interval of 4-6 hours for each successive coats and ensure consumption of 0.27 ltr /Sqm for 3 coats, including preparation of surface, cleaning and filling the cracks and crevices with Latex caulking crack filling etc. complete generally as per the manufacturer's specification and as directed by the EIC.					
12.1	a) Over sand faced palstered surfaces Note: 1) The surface shall be cleaned with water jet with high pressure water pump spray of at least 100kg/ sq.cm and brushing / rubbing with coir to remove all foreign materials etc. before painting work. 2) Lower consumption less than as mentioned will be recovered @ 260/ltr	100.00	Sqm.			
13	Providing and repairing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position: 2nd class teak wood (only new wood to be measured for payment)	0.60	cum			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
14	<p>Providing and fixing approved quality machine cut, mirror polished 18 mm uniform thick Granite stone slab for frame in single piece 100 to 200 mm wide in position at all floors and locations laid over 20 mm thick cement mortar 1:3 bedding/backing in correct line, level and plumb, closed jointed, machine grouting, cement slurry, curing including cutting of stones to get rounded exposed edges, wastage, final hand polishing, rounding of free exposed stone edges etc. complete as per specifications and as directed by the Engineer-in-Charge.</p> <p>a) 18 mm thick jet black granite stone door frame for toilet including providing and fixing 90 mm long stainless steel screws 3 nos. in each vertical stone with rawl plug by drilling and finishing with approved putty with suitable pigment etc. complete.</p>	12.00	sqm			
15	<p>Supplying and fixing 35 mm thick factory made FRP semi solid wooden core moulded door shutters of M/s. Fibroplast manufacture all floors and location of approved colour using 1.5 mm thick FRP sheet with extra reinforcement on sides / edges with recess for hinges, necessary arrangement suitable for fixings fittings, fixtures and fasteners, including supplying and fixing fitting & fixtures, 3 nos. 100 mm S.S. approved quality butt hinges per shutter with S.S. pin & nylon washers and other fittings and fixtures as mentioned below including cutting, assembling, fabricating and fixing with special self tapping to granite frame work all as per drawing and manufactures specifications and as directed by the Engineer- in-charge.</p> <p>a) For single leaf Door type D2 of approximate size 750 x 2100 mm. including providing and fixing one no keyless cylindrical lock of M/s Godrej.</p>	12.00	sqm			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
16	<p>Providing and laying machine cut machine polished approved Telephone Black Granite stone slab as mentioned for the followings for kitchen platform topping and facia over and including necessary cement mortar for backing / bedding, close jointed and grouted with matching cement slurry and finished to line, slope, level, plumb, curing etc as required including cutting of stone slabs, wastage,making cut outs wherever required etc all as per specification and as directed by the EIC (Note: Top exposed surface on plan and exposed vertical finished face shall be measured for payment in sqm.)</p> <p>For kitchen platform top, upto 750 mm wide and upto 1800 mm length insingle piece consisting machine cut machine polished on one side 35 mm thick cuddappa stone at bottom and mirror polished machine cut 18 mm thick Jet Black granite stone at top fixed with 20 mm thick 1:4 cement mortar, between two stone slabs (double stone slab sandwich type) including providing cut out if any, moulding and polishing the edges etc complete.</p>	8.00	Sqm			
17	<p>Providing and Fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS:13983 of M/s. Nirali make with C.I. brackets and stainless steel plug 40 mm, including painting of fittings and brackets, cutting and making good to the walls wherever required: kitchen sink with drain board 610 x 510 mm bowl depth 200 mm</p>	3.00	each			
18	<p>Dismantling G.I.pipes (external work) including excavation and refilling trenches after taking out the pipes, manually by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge. 15mm to 40 mm niminal bore</p>	12.00	metre			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
19	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per the direction of Engineer in Charge. Internal work- exposed on wall					
	20 mm nominal outer dia. Pipes.	40.00	metre			
20	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings. This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per the direction of Engineer in Charge. External work-					
	25 mm nominal outer dia. Pipes.	15	metre			
	32 mm nominal outer dia. Pipes.	10	metre			
21	Providing and fixing gun metal gate valve with C.I.wheel of approved quality (screwed end): 32 mm nominal bore					
	25 mm nominal bore	1.00	each			
	32 mm nominal bore	1.00	each			
22	Providing and fixing ball valve (brass) of approved quality, High or Low pressure, with plastic floats complete:					
	25 mm nominal bore	1.00	each			
23	Providing and fixing unplasticised PVC connection pipe with brass unions: 45 cm length					
	15mm nominal bore	12.00	each			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
24	Providing and fixing in position following approved quality CP brass fittings/Fixtures of 15 mm nominal dia. With ISI mark / approved make of following type including providing and fixing specials, wall flanges and fixing to concealed/ exposed pipe line with leak proof threaded joints using tephlon tapes, testing the joints hydraulically to a pressure of 10 kg/ sq.cm rectifying the leaky joints, if any, including cleaning etc. complete all as per the specifications and as directed by Engineer-in-Charge.					
24.1	C.P.Brass Bib Tap with wall flange, CONTINENTAL' of Jaquar cat.No.CON-047.	9.00	each			
24.2	C.P.Brass long body Bib Tap 2 in 1 similar to FLORENTINE series of Jaquar cat.No.CON-5041.	6.00	each			
24.3	Health Faucet with 1.5 Mtr. Long Flexible tube and wall hook (JAGUAR make cat No. 573)	3.00	each			
24.4	Angular Stop Cock with wall Flange similar to CONTINENTAL series of ' JAGUAR' cat.No.CON-053.	5.00	each			
24.5	C.P.Brass Pillar Cock 15 mm size similar to CONTINENTAL series of ' JAGUAR' cat.No.CON-011.	3.00	each			
24.6	C.P.Brass shower single flow with revolving wall joint similar to CONTINENTAL series of ' JAGUAR' cat.No.-491.	3.00	each			
24.7	C.P.Brass shower arm 190 mm long light body with wall flange similar to CONTINENTAL series of ' JAGUAR' cat.No.477.	3.00	each			
24.8	Providing & Fixing 125 mm dia. S.S. grating for Nahini trap with necessary cement mortar 1:3 & matching cement and including removing existing grating, disposal of debris outside colony etc complete all as per specifications and as directed by the Engineer-in-Charge.	15.00	each			
24.9	C.P.Brass two way coat hook as per ' Continental' Jaguar make Cat No:1161 N	6.00	each			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
24.10	Glass shelf 600 mm long as per 'Continental' Jaguar make Cat No:1171 N	3.00	each			
24.11	C.P.Brass single towel rail of as per 'Continental' Jaguar make Cat No:1111 N	3.00	each			
24.12	Providing and fixing approved quality wash basin of M/s Cera Sanitaryware, Hindware, Parryware or other approved equivalent in white glazed vitreous chinaware supported on suitable wall brackets and of size mentioned below, including providing and fixing approved quality, make & shape cp brass waste coupling, including cost of removing the existing wash basin and fittings depositing serviceable materials at the dept store and disposing of debris out side colony etc complete all as per specifications and as directed by the Engineer-in-Charge. Wash basin size 550X400 mm (CORNET cat No.1008)	2.00	each			
24.13	Providing and fixing in position best quality bevelled edge plate Glass Mirror of size 600 x 450 mm & 6 mm thick of Saintgobin or Modiguard or other approved equivalent make with marine ply wood back 6 mm thick, CP brass screws and caps, washers etc. including providing & fixing rawl plug in wall, wooden packing behind the mirror if necessary, reinstating the damages to its original conditions etc. and painting the ply with 2 coats of synthetic enamel paint over a coat of wood primer all complete as directed.	2.00	each			
25	Providing cleaning the surface from loose particles, cement laitance then prepare the surface by cement plaster where the surface will be damaged to make the smooth surface before application of APP Membrane work including labour, materials, transportation, taxes etc complete.	700	SQM			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
26	Providing, cleaning the surface from loose particles, debris and unused materials from the basement then preparation, providing and laying TORCHSHIELD (3mm) of Dr. Fixit from Pidilite Industries Ltd or equivalent product of M/s. Sika India Ltd. of Polymer modified bitumen based as well as dimensionally stable non-woven polyester/ fiber glass carrier to obtain high tensile strength, tear and puncture resistance with thermal expansion using gas burner to bond from lower end towards higher end with overlap margin for minimum 100mm before the application one coat solvent based bitumen TORCHSHIELD or equivalent M/s. Sika India Ltd. Primer @ 0.60 kg/sqm. including the cost of labour, materials, transportation, taxes, etc. complete as per direction of Engineer in charge.	700	SQM			
Non Scheduled Items						
27	Dismantling of glass from window pannels	60.00	each			
28	Replacement of existing window panels with 4 mm thick float glass pannels including cost of fixing pins, putty and rubber packing etc. where ever necessary including cost and conveyance of all materials and labour required for the work etc. complete in all respect as per the direction of the Engineer-in-charge .	20.00	Sqm			
ELECTRICAL WORK						
1	<u>DISTRIBUTION BOARDS:</u>					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	<p>Supply, Installation, testing & commissioning of following medium voltage (415V) TP&N distribution boards single door complete with necessary SFU, MCCB, MCBs, etc. suitable for wall mounting with M.S. frame work of 40x40x5mm angle mounting with M.S. enclosure fabricated out of 16SWG thick M.S. CRCA sheet with concealed hinged door, cam type locking arrangement etc. Suitable tinned copper bus bars have to be provided for all phases, neutral and earth connections both for incoming and outgoing connections. Cable end box, wire way box, including interconnections with appropriate size of PVC insulated copper conductor, phase barriers, earth of DB, enameled danger board, name plate, neoprene gasket for joints & door has to be provided. Necessary metal treatment, two coats of red oxide paint & two coats of enameled paint has to be provided. The front door (MS sheet) should have necessary cutouts for knobs/ operating levers of MCB's/ MCCB/ SFU etc. Phase distribution drawing etc. all as per drawings specifications etc. relevant IS & instruction of Engineer-in-charge-IOP (G.A. & Note:</p> <ol style="list-style-type: none"> 1. MCCB should be of 25 KA breaking capacity with short circuit and earth fault protection, preferably of L&T, Siemens make or approved equivalent of the 2. MCB's shall be minimum 10KA breaking capacity & <u>Preferably of Legrand make</u> or approved equivalent of the same. 3. All tinned copper bus bars should be minimum of 200A rating or as mentioned in the drawing. 4. All wires to be used for wiring are should be FRLS, Finolex make or approved equivalent of the same. 5. Bolted type terminal blocks of suitable rating are to be provided for all types of input and output connections. 6. All input & output connection has to be provided with suitable cable sockets (Aluminium for Aluminium cable and Copper for copper cable) 					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	7. If factory made DB is available of legrand or approved equivalent make suitable for this requirement same can be supplied and installed.					
1.1	<p><u>Main Incoming with Meter DB for 4 quarters.</u></p> <p>100A TPN SFU with fuse for Incomer – 01 no.</p> <p>63 A TPN MCB for out going- 4 Nos.</p> <p>16 A DP MCB for out going (staircase)- 1 Nos.</p> <p>2. Three phase energy meter- 4 Nos Preferably of L&T make, EM301, 3Ph, 4wire, current 10Amp to 40Amps, current 10Amp to 40Amps, Indicating Lamp for all 3phase (RYB)-1 set/03 nos.</p> <p>Volt meter with selector Switch and Fuse.</p>	1	Set			
1.2	<p><u>Incoming DB:</u></p> <p>50A TPN MCB for In-comer -01no.</p> <p>25A SP MCB for outgoing – 08nos.</p> <p>16A SP MCB for outgoing – 02 nos.</p> <p>10A SP MCB for outgoing – 07 nos.</p>	1	Set			
2	<p><u>MCB BOX:</u></p> <p>Fabrication, supply, installation, Testing and fixing on concrete/brick wall/ plywood partition of local control MCB box made out of 16 SWG thick galvanized MS sheet with top cover also galvanized MS sheet duly fixed by SS screws. Necessary cut outs to be provided on the top cover for the operating lever of the MCB and suitable size gland holes at two ends has to be made for the MS conduits/ Armored cables or The readymade factory made MCB boxes of make Legrand or approved equivalent. MCB shall be minimum of 10 KA breaking capacity. All complete as per the instructions of Engineer-in-charge- IOP</p> <p>Make: MCB of Legrand or approved equivalent of same.</p>					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	All input & output connection has to be provided with suitable cable sockets (Aluminium for Aluminium cable and Copper for copper cable)					
2.1	The MCB box with one no. 25A DP MCB	9	Nos.			
3	<p>Concealed wiring in PVC conduit: Supply Installation, testing & commissioning of 1100V FRLS grade PVC insulated multi stranded copper conductor wires, for light point/ fan point/ exhaust fan point/ call bell point, in surface / recessed medium class MMS PVC conduit/ Flexible Nylon conduit 25/32/40mm dia, with, suitable size PVC junction box and earthing the point with FR PVC insulated copper conductor single core cable etc as required, as per IB/IS specification, on ceiling/ concrete or brick wall at a minimum depth of 3inch from the surface, complete with all accessories, suitable pull boxes/ junction boxes of suitable size as per the site condition wherever required & with necessary leads at both ends by approved copper lug, complete as per the instructions of Engineer-in charge.</p> <p>Note: 1. Connection shall be done with crimped type tinned copper lugs and washers.</p> <p>2. Cutting of concrete/ Brick wall, ceiling etc are to be done properly using suitable cutting machine without damaging periphery area for laying of conduits & fixing of switch boards, DBs, JBs etc.</p> <p>3. After laying of conduits, and fixing of switch boxes, JBs etc the cutting area has to be repaired good to finish as like as prior to cutting of the same.</p> <p>4. All PVC insulated copper conductor FRLS grade shall be ISI marked.</p> <p>5. Make of wires: Finolex/ L&T or approved equivalent of the same.</p>					
3.1	01 nos. of 06 Sqmm wires in suitable PVC conduit	250	Mtrs.			
3.2	01 nos. of 04 Sqmm wires in suitable PVC conduit	660	Mtrs.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
3.3	01 nos. of 2.5 Sqmm wires in suitable PVC conduit	300	Mtrs.			
3.4	01 nos. of 1.5 Sqmm wires in suitable PVC conduit	590	Mtrs.			
3.5	01 nos. of 01 Sqmm wires in suitable PVC conduit	600	Mtrs.			
4	<p>OUTLET SWITCH & SOCKET BOXES:</p> <p>Fabrication, supply, installation, Testing and commissioning duly concealed in concrete/brick wall/Ceiling of outlet switch boards made out of 16 SWG thick galvanized MS sheet with top cover 3mm thick Bakelite Hylam laminated sheet duly fixed by SS screws. Necessary wiring inside the board has to be carried out using 2.5Sqmm copper PVC insulated single core flexible wire. One suitable nut and bolt has to be provided on the side wall of the board for earth connection. All complete as per the instructions of EIC-IOP.</p> <p>Note:</p> <p>1. All Switches (Piano type), Sockets, ceiling rose & Angle holder should be of Anchor make or approved equivalent of the same.</p> <p>2. All fan regulators are to be electronic stepped type (5A socket type) and make of the same is to be Anchor or approved equivalent of the same.</p> <p>3. All wires to be used should be of Finolex/ L&T make.</p> <p>4. All terminals of the wires to be connected inside the board should be provided with suitable copper lugs/ sockets.</p> <p>5. Sample of all materials is to be got approved from EIC, IOP before execution.</p> <p>6. Nomenclature as required for each board is to be mentioned on the same.</p>					
4.1	<p>The switch box will contain</p> <p>1. 05no.s of 5 Amp, 250Volt Switches</p> <p>2. 01 no. of electronic, step type, socket size fan regulator</p>	3	Nos.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	3. 01 no. of 5Amp, 250Volt Socket					
4.2	The switch box will contain	6	Nos.			
	1. 04no.s of 5 Amp, 250Volt Switches					
	2. 01 no. of electronic, step type, socket size fan regulator					
	3. 01 no. of 5Amp, 250Volt Socket					
4.3	The switch box will contain	3	Nos.			
	1. 03no.s of 5 Amp, 250Volt Switches					
	2. 01 no. of electronic, step type, socket size fan regulator					
	3. 01 no. of 5Amp, 250Volt Socket					
4.4	The switch box will contain	6	Nos.			
	1. 03no. of 5 Amp, 250Volt Switches					
	2. 01 no. of 5Amp, 250Volt Socket					
4.5	The switch box will contain	3	Nos.			
	1. 01 no. of 15Amp, 250Volt Switch					
	2. 01 no. of 15Amp, 250Volt Socket					
4.6	The switch box will contain	3	Nos.			
	1. 03 no. of 5 Amp, 250Volt Switches					
	2. 03 no. of 5Amp, 250Volt Socket					
4.7	The switch box will contain	6	Nos.			
	01 no. of 15Amp, 250Volt Socket					
4.8	The switch box will contain	10	Nos.			
	01 nos. of 5 Amp, 250Volt Switches					
4.9	The switch box will contain	3	Nos.			
	1. 02 no. of 15Amp, 250Volt Switch					
	2. 02 no. of 15Amp, 250Volt Socket					
4.10	The switch box will contain	4	Nos.			
	02 nos. of 5 Amp, 250Volt Switches					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
4.11	The switch box will contain	3	Nos.			
	1. 04no.s of 5 Amp, 250Volt Switches					
	2. 01 no. of 5Amp, 250Volt Socket					
4.12	The switch box will contain	33	Nos.			
	1. 01 no. of Ceiling Rose					
4.13	The switch box will contain	33	Nos.			
	1. 01 no. of Angle Holder					
4.14	The switch box will contain	3	Nos.			
	1. 01 no. bell push switch					
4.15	The switch box will contain	3	Nos.			
	1. 01 no. of Call Bell, Ding-Dong type, preferably of CONA make or approved equivalent of the same.					
5	Supply, installation, testing and commissioning of water tight/ Bulk Head CFL fitting with 9W CFL lamp suitable for fixing on wall outside of the house. Make: Philips/ Bajaj/ Wipro or approved equivalent of the same.	6	Nos.			
6	EXHAUST FAN:					
	Supply, Installation, testing & commissioning of following size of exhaust fans, single phase complete with blades, motor, Light weight, rustproof body & blades, scope includes supply of 3Core, copper 1.5 Sqmm, flexible chord of suitable length with 6A, 3 pin plug top, aluminum louvers, rag bolt/anchor fastener suitable MS angle iron frame made from 30x30x5 mm, 4 corners covered with 2mm thick MS sheet to form suitable circular opening with necessary fixing arrangement painting as per specification drawing & as per the instructions of EIC-IOP.					
	Make: Crompton Greaves model-Drift Air or approved equivalent of the same					
6.1	300mm dia, 1300rpm, 230V, 50Hz,	9	Nos.			
7	<u>TUBE LIGHT FIXURES:</u>					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	<p>Supply, installation, testing commissioning of tube light fixtures and fittings complete with all accessories, tube / lamp, choke, starter, etc. on surface of slab/ beam/ false ceiling by 2 numbers (minimum) of 6mm Anchor fasteners or on wall by means of 25 x 3mm GI strip bend to shape and with 2 nos. of wood screws, nylon plug etc. suitable supporting frame fixed with rag bolts grouted on the wall/ anchor fastener on the beam/ column & other fixing accessories etc., provision & connection with 01 sq.mm multi-stranded copper conductor PVC insulated FRLS grade wires/ 1.5sq.mm copper conductor PVC insulated FRLS grade earth wire etc. with the fixture from the existing point, painting with two coats of red oxide & two coats of enameled paint, 6mm thick GI supports all as per drawing, specifications & as per the instruction of EIC.</p> <p>Note: Sample fixture/ fitting shall be got approved from department with complete technical data. All fittings should be supplied with the electronics heavy duty ballast and tube as per requirement Extension MS rod/Ms Pipe duly painted with white enamel paint</p>					
7.1	<p>Fluorescent fixtures with Electronics choke/ Copper choke with starter & 01 x 36W tube/ lamp suitable for 230/ 250V, 50Hz supply system. (Make – PHILIPS, Cat no.TMC 501 1xTLD 36W1 or approved equivalent of same)</p>	13	Nos.			
8	<p><u>CEILING FANS:</u> Supply, Installation, testing & commissioning of 1200 mm sweep ceiling fans, double ball bearing, capacitor with aluminium canister complete with down rod/ motor, safety chain/ wire and all accessories, suitable for 230V/ 250V, 50Hz supply system, including continuous earthing and final connection with 01sq.mm multi-stranded copper conductor PVC insulated FRLS grade wires.</p>	12	Nos.			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	Make: Crompton Greaves/ Bajaj/ USHA, BEE 05 Star rated or approved equivalent of the same.					
9	<u>GEYSER</u> Supply, Installation, Testing & Commissioning of mini instantaneous electric water heater relevant ISI marked 3KW, 3 liter capacity, superior grade stainless steel tank, Moulded PUF insulation for less energy consumption, Sleek & ABS body, Copper heating element, with safety devices like pressure relief Valve, Snap action automatic thermostat, thermal cut out, fusible plug and non return device and reset knob, working on 230/ 250V single phase supply including MS supports fabricated out of 25 x 5 mm thick MS flat with 2 coat of red oxide and 2 coats of enamel paint fixed on wall with 3 no.s of no.10 nettle fold wood screw in wall with nylon/ Phil plug and all mounting accessories including connection with suitable lugs. The scope of work includes supply with 3 core x 4 Sqmm copper wire between geyser & connector box and suitable C.P. brass pipe with nut bolts, coupling to the inlet and outlet of water heater and pipe line and all as per specifications, standards, drawings & instructions of EIC. Make: V-Guard make, Model STRIN HOT, Classic-03ltr or approved equivalent of the same.	3	Nos.			
10	<u>EARTHING CONNECTION:</u>					

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
	Supply, laying/fixing, testing & commissioning of tinned copper earth wire fixed to wall side of trench/slab/column/beam/shaft with thick GI spacers and GI saddles or in ground at 750mm below including excavation in ground with protective baked bricks, excavation in ground refilling and back filling of trench, interconnection of earth wire /strip with GI nut bolts and washers and solder jointing, painting with two coats of black bituminous compound for earth wire/strip in ground and green enamel paint for earth wire/strip on surface as per the specifications and as per the instruction of Engineer-in-charge. Jointing of the earth wire shall be solder joints with tinned copper cable sockets					
10.1	Two numbers of 08 SWG copper wire	27	Mtrs.			
11	<p><u>EARTH STATION:</u></p> <p>Supply, installation, testing & commissioning of tinned copper plate electrode earth station, 2.5 mtr. below ground level conforming to latest IS specifications complete with all required materials like coke/charcoal, salt, brass, nut bolts & washers, watering arrangements (GI funnel), G.I. pipe-25mm (B class), masonry chamber, heavy duty cast iron cover plates and excavation in all types of soil in ground, refilling and removal of excess earth within a radius of 500mtr etc. as per instruction of EIC, drawing & specification.</p> <p>Note:</p> <p>1. Measurement of resistance of earth station and resistance of complete scheme of earthing shall be measured, recorded & got approved by EIC.</p> <p>2. The copper plate should be of electrolytic grade.</p> <p>3. Two nos. of 25 x 6 mm tinned copper flat is to be bolted to the earth plate and to be brought up to the top of pit.</p>					
11.1	600 x 600 x 3.15 mm tinned copper plate electrode earth station	2	Set			

Sl. No.	Description of items	Qty	Unit	Unit Rate		Amount (Rs.)
				In figure	In word	
12	<u>Junction Box:</u> Fabrication, supply, installation, testing and fixing on concrete/brick wall/ ceiling of outlet JB (5" x 5 " Box size) made out of 16 SWG thick galvanized MS sheet with top cover 3mm thick Bakelite Hylam (Preferably of National make,white color) laminated sheet duly fixed by SS screws. One suitable nut and bolt has to be provided on the side wall of the board for earth connection. All complete as per the instructions of EIC-IOP.	12	Nos.			
13	<u>Dismantling of existing old wiring of the same quarter:</u> The scope of job involves the following: 1. Disconnection of all connected wires/ cables in the 04 quarters. 2. All the fans & light fittings has to disconnected/ removed and to be handed over to EIC, IOP. 3. Removal of the wires from the conduit and to hand over the same to EIC, IOP. 4. Removal of the existing switch boards/ DBs from the wall and to hand over the same to IOP, EIC. 5. All the materials after removal has to be handed over EIC, IOP within a lead of 500 meters as per his instruction. 6. If required hand held machine may be used for cutting of the wall for removal of the boards from the wall.	3	Jobs			
TOTAL AMOUNT (C) = Rs.						
TOTAL AMOUNT(A) + (B)+(C) = Rs.						
Total Amount (in word)						

N.B: 1)The Contractor is required to inspect the worksite before quoting their rates.

Signature of the Contractor