

HOMI BHABHA CENTRE FOR SCIENCE EDUCATION

Tata Institute of Fundamental Research
Autonomous Institution of the Atomic Energy, Government of India
(A Deemed University)

V. N. Purav Marg, Mankhurd, Mumbai – 400 088.

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E-mail: purchase@hbcse.tifr.res.in

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NIT cum Tender Document for

**ANNUAL MAINTENANCE CONTRACT (COMPREHENSIVE) FOR
ELECTRICAL SYSTEMS INCLUDING SUBSTATION, DEVICES AND
FIXTURES INSTALLED AT HOMI BHABHA CENTRE FOR SCIENCE
EDUCATION, TIFR, MANKHURD, MUMBAI – 400088
FOR THE YEAR 2023-2024**

Date : 08/11/2023

(TENDER NO : HBC/P-S/PUBLIC TENDER 18/2023)

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SECTION 1: NOTICE INVITING TENDER

Ref: HBC/P-S/PUBLIC TENDER 18/2023

Date: November 08, 2023

Annual Maintenance Contract (comprehensive) for Electrical Systems including Substation, Devices & Fixtures installed at Homi Bhabha Centre for Science Education - TIFR, Mankhurd, Mumbai – 400088 for the year 2023-2024.	Estimated Cost (Annex. A only) = Rs. 8,85,000/- (Incl. GST)
Earnest Money Deposit (EMD) : Rs. 17,700/- (Rupees Seventeen Thousand Seven Hundred only) by way of Demand Draft in favour of “HBCSE” payable at Mumbai. Alternatively, this amount can be remitted by bank transfer. The details are as follows: HBCSE-TIFR Non Plan A/C, Account No.:1038019943 Bank Address: Central Bank of India Jigna Apartment, Sion-Trombay Road, Mankhurd, Mumbai – 400 088 IFSC Code: CBIN 0282523.	

Tender documents can be downloaded from HBCSE website: www.hbcse.tifr.res.in/tenders or <https://eprocure.gov.in/epublish/app>

All interested bidders are requested to attend the Pre-Bid Meeting at 11:00 AM on 20/11/2023 at Homi Bhabha Centre for Science Education, V. N. Purav Marg, Near Anushakti Nagar Bus Depot, Mumbai – 400 088.

Tender should reach us before or on **November 28, 2023 by 14.30 PM (BID DUE DATE)**

Technical bid only will be opened on **November 28, 2023 at 15.30 PM.**

Financial bid will be opened on – **The date and time of opening of financial bids will be conveyed to the technically suitable bidders through Telephone and mail.**

Contract Period: **One (01) year** after the date of issue of Work Order/ LOI/ PO or date of completion of Handing Over taking over process whichever is latest.

Bids under **TWO Bid System** (Technical + Financial Bid) are invited on behalf of Centre Director, HBCSE Mumbai for award of contract for ‘**Annual Maintenance Contract (comprehensive) for Electrical Systems including Substation, Devices & Fixtures installed at HBCSE**’. The details of the tender including the scope of work, technical specification, drawings (if applicable) etc. is given in this tender document. All the prospective bidders are requested to go through the tender document before submitting their bids.

Quotation sent by hand delivery/courier are to be deposited in the Tender Box kept at the Main Gate after obtaining stamp, date and signature of the Security Officer.

To assess the nature of job, bidder must visit the HBCSE site before bidding. Bidder may seek prior appointment for site visit. The contact person is Shri. S. D. Pardeshi (Tel No. 25072100/25072121, Email: sdp@hbcse.tifr.res.in).

Tenders to be sent to:

Head, Administrative Operations

Homi Bhabha Centre for Science Education

V. N. Purav Marg, Near Anushakti Nagar Bus Depot, Mumbai – 400 088.

Bids sent by Fax/email shall be rejected straightway. The Centre reserves the right to accept/ reject the proposal either in part or in full without assigning any reasons.

Head, Administrative Operations

For and on behalf of Centre Director, HBCSE

SECTION 2: PRE-QUALIFICATION/ELIGIBILITY CRITERIA

Bidders are required to comply with the following eligibility criteria.

- a. Registration /empanelment /worked in past with Government organizations like CPWD, MES, Railways, State PWDs etc. /Semi Government organizations, PSUs etc. / reputed private organizations in appropriate class and having experience in execution of similar nature of works.
 - b. The contractor should have **zonal office in Mumbai/ Navi Mumbai/ Thane and nearby areas.**
 - c. Annual turnover as per ITCC or profit & loss statement for the last 5 years. Average annual turnover for the last 3 financial years should be at least Rs. **8,85,000/-** not having incurred any loss in more than 2 years during last 5 years ending 31March, 2023.
 - d. **The contractor should have valid Electrical Contractor license issued by Chief Electrical Inspector, Govt. of Maharashtra or any other competent authority to execute the AMC work.**
 - e. Experience of having successfully completed the following works (during last **Five** years ending 31 March,2023):
 - i. **One** similar work order not less than Rs.**7,08,000/-**; Or
 - ii. **Two** similar works completed costing not less than Rs.**5,31,000/-** each; Or
 - iii. **Three** similar works completed costing not less than Rs.**3,54,000/-** each
- A) **Similar works** shall mean Annual Maintenance Contracts for Electrical Systems including Substation, fixtures, devices & units including installation of new units, replacement of old devices and its installation and misc. works of BOQ mentioned magnitude of quantities. The quality & satisfactory performance of the submitted work will be verified by HBCSE technical team if required by inspecting the said work.
- **Notes:**
 1. The above (Pre-qualification criteria) should be supported by relevant documentary evidence like copies of work orders and completion certificates issued by clients indicating the detailed scope of work covering the above aspects, value of work, completion/commissioning dates etc., in support of meeting all the qualification criteria given as above.
 2. Relaxation may be provided from the above mentioned pre-qualification criteria for the firms registered under MSME / NSIC. The decision of Centre in this regard will be final and binding.
 3. The certificates submitted, as evidence of works executed for private organization should be accompanied with TDS certificates. These certificates in addition to the certificates issued by the organization shall form the basis for considering experience of work executed for private organization.
 4. The offers of the Bidders not meeting the pre-qualifying requirements and not producing supportive documents are likely to be rejected.
 5. HBCSE reserves the right to verify the documents/ information submitted or inspect the installation done. The Bidder shall provide necessary facilities for this purpose.
 6. Even though the Bidders meet the above qualifying criteria, they are subject to be disqualified if they have made misleading or false representations in the forms, statements and attachments submitted in proof of qualification requirements; and/or record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, in case of blacklisting by any PSU/Govt. body, or financial failures etc.
 7. The Contractor must confirm in writing that the spares supplied & installed by them shall be as per specification of goods and in case of any variation, the contract shall be liable to cancel immediately.

SECTION 3: INSTRUCTIONS TO BIDDERS

- A) General Instructions:** The Prospective bidder shall carefully examine and understand the specifications/conditions of the tender document/RFP and seek clarifications in writing if required, to ensure that they have understood all specifications/conditions of tender. These clarifications should be sought before submission of bids. If no such clarifications are sought in writing, it will be taken that the Bidder has read, understood and accepted all the terms, conditions and specifications in the tender document.
1. The Bidder is required to submit a copy of this tender document, with all pages signed by the authorized person, to confirm that Bidder has read and understood the conditions of this tender document and that the proposal is submitted in full understanding and agreement of the requirements of HBCSE.
 2. The Bidder shall bear all costs associated with the preparation and submission of the Bid, and HBCSE will in no case be responsible for those costs, regardless of the conduct or outcome of the bidding process.
 3. HBCSE reserves its rights to amend any of the terms and conditions of the tender document. All such changes can be made up to one week before the last date of submission of bid. The notice of such amendment will be published on HBCSE website only. No separate advertisement will be issued in the newspapers for such changes/Corrigenda. All the prospective bidders are therefore requested to regularly visit HBCSE website for any such updates.
 4. The complete bid will be as per the specified formats only. The bids should be without alteration or erasures, except those to accord with instructions issued by the HBCSE or as necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.
 5. The Bid prepared by the Bidder, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and HBCSE, shall be in English only.
 6. Wherever a specific form is prescribed in the Bid document, the Bidder shall use the form to provide relevant information. If the form does not provide space for any required information, space at the end of the form or additional sheets shall be used to convey the said information. For all other cases, the Bidder shall design a form to hold the required information.
 7. The Bidder shall explicitly indicate the non-compliance or deviation of the Solution offered in the Proposal to all the terms, clauses, conditions and specifications stipulated in this document. If non-compliance or deviation for any term, clause, condition or specification is not explicitly indicated, it will be construed as compliance and if successful in the bid, the bidder is obligated to comply with all the requirements (excluding those non compliances explicitly accepted by HBCSE in writing).
 8. Successful bidder shall perform all the obligations specified in accordance with the terms and conditions laid down in the tender document. All details provided by the Bidder should be specific to the requirements specified in this tender document. Detailed clarification may be provided by Bidder, if so desired by HBCSE. The Bidder shall specify the responsibilities of HBCSE, if any, separately for the successful implementation of the project.
 9. **Bidder shall ensure that all documents are submitted with the Technical bid. The bid should contain the following documents:**
 - i. Copy of PAN (Permanent Account Number) card.
 - ii. List of similar works in hand & works carried out by them for last 5 years indicating A) Agency for whom executed, B) Value of work, C) Completion time as stipulated and actual, or present position of the work
 - iii. Experience testimonials along with work orders and completion certificates.
 - iv. Certificate of Registration for MSME/ NIC, GST and Income Tax and acknowledgement of up to date filed return.
 - v. **Copy of valid Electrical Contractor license** issued by Chief Electrical Inspector, Govt. of Maharashtra or any other competent authority to execute the AMC work.
 - vi. **Copy of valid licenses of the Electrical Supervisor** issued by Chief Electrical Inspector, Govt. of Maharashtra or any other competent authority, for the one who will be deputed on site Twice a week (or as required) if the work gets allotted along with his work experience certificates for related Supervision of Electrical AMC works.
 - vii. **Copy of valid licenses of the Wireman (Technician)** issued by Chief Electrical Inspector, Govt. of Maharashtra or any other competent authority, for the one who will be deputed on site if the work gets allotted along with his work experience certificates for related Electrical AMC works.
 - viii. **Earnest Money Deposit** – DD or in case of Bank Transfer the receipt of the same must be attached.

B) Earnest Money Deposit (EMD): An earnest money for **Rs. 17,700/- i.e. 2%** of the total estimated cost has to be deposited in the form of Demand Draft, Bankers cheque or through online transfer through bank (Bank details to be provided on demand) in favour of '**Homi Bhabha Centre for Science Education**' Mumbai along with the Technical Bid (Part 'A'). After online transfer of earnest money, the vendor should intimate us by email or proof of online transfer of EMD should be part of tender. The firms registered under MSMEs can be exempted from submission of EMD as per rule 170 of GFR 2017, provided they must submit a '**Bid Securing Declaration**' in prescribed form as per '**Annexure X**'

EMD shall be interest free and it will be refunded to the unsuccessful bidders within 15 days after acceptance of Work Order by the awarded bidder without any interest. EMD will be forfeited if the bidder withdraws or amend impairs or derogates from the tender in any respect. **Kindly submit your bank details along with the tender like Cancelled Cheque/NEFT/Bank A/C details for ease in repayment of EMD.**

C) Performance Guarantee: The tenderer, **whose tender is accepted**, will be required to furnish a performance Guarantee of **5% of the WO value** (of '**Annexure –A**' only) within **7 (seven) working days** from the date of intimation. This Guarantee shall be in the form Demand Draft / Pay Order / Banker's Cheque issued by a Scheduled Bank in favour of '**Homi Bhabha Centre for Science Education**'.

The performance guarantee shall be returned to the contractor, without any interest, after recording of the completion certificate for the work by the competent authority and submission of final bill by the contractor as per the joint measurement within 60 days.

The Engineer-in-charge shall make a claim under the Performance guarantee for amounts to which the Centre Director, HBCSE entitled under the contract (notwithstanding and / or without prejudice to any other provisions in the contract agreement) in the event of: Failure by the contractor to pay Centre Director, HBCSE any amount due, either as agreed by the contractor or determined under any of the Clauses / Conditions of the agreement, within 30 days of the service of notice to this effect by Engineer-in- charge. In the event of the contract being determined under the provisions of any of the relevant clauses of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the Centre Director, HBCSE.

D) Security Deposit: The tenderer, whose tender is accepted, will also be required to furnish by way of a Security Deposit for fulfillment of his contract, an amount equal to **2.5%** of the value of the work. The successful tenderer shall permit HBCSE at the time of making any payment to him for work done under the contract to deduct a sum at the rate of **2.5%** of the gross amount of each running bill. The Security Deposit shall be released after the period of 6 months reckoned from the date of completion as certified by Engineer.

E) Defect Liability period: Twelve (12) months from the satisfactory completion of work **(for works carried out under Annexure –B' only).**

F) In case Bidder finds discrepancies or omissions from the specifications or other documents or has any doubt as to their meaning, he shall at once request in writing to the Head, Administrative Operations (HBCSE) who will issue interpretation and clarifications as he may consider necessary in writing as an addendum. Copies of such addenda, if issued, shall be signed by the Bidder and shall form a part of his bid. Verbal clarifications given shall not be binding on HBCSE.

G) HBCSE does not bind itself to accept the lowest or any bid/all bids or a portion hereof. HBCSE is competent to reject any or all offers without assigning any reason whatsoever or to split the contract or to eliminate the portion of contract during the progress of work due to unsatisfactory work. HBCSE will not entertain any claim from the contractor because of such action on the part of the owner.

H) Acceptance of Tender: The competent authority, on behalf of Centre Director, HBCSE, Mumbai, does not bind himself to accept the lowest or any other tender, and reserves to himself the authority to reject any or all the tenders received, without assignment of any reason. All tenders, in which any of the prescribed condition is not fulfilled or any condition, including that of conditional rebates is put forth by the tenderer, shall be summarily rejected. The Competent Authority, on behalf of HBCSE, Mumbai reserves to himself the right to accept the whole or any part of the tender and the tenderer shall be bound to perform the same at the rates quoted. The officer inviting tenders shall have the right to reject all or any of the tenders and will not be bound to accept the lowest tender or any other tender.

I) Validity of Tender: The tender for the work shall remain open for acceptance for a period of **180 days** from the last date of submission of tenders. If any tenderer withdraws his tender before the said period, or before issue of Letter of Intent, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the Department, then HBCSE, TIFR, Mumbai shall, without prejudice to any other right or remedy, the tenderer shall not be allowed to participate in the retendering process of the work.

J) Levy / Taxes payable by contractor:

- a. GST @18% on materials and services in respect of this contract shall be payable by the contractor.

K) Deduction of Income Tax: Income Tax will be deducted as per Section 194-C of Income Tax Act 1961 and a certificate for the amount recovered will be issued by the HBCSE Centre.

L) Site visit by the tenderer before tendering: Tenderers are advised to inspect and examine the site and its surroundings during working hours and satisfy themselves before submitting their tenders as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed.

M) Signing of Tender and receipts for payments: In the event of the tender being submitted by a firm, it must be signed separately by each partner 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 authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act-1952. Receipts for payments made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.

N) Tenderer's responsibilities: The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & Personal protective equipment's (PPE) kits, plants, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice & all other contract documents and has made himself aware of the scope & specifications of the work to be done and local conditions and factors having a bearing on the execution of the work. Water and electricity shall be provided for the work by HBCSE-TIFR free of charge.

O) Notification of amendments to the tender document: If the technical specification requires any modification, suitable amendment to this tender document will be issued and the same will form part of the tender document. Prospective bidders are advised to regularly visit the TIFR web site or the CPP portal. Corrigendum/amendments etc., if any, will be notified only on the TIFR web site/CPP portal and no separate advertisement will be made for this.

P) Signing of contract: The Notice Inviting Tender shall form a part of the contract document. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of: The Notice Inviting Tender, all the documents including all conditions, specifications and drawings, if any, forms the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.

Q) Canvassing: either directly or indirectly, in connection with the tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection and may be barred from the future participation in HBCSE- TIFR works.

R) Contract Period: One (01) year after the date of issue of Work Order/ LOI/ PO or date of completion of Handing Over taking over process whichever is latest. The Centre reserves the right to extend the contract for a further period of 12 months not beyond 36 calendar months together on the same terms and conditions on mutual understanding basis of HBCSE and the Vendor. In case the AMC is further extended beyond 01 years the rates for the items in Annexure B only may be revised and finalized considering the price escalation and market rates by HBCSE. The rates for Annexure A i.e. Electrical AMC will be kept constant for next years. If the rates finalized by HBCSE are not acceptable to the vendor at that time, the contract will be cancelled fully.

S) The terms 'Municipal Corporation', 'Electricity Boards' etc. indicated in this tender shall also represent the 'Local statutory authority'/' State Govt.'/' Union Territory' etc., for works at different station.

T) As this is an Annual Maintenance Contract and availability of Work front on Day to Day Basis by the residents will be limited, the Bidder should have an Office in Mumbai/ MMRDA region for quick work at short notice. The name of Office In-charge of Mumbai Office along with address, mobile number and email address with address proof should be submitted.

SECTION 4: GENERAL RULES AND DIRECTIONS

1. **NIT & its contents:** All works proposed for execution by contractor will be notified in a form of invitation to tender pasted in public places and signed by the officer inviting tender or by publication in Newspapers as the case may be. 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, and the amount of the security deposit and Performance guarantee to be deposited by the successful tenderer and the percentage, if any, to be deducted from the bills. Copies of the specifications, designs and drawings, schedule of quantities of the various descriptions of work and any other documents required in connection with the work signed for the purpose of identifications by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours.
2. **Signing of Tender and receipts for payments:** In the event of the tender being submitted by a firm, it must be signed separately by each partner 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 of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act 1952. Receipts for payments made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm, in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.
3. **Filling-up of tender:** 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 rebates, will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tenders shall have the name and number of the works to which they refer, written on the envelopes. It will be obligatory on the part of the tenderer to sign all the pages of tender documents affixing his stamp. The tenders are to be on the prescribed form of DAE. All rates shall be quoted on the proper form of the tender alone. All corrections shall be attested by the dated initials of the tenderer. Use of correcting fluid, anywhere in tender document is not permitted. Such tender is liable for rejection. If it is found that the tender is not submitted in proper manner or contains too much corrections and/or absurd rates or amount, it would be open for the Government to take suitable disciplinary action against the Contractor. Bids prepared by the tenderer shall contain all requisite information along with self-attested supporting documents as per details in Technical Bid-Part I

The Tender is consisting of two parts: **PART I- TECHNICAL BID & PART II- FINANCIAL BID**

The bigger envelope must be super scribed '**Tender for Annual Maintenance Contract (Comprehensive) for Electrical Systems including Substation, Devices & Fixtures installed at HBCSE**'.

The two envelopes inside the bigger envelope must be super scribed as:

i. Tenderer's name & signature with seal

ii. Envelope No-1: The said envelope is for technical bid & shall be super scribed as '**Tender for Annual Maintenance Contract (Comprehensive) for Electrical Systems including Substation, Devices & Fixtures installed at HBCSE – Technical Bid**'.

iii. Envelope No-2: The said envelope is for financial bid & shall be super scribed as '**Tender for Annual Maintenance Contract (Comprehensive) for Electrical Systems including Substation, Devices & Fixtures installed at HBCSE – Financial Bid**'.

The tender must be placed in a properly sealed bigger envelope addressed to the '**Head Administrative Operations, Homi Bhabha Centre for Science Education, V. N. Purav Marg, Mankhurd, Mumbai – 400088**' and the said bigger envelope shall contain two sealed envelopes containing Technical & Financial bids.

4. **Opening of tenders:** The officer inviting tender, or his duly authorised assistant will open the technical bids first. In selecting technically suitable parties, the decision of the HBCSE Scrutiny Committee will be final and binding on all the contractors. Financial bids for those tenderers who qualify in the technical bid will be opened. Intimation will be sent to through email/telephone/letter to those tenderers, who qualify in the technical bid. No correspondence in this regard will be entertained. Further the Financial bids may be opened in the presence of any intending tenderers who may be present at the time and will enter the amount of the several tenders in a Comparative Statement in a suitable form.

The firms whose bids meet all the technical & financial conditions will be deemed eligible to be awarded an AMC contract. A Committee will shortlist the eligible bidders and determine the L1 bid for each category of

equipment from the eligible bids only. This shall constitute the final AMC rate for each category of equipment. Any Financial bid which is considered highly unreasonable will be discarded and such bids will be considered deficient and rejected as ineligible. All the eligible bidders who are willing to provide AMC service for all categories of equipment at the final rate, as determined above, will be empaneled to provide AMC services to HBCSE.

5. **Declaration by tenderer:** The tenderers shall sign a declaration under the Official Secret Act-1923 for maintaining secrecy of the tender documents, drawings or other records connected with the work given to them. The unsuccessful tenderers shall return all the drawings given to them.
6. **Guidelines for quoting the rates:** All rates shall be quoted on the prescribed tender form. The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words, and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in word. In case of figures, the words “Rs.” should be written before the figures of rupees and word “P” after the decimal figures, e.g., “Rs. 2.15 P”. and in case of words, the word, “Rupees” should precede and the word “Paise” should be written at the end. Unless the rate is in whole rupees followed by the word 'only' it should invariably be up to two decimal places. While quoting the rate in schedule of quantities, the word 'only' should be written closely following the amount and it should not be written in the next line.
7. **Quoted rates to include all taxes (except GST):** Sales tax, VAT, Purchase tax or any other tax on materials in respect of this contract, including state Sales tax and Turnover tax on transfer of property as per Works Contract Act etc. if any, shall be payable by the contractor and Government will not entertain any claim whatsoever in respect of the same. As per the directives of the Sales Tax Authorities, the tax due at the rates notified by the State Government from time to time, shall be deducted from the bills payable to the Contractors, for which TDS certificate shall be issued by the Department.
8. **Filling-up of Financial Bid:** Unless otherwise called for, any tender containing percentage below / above the estimated cost put to tender is liable to be rejected. All rates shall be quoted on the tender form by the tenderers in figures and words shall be accurately filled in, so that there is no discrepancy in the rates written in figures and in words. The amount for each item should be worked out and requisite totals given. However,
 - i) The rate(s) must be quoted in decimal coinage. Amounts must be quoted in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.
 - ii) If a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall, unless otherwise proved, be taken as correct.
 - iii) If the amount of an item is not worked out by the tenderer, or it does not correspond with the rate written either in figures or in words, then the rates quoted by the tenderer in words shall be taken as correct.
 - iv) Where the rate quoted by the tenderer in figures and in words tally but the amount is not worked out correctly, the rate quoted by the tenderer will, unless otherwise proved, be taken as correct and not the amount.
 - v) In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the contractor has included the cost of this / these item(s) in other items and rate for such item(s) will be considered as **zero** and work will be required to be executed accordingly.
9. **Action in case of un realistic rates:** In the case of any tender where unit rate of any item (s) appear unrealistic, such tender will be considered as unbalanced and in case the tenderer is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.
10. **Witnessing of a tender:** The tender for the work shall not be witnessed by a contractor or 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 contractors tendering, as well as witnessing the tender, liable to summary rejection.
11. **List of works in hand:** The contractor shall submit list of works which are in hand / in progress in the form as per Annexure VI.
12. **Safety Rules:**
 - a. The contractor shall maintain in a readily & easily accessible place first-aid appliances including adequate supply of sterilized dressings and cotton wool.
 - b. The injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.
 - c. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from ground.
 - d. No portable single ladder shall be more than 6 meters in length. The width between the side rails shall not be less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used, an extra labour shall be engaged for holding the ladder. Safety belt should be used during working on external surface of the building, terrace, overhead tanks and electrical poles etc.

- e. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person(s) or materials by providing suitable fencing or railing minimum height of which shall be one meter.
 - f. No floor roof or other parts of the structure shall be loaded with rubbish or materials as to render it unsafe.
 - g. Ropes used in hoisting or lowering material or as a means of suspension should be of durable quality, adequate strength and free from defects.
 - h. The contractor will ensure that all types of safety measures as advised by Government from time to time are taken care of during the performance of work.
 - i. The contractor is liable to maintain LT room to be neat and clean and all the electrical works carried out by the contractors should be followed as per Indian Electricity Rule 1956 and India Electricity act 2003.
 - j. The Contractor shall at his own expense arrange for the safety provisions as appended to these conditions or as required by the Engineer-in-Charge, in respect of all labour directly or indirectly employed for performance of the works and shall provide all facilities in connection therewith. In case the Contractor fails to make arrangements and provide necessary facilities as aforesaid the Engineer-in-Charge shall be entitled to do so and recover cost thereof from the Contractor.
 - k. The Contractor shall provide and maintain at his own expenses, safety shoes, safety helmets, insulation gloves of appropriate rating, gum boots, raincoats, safety belts and any other personal protective equipment, when and where necessary or required by the Engineer-in-Charge for the protection of the works or for the safety and convenience of those employed on the works or the public.
 - l. **The HBCSE shall not be liable for any accident, injury or for any other mishap caused to him/them/their employees/agents and labour employed by the Contractor and for any kind of damage during the execution of the contract or work done. For any kind of such injury or loss caused to any person/persons mentioned herein above, the Contractor shall be sole responsible.**
 - m. Prevent all potential contact with live Electrical current.
 - n. **De-energize equipment and use Lockout/Tag out.**
13. **Apart from the above-mentioned rules and regulations, it is abiding to the contractor to follow the Rules, regulations and guidelines of Govt. of India, Maharashtra Electricity Regulation Commission, Chief Electrical Inspector Govt. of Maharashtra, Indian Electricity Act & the Indian Electricity rules and their amendments issued from time to time.**

SECTION 5: CONDITIONS OF CONTRACT

A. DEFINITIONS:

1. The **'Contract/ Agreement'** means the documents forming the tender and acceptance thereof and the formal agreement executed between the Competent authority on behalf of the Centre Director, HBCSE 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 Engineer-in-charge 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 expression shall, unless the context otherwise requires, have the meanings hereby respectively assigned to them.
 - i) The expression **'Works'** or **'Work'** shall, unless there be something either in the subject or context repugnant to such work, 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.
 - ii) The **'Site'** shall mean the land or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
 - iii) The **'Contractor/ Bidder/ Vendor'** shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personnel representative of such individual or the persons composing such firm or company or the successors of such firm or company and the permitted assignees of such individual, firm or company.
 - iv) The **'Engineer-in-Charge'** means the Engineer / Officer, who shall supervise and be in charge of the work
 - v) **'Centre/ Institute/ Department/ Owner'** shall mean the HBCSE-TIFR.
 - vi) **'Temporary Work'** means all temporary works of every kind required in or about the execution, completion and maintenance of the works.
 - vii) **'Accepting authority'** shall mean the Head, Administrative Operations, HBCSE-TIFR.
 - viii) **'Excepted Risk'** are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Government, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by Government of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Government's faulty design of works.
 - ix) **'Market Rate'** shall be the rate as decided by the Engineer-in-Charge on the basis of the cost of materials and labour at the site where the work is to be executed plus the percentage to cover, all overheads and profits.
 - x) **'Schedule(s)'** referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers.
 - xi) **'Tendered value'** means the value of the entire work as stipulated in the letter of award.
 - xii) **'Working Days'** means every Monday to Saturday from 9.00 AM to 06:00 P.M

B. Works to be Carried out: The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognised principles.

C. Sufficiency of Tender: The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

- a. If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.
- b. Any error in description, quantity or rate in Schedule of Quantities or any omission therefrom shall not vitiate the contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract. the works.

D. Signing of Contract: The successful tenderer / contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of complete tender document including conditions, bill of quantities, drawings, if any, and acceptance thereof together with any correspondence leading thereto No payment for the work done will be made unless contract is signed by the contractor.

SECTION 6: GENERAL CLAUSES OF CONTRACT

- 1. Determination of contract:** Subject to other provisions contained in this clause, the Engineer-in-Charge may, without prejudice to his any other right or remedy against the contractor in respect of any delay, inferior workmanship, any claim for damages and /or any other 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, reconstructor replace any defective work or that the work is being performed in an 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.
 - ii. If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion 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 and continue to do so after a notice in writing of 7 days from the Engineer-in-Charge.
 - iii. If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-Charge.
 - iv. If the contractor persistently neglects to carry out his obligations under the contract and / or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-Charge.
 - v. If the contractor shall offer or give or agree to give to any person in HBCSE- TIFR or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for HBCSE-TIFR.
 - vi. If the contractor shall obtain a contract elsewhere as a result of wrong tendering or other non-bonafide methods of competitive tendering.
 - vii. If the contractor assigns, transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Engineer-in-Charge. When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge on behalf of the Centre Director, HBCSE shall have powers:
 - a. To determine the contract as aforesaid (of which termination notice in writing to the contractor under the hand of the Engineer-in-Charge shall be conclusive evidence) upon such determination, the Security Deposit already recovered and Performance Guarantee under the contract, shall be liable to be forfeited, and shall be absolutely at the disposal of HBCSE-TIFR.
 - b. After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be unexecuted out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined as above, shall not be allowed to participate in the tendering process for the balance work.
 - viii. In the event of above courses being adopted by the Engineer-in-Charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered any engagements or made any advances on account or with a view to the execution of the work or the performance of the 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 thereof or 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.
- 2. Contractor liable to pay compensation even if contract is not determined:** In any case in which any of the powers conferred upon the Engineer-in-Charge under the contract, shall have become exercisable and the same are not exercised, the 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 a notice in writing to the contractor, take possession of (or at the sole discretion of the Engineer-in-Charge which shall be final and binding on the contractor), 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 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 and binding on the contractor, his clerk of the works, foreman or other authorized agent to remove such tools, plant, materials, or stores from the premises (within a time to be specified in such notice); 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 respects and the certificate of the Engineer-in-Charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.

- 3. Time Extension for delay:** The time allowed for execution of the works as stipulated in the contract or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence from such time as mentioned in the contract. If the Contractor commits default in commencing the execution of the work as aforesaid, HBCSE-TIFR shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the performance guarantee absolutely. As soon as possible after the Contract is signed, the Contractor shall submit a Time and Progress Chart for each milestone and get it approved by the Department. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and maybe amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the Contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate program has been agreed upon) to complete the work as per the mile stones given.

If the work(s) be delayed by:

- a. Force majeure, or
- b. Abnormally bad weather, or
- c. Serious loss or damage by fire, or
- d. Civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or
- e. Delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract, or
- f. Non-availability of stores, which are the responsibility of HBCSE-TIFR to supplier.
- g. Non-availability or break down of tools and plant to be supplied or supplied by HBCSE- TIFR or
- h. Any other cause which, in the absolute discretion of the Engineer-in-Charge is beyond the Contractor's control, then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Engineer-in-Charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.

4. Measurements and Payments of work done:

- a) All measurements and levels shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer-in-Charge or his representative shall be deemed to be accepted by the Contractor.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available, then a mutually agreed method shall be followed. The contractor shall give, not less than 7 days' notice to the Engineer-in-Charge or his authorized representative 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 and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer-in-Charge or his authorized

representative in-charge of the work who 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 measurements without such notice having been given or the Engineer-in-Charge's consent being obtained in writing, 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.

It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

- b) Payments:** For AMC work under 'Annexure A' the payment will be released on quarterly basis on complete satisfaction of work by Engineer-In-Charge against the Tax Invoice submitted within 15-20 working days. The TDS and any such deductions will be made as per the Income Tax rules. The payment for the works under 'Annexure B' can be combined with the bill for AMC work of 'Annexure A' in quarterly payment invoice and/or the RA bill can be placed for payment over Rs. 15,000/- only. No further matters in this regard will be entertained.

NOTE: No payment will be made for goods rejected.

- 5. 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 fifteen days 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 physical 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 final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed, all scaffolding, 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 cleaned off the dirt from all wood work, doors, windows, walls, floors or other parts the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the 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 before the date fixed for the completion of the work, the Engineer-in-Charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish, etc., and dispose off the same as he thinks fit and clean off such dirt as aforesaid; and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.
- 6. Quality Check:** The material/ spares to be used for repairing or installation purpose should be only of approved or genuine make. The quality of the spares or other materials will be checked by the departmental Technician or EIC. It will be the responsibility of the contractor to take prior approval with signature of departmental Technician or EIC before unboxing or using any products on site. If any material used on site found to be of bad quality should be replaced by the contractor as and when communicated. In case of any loss or damage cause by virtue of using non approved quality of material, the contractor should restore the damage fully or otherwise the corresponding cost with penalty will be recovered from the bills, SD & PBG.
- 7. Contractor to keep site clean:** When the works are carried out, the old and damaged parts, spares, covers, waste etc. shall be removed and the area should be 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 contract. In case the contractor fails to comply with the requirements 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 any other agency. Before taking such action, the Engineer-in-Charge shall give 10 days' notice in writing to the contractor.
- 8. Payment of Final Bill:** The final bill shall be submitted by the contractor in the same manner as specified in interim bills within two months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-Charge whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-Charge, will, as far as possible be made within the period specified herein-under, the period being reckoned from the date of receipt of the bill by the Engineer-in-Charge or his authorized representative, complete with account of materials issued by the Department and dismantled materials. Penalty for any default will be deducted from the RA bills and Final bill as well.

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

a. Deviation and Time Extension: The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, will be extended, if requested by the contractor, as follows:

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

b. Extra Items and Pricing: In the case of extra item(s) which cannot be determined under the schedule of quantities, the contractor may within fifteen days of receipt of order or occurrence of the item(s), claim rates, supported by proper analysis, for the work and the engineer-in-charge shall within one month of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined. In the case of substituted items, the rate for the agreement items (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following para:

c. Substituted Items and Pricing:

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

10. Foreclosure of contract due to abandonment or reduction in scope of work: If at any time after acceptance of the tender, HBCSE-TIFR shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not require the whole or any part of the works to be carried out, the Engineer-in-charge shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The contractor shall be paid at contract rates full amount for works executed at site and in addition, a reasonable amount as certified by the Engineer-in-charge for the items hereunder mentioned which could not be utilized on the work to the full extent in view of the foreclosure.

- a. Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office, storage accommodation and water storage tanks.
- b. HBCSE-TIFR shall have the option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work) provided however, HBCSE-TIFR shall be bound to take over the materials or such portions thereof as the contractor does not desire to retain. For materials taken over or to be taken over by HBCSE-TIFR, cost of such materials as detailed by Engineer-in-charge shall be paid. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor.
- c. If any materials supplied by HBCSE-TIFR are rendered surplus, the same except normal wastage shall be returned by the contractor to HBCSE-TIFR at rates not exceeding those at which these were originally issued less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor. In addition, cost of transporting such materials from site to HBCSE-TIFR stores, if so required by HBCSE-TIFR, shall be paid.

- d. Reasonable compensation for transfer of T & P from site to contractor's permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable.
- e. Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary. The contractor shall, if required by the Engineer-in-charge furnish to him books of account, wage books, time sheets and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition. The reasonable amount of items on (i), (iv) and (v) above shall not be in excess of 2% of the cost of the work remaining incomplete on the date of closure, i.e. total stipulated cost of the work as per accepted tender less the cost of work actually executed under the contract and less the cost of contractor's materials at site taken over by HBCSE-TIFR as per item (ii) above. Provided always that against any payments due to the contractor on this account or otherwise, the Engineer-in-charge shall be entitled to recover or be credited with any outstanding balances due from the contractor for advance paid in respect of any tool, plants and materials and any other sums which at the date of termination were recoverable by HBCSE- TIFR from the contractor under the terms of the contract.

11. Suspension of work:

- a. The contractor shall, on receipt of the order in writing of the Engineer-in-Charge, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in- Charge may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons:
 - i. On account of any default on the part of the contractor or;
 - ii. For proper execution of the works or part thereof for reasons other than the default of the contractor; or
 - iii. For safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-Charge.

- b. If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:

- i. The contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25%, for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and;
- ii. If the works or part thereof is suspended on the orders of the Engineer-in-Charge for more than three months at a time, except when suspension is ordered for reason (a) in sub-para (i) above, the contractor may after receipt of such order serve a written notice on the Engineer-in-Charge requiring permission within fifteen days from receipt by the Engineer-in-Charge of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by HBCSE- TIFR or where it affects whole of the works, as an abandonment of the works by HBCSE-TIFR, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Engineer-in-Charge. In the event of the contractor treating the suspension as an abandonment of the contract by HBCSE-TIFR, he shall have no claim to payment of any compensation on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Engineer-in- Charge may consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-Charge within 30 days of the expiry of the period of 3 months.

12. Action in case of work not done as per specifications:

All works under or in course of execution or executed in pursuance of the contract, shall at all times be open and accessible to the inspection and supervision of the Engineer-in- charge, his authorized subordinates in charge of the work and all the superior officers of the Department or any organization engaged by the Department for Quality Assurance and of the Engineer's Office, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders 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.

If it shall appear to the Engineer-in-charge or his authorized subordinates in-charge of the work or his subordinate officers or the officers of the organization engaged by the Department for Quality Assurance or to the Chief Technical Examiner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor

shall, on demand in writing which shall be made within twelve months (six months in the case of work costing Rs. 10 Lakh and below except road work) 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 and paid for 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 materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-Charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause III (1) of the contract (for non-completion of the work in time) for this default in such case the Engineer-in-Charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates. Decision of the Engineer-in-Charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

- 13. Contractor liable for damages, defects during Maintenance (Defect Liability Period):** 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 kerb, 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 of it 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 **12 months** after a certificate final or otherwise of its completion shall have been given by the Engineer-in-Charge as aforesaid arising out of defective 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 thereafter may become due to the contractor, or from his security deposit, or 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 **12 months** after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever 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 the liabilities of the contractor under this contract, the security deposit will be refundable after **12 months** of the issue of the said certificate of completion or till the final bill has been prepared and passed whichever is later. Performance guarantee shall be refunded to the contractor after completion of the work and recording the completion certificate.

- 14. Contractor to supply tools & equipments etc.:** The contractor shall provide at his own cost all materials (except such special materials, if any, as may in accordance with the contract be supplied from the Engineer-in-Charge's stores), machinery, tools & equipments. In addition to this, appliances, implements, other accessories, ladders, cordage, tackle and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specification or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-Charge as to any matters to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefore 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 in the measurement or examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-Charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under the contract and/or from his security deposit or the proceeds of sale thereof, or of a sufficient portion thereof.

- 15. Lump sum provision in tender:** When the estimate on which a tender is made include lump sums 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 payable of measurement, the Engineer-in-Charge may at his discretion pay the lump sum amount entered in the estimate, and the certificate in writing of the Engineer-in-Charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of the clause.

- 16. Recovery of compensation paid to workmen:** In every case in which by virtue of the provisions of section 12 sub-section (1) of the Workmen's Compensation Act, 1923, HBCSE-TIFR is obliged to pay compensation to a workman employed by the contractor, in execution of the works, HBCSE-TIFR will recover from the contractor the amount of the compensation so paid; and, without prejudice to the rights of HBCSE-TIFR under Section 12, sub-section (2) of the said Act, HBCSE 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 HBCSE to the contractor whether under this contract or otherwise. HBCSE shall not be bound to contest any claim made 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 HBCSE full security for all costs for which HBCSE might become liable in consequence of contesting such claim.

- 17. Fall Clause:** At any point of time if it is observed that the vendor is providing similar services of Annual Maintenance Contract (AMC) for Electrical Systems and installation to other any organizations in similar Regions / Zones with similar terms and conditions and status of work at a lower rate than offered to HBCSE, then the vendor shall have to compensate HBCSE by paying the difference amount and downward revise the rate of respective services with immediate effect.
- 18. Ensuring payment and amenities to workers if contractor fails:** In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and of the contract labour (Regulation and Abolition) Central Rules, 1971, HBCSE is obliged to pay any amounts of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the Rules, under Clause 19 H or under the DAE Contractor's Labour Regulations, or under the rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by Department of Atomic Energy contractors, HBCSE will recover from the contractor the amount of wages so paid or the amount of expenditure so incurred; and without prejudice to the rights of TIFR under Section 20, sub- section (2) and Section 21, sub-section (4) of the contract labour (Regulation and Abolition) Act, 1970, HBCSE 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 HBCSE to the contractor whether under this agreement or otherwise. HBCSE shall not be bound to contest any claim made against it under Section 20, subsection (1) and section 21, sub-section (4) of the said Act, except on the written request of the contractor and upon his giving to HBCSE full security for all costs for which HBCSE might become liable in contesting such claim.
- 19. Disposal of Debris/ Electronic Waste items:** The electronic waste/ debris generating out of the tender work needs to be get disposed at appropriate location. The disposal of such items will be the responsibility of contractor only. No matters in this regard will be entertained by HBCSE.
- 20. Termination of contract in case of death:** Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Engineer-in-Charge on behalf of the Centre Director, HBCSE shall have the option of terminating the contract without compensation to the contractor.
- 21. Labour laws to be complied by the contractor:** The contractor shall obtain a valid license under the Contract Labour (R & A) Act, 1970 and the Contract Labour (Regulation and Abolition) Central Rules, 1971, before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also abide by the provision of the Child Labour Prohibition & Regulation) Act-1998. The contractor shall also comply with the provisions of the building and other Workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Workers Welfare Cess Act, 1996. Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non execution of the work.
- 22. Minimum wages act to be compiled with:** The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, Contract Labour (Regulation and Abolition) Act, 1970 and rules framed thereunder and other labour laws affecting contract labour that may be brought into force from time to time.
- 23. Settlement of Disputes & Arbitration:** Any dispute arising from this contract will be referred to two arbitrators one to be appointed by you and one by us. The two arbitrators, in the event of their disagreement will appoint an Umpire. The decision of the Umpire shall be final and binding. The arbitration will proceed as per Indian Arbitration Act, 1940, as amended up to date. Mumbai city will be the jurisdiction for the settlement of all court/ arbitration and related matters.
- 24. Confidential Information:** The drawings, specifications, proto-type, samples and such other information furnished to the contractor relating to the supply / work, sub-systems / equipment etc. are to be treated as confidential which shall be held by the contractor in confidence and shall not be divulged to any third party without the prior written consent of the Department. The contractor, therefore, binds himself, his successors, heirs, executors, administrators, employees and the permitted assignees or such other persons or agents directly or indirectly concerned with the work / supply to the confidential nature of the drawings, specifications, proto-type samples etc. It is a further condition of the contract that the contractor shall not, without prior written permission from the Department, transmit, transfer, exchange, and gift or communicate any such confidential information, and also the component, sub assembly, products, by-products.

SECTION 7: SPECIAL CLAUSES OF CONTRACT

The following Special clauses of contract shall be read in conjunction with General clauses of contract. The same shall be considered as an extension and not limitation of the obligations of the contractor. In case of any discrepancy between Special clauses of contract and the General clauses of contract, these Special clauses shall take precedence over the General clauses of the Contract.

- 1. Sequence of work:** The contractor shall execute the work as per the sequence given by the Engineer-in- Charge from time to time so that all other items of the work to be executed by other agencies are completed progressively along with the main work.
- 2. Co-operation and Co-ordination with other contractors:** The contractor will carry out the entire work in a planned manner by co-ordinating his work with other contractors, who will be simultaneously carrying out work in the same area and also co-ordinate in connection with the position of various fixtures, inserts, embedment and other allied work connected with the completion of the building / subject work. In case of any dispute between the contractors engaged on the same work, decision of Engineer-in-Charge shall be final and binding.
- 3. Operations and storage areas:** All operations of the contractor shall be confined to areas authorised by the Engineer-in-Charge and storage of materials shall be over the areas specially indicated by the Engineer-in-Charge. The contractor shall be obliged to keep the premises in hygienic conditions by proper drainages of the area provided with suitable approaches throughout the period of contract. He shall rectify all damages caused to the Government property within the areas thus allotted. He shall be responsible to clear all rank, vegetation at site at his own cost. **The contractor should provide Storage box for the working personal at his own cost with lock and key arrangement. The box can be placed at approved location by Engineer-In-Charge.**
- 4. Traffic interference & inconvenience to the public:** The contractor shall so conduct his operations as to interfere as little as possible with the traffic/public. The contractor shall take all precautionary and other measure, such as providing warning signals, temporary diversion etc. all as directed by the Engineer-in-Charge. The contractor shall not deposit materials anywhere at work site which will seriously inconvenience the public. The Engineer-in-Charge may require the contractor to remove any materials which are considered to be a danger or inconvenience to the public or cause them to be removed at the contractor's cost.

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.
- 5. Supply of Water & Electricity:** Water and electricity shall be supplied to the contractor by HBCSE free of cost subject to the following conditions:
 - i. The Source of Water and Power Supply will be given at one point. All other arrangements have to be arranged by Contractor.
 - ii. Contractor(s) shall make his/ their own arrangement of water/ electricity connection and laying of pipelines/ connection from existing main of source of supply as directed by Engineer-In-charge.
 - iii. HBCSE do not guaranty to maintain uninterrupted supply of water/ electricity and it will be incumbent on the contractor to make alternative arrangement for proper supply of the same at his/ their own cost in the event of any break down in the government water/ electricity mains so that the progress of his/ their work is not held up for the want of the same. No claim of damage or refund will be entertained on account of such break down.
- 6. Tendered rates to cover overheads and profit:** The rates quoted shall also cover the cost of necessary protection including labour, materials and equipment to ensure safety and protection against risk or accident, compensation for injury to life and damage to property if any, caused by the contractor's operations connected with this work. The rates shall be firm and shall not be subject to change due to variations during the entire period of execution of the work in cost of materials, labour and conditions, or any other conditions. No separate claim on this account will be entertained by the Department.

Unless otherwise stated in schedule of quantities, rates for item quoted by the tenderer should be for the complete work including supply and fixing with all materials and should be for all heights and depths, lifts and leads, lengths and widths involved in the work. Any cement slurry added over base surface (or) for continuation of concreting, for better bond, is added to have been in-built in the item (unless otherwise explicitly stated) and nothing extra shall be payable and no extra cement considered in consumption on this account. Rate for all items, in which use of cement is involved, shall include charges for curing.

The contractor when called for by the Department should furnish detailed rate analysis in support of the rates quoted by him against each item of the tender. The Department reserves the right to utilize the analysis thus supplied in settling the rate of any deviations or claims arising in this contract.

7. Claims against the contractor: Whenever any claim against the contractor for the payment of a sum or money arises out of or under the contract, Department shall be entitled to recover such sum by appropriating in part or whole, the security deposit of the contractor and to sell any Government promissory notes etc. forming the whole or part of such security. In the event of the security deposit having been taken from the contractor, 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 from the contractor, under this or any other contract with the Department. Should this sum be not sufficient to cover the full amount recoverable, the contractor shall pay the Department, on demand the balance remaining due.

Department shall have the right to cause an audit and technical examination of the work and the final bill of the contractor including all supporting vouchers, abstracts etc. to be made after payment of the final bill and if as a result of the due audit and technical examination any sum is found to have been over paid in respect of any work done by the contractor under the contract or any work claimed by him to have been done under the contract and found not have been executed, the contractor shall be liable to refund the amount of the over payment and it shall be lawful for the Department to recover the same from him in the manner prescribed above 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, amount of such under payment shall be duly paid by the Department to the contractor.

8. Mode of measurements: Measurements for all hidden items once taken jointly and so accepted by the tenderer in the bills, in writing shall be final and binding. No re-recording of measurements for hidden items of work will be permitted. The contractor shall provide at his own cost suitable weighing and measuring arrangements at site for checking the weight / dimensions as may be necessary for execution of the work.

All measuring tapes (of steel), scaffolding and ladders which may be required for taking measurements shall be supplied by the contractor. If the contractor fails to accompany the Engineer-in-Charge or his duly authorised person to take measurements, then he shall be bound by the measurements, recorded by the Engineer-in-Charge or his representative.

9. Proper drawings and instructions: The Engineer-in-Charge shall have full powers and authority to supply to the contractor from time to time during progress of the 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.

10. Employment of staff for electrical works:

a. Employment of licensed electrician: The contractor should employ a Licensed Electrician to carry out the Electrical works.

11. Urgent repairs: If by reason of any accident or failure or other event occurring to 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 his own or other workmen do such work or repair as he may consider necessary. If the work or repair so done which in the opinion of the Engineer-in-Charge, the contractor was liable to do at his own expenses under the contract and all cost and charges properly incurred by the Engineer-in-Charge in so doing shall on demand be paid by the contractor or may be deducted from any sum due or which may become due to the contractor provided always that the Engineer-in-Charge shall soon after the occurrence of any such emergency as may be reasonable, practicable, notify the contractor thereof in writing.

12. Pandemic Situation: If a Lock down or anything as such announced by Govt of India/State Govt due to pandemic condition like Covid 19 or any other and the work remain suspended, nothing extra shall be paid to contractor for any losses in this regard.

13. Medical Fitness of staff/ labour: Staff/ Labour to be engaged in work should have medical fitness certificate if required by the department. The contractor will also follow the guideline issued by Govt of India/State Govt during any pandemic and will follow the safety norms and be responsible for the safety of labours to be engaged in the work. No claim for any causality in this regard will be entertained.

14. Security regulations: The contractors have to follow strictly the regulations of the Department at the work site regarding entry of personnel, material etc. and any other regulation that might be enforced from time to time. All materials and articles brought by the contractor to the work site shall have to be declared at the security gate. Similarly, no materials shall be taken out from the Departmental 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 in vehicles and trucks shall be done in the presence of Departmental personnel.

For working on Sundays, 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. The contractor, his agents, representatives, workmen etc. and his materials, carts, trucks or other

means of transport etc. will be allowed to enter through and leave from such point of entry/exit at such times, the authorities in-charge of the area, at their sole discretion, may permit. The contractor, his agents and representatives are required to be in possession of the individual identity / muster cards or passes. The muster cards or passes are examined by the security staff at the time entry / exit inside the departmental area.

The contractor, his agents, representatives, workmen shall strictly observe the orders pertaining to prevailing fire precautions. In addition to the above, other security regulations as may be imposed by the Security authorities / Engineer-in- Charge shall be complied with / observed by the contractor and his workmen, in addition to the above. Any breach of above security regulations and rules in force from time to time will be viewed seriously. No claim whatsoever will be entertained by the Department on account of the observation of the Security regulations.

Once the contract staff/ workers enter on site at 9:00am will not be allowed to leave the campus before 6:00pm for any kind of material purchase or any such related works. In case of emergencies and only after prior intimation and approval of EIC the worker/ staff will be allowed to leave.

15. The contractor shall arrange to provide the service on Sunday and other holidays in case of Emergency as required by Engineer in charge, failing which penal recovery shall be made, decision of Engineer in charge in this regard will be final and binding to the contractor.

16. All breakdown calls (complaints received during normal working hours) should be attended to, at the shortest possible time. TIME IS THE ESSENCE OF THE CONTRACT.

17. The contractor shall provide a valid ID card to the workers issued by the contractor and signed by the HBCSE representative, showing name of the contractor with address and telephone number on ID card as approved by the Engineer in charge. All the workers must wear the same while on duty.

18. Selection of Technician (licenced) – The Technician allotted by the bidder to work on site should have min 2 years of experience of working on sites for Repair & Maintenance of all types of Electrical Systems including substations along with installation of electrical fixtures. The Technician will be supervised by the departmental personal for at least 10 days and will be reviewed for his performance by EIC and will be continued serving if found satisfactory. In case if the Technician has been observed to be incapable of serving or less experienced at any point of contract period, will be rejected and it will be the responsibility of the vendor to replace the same with efficient Technician as directed by EIC.

19. Applicable penalty for Default- The penalty amount per complaint will be as follow:

- I) Minor Faults viz. Repair/replacement of all types of fans, lights chokes, lamp holders, starters, capacitors, Igniters, switches, plugs, HRC fuses, bearings, MCB's, switch device fuse units, sockets, grinding machines ,motors and supply of Refrigerator, water coolers etc. not rectified within 24 hour @ Rs 500/- per day.
- II) Major faults viz. ACB faults, VCB faults, Transformers faults, Relay failure, replacement of MCCB, Ground faults, cable faults, etc. not rectified within 4 working days @ Rs 1000/- per day.
- III) The repairing/ replacement Capacitor banks, short circuits of cables if it is not done within 5 working days @ Rs. 2000/- per day.
- IV) The spare materials / spare parts of units used for replacement of old/ damaged parts must be of standard approved make (**Genuine spare parts**) only by the EIC. The material brought on site as a spare for replacement should be used post approval of EIC/ Supervisor only. If any material used and found to be of inferior quality at any point of the contract period or of non-approved, make & model should be replaced with the new approved spare by the contractor at its own cost. Otherwise, the same will be replaced by HBCSE and the cost for the same will be deducted as a penalty from bills.
- V) Any delay beyond 04 days in rectifying all minor/major faults at S.No. I the equipment will be repaired by the HBCSE Technician in house and the actual cost of the same shall be recovered from the payable amount of AMC in addition to the misc. expenses to be incurred while repairing & penalties as mentioned in I.
- VI) Any delay beyond 04 days in rectifying all minor/major faults at S.No. II the equipment will be repaired from the market by HBCSE and the actual cost of the same shall be recovered from the payable amount of AMC in addition to the misc. expenses to be incurred while repairing & penalties as mentioned in II.
- VII) Any delay beyond 05 days in rectifying the faults at S.No. III the equipment will be repaired from the market by HBCSE and the actual cost of the same shall be recovered from the payable amount of AMC in addition to the misc. expenses to be incurred while repairing & penalties as mentioned in III.

- VIII) In extreme cases, the action of forfeiture of security money/pending bill/blacklisting of the firm can be resorted at the discretion of the competent authority in case of failure by the contractor to rectify the complaints within the specified time.
- IX) Any damage to the building or the any part of the equipment which might result during the operation or malpractice shall be repaired by the contractor. Nothing extra will be paid for such work.
- X) If the contractor's workers working in any residence places such as hostel/ guest house rooms or in any office spaces and found to be using the beds and chairs inside the rooms and office spaces, will be penalized with Rs. 500/- for First instance, Rs. 1000/- from Second instance onwards and will be either penalised or any further strict action can be taken from HBCSE such as termination of contract, blacklisting etc. along with penalties from Third instance onwards.
- XI) In case any employee found absent from his duty following recovery shall be made from the contractor's bill-
a) Electrician @ Rs 800/- per day
b) Assistant /Helper @ Rs 500/- per day
The contractor shall provide reliever for the regular employee on leave / is sick.
- XII) The contractor is sole responsible for the safety of his workers working on site at any heights. The contractor should make arrangements for the safety of the workers and take all measures to make accident free work. Proper safety accessories such as safety belts, helmets of standard make and IS marked should be provided to the workers while working at heights and at stringent locations. **Safety talks should be conducted by the contractor or his representative at least once in a month.**
- XIII) Penal recovery shall be made for delay in completion of work after 07 days. Penal recovery @ Rs. 300/day, beyond 07 days of time period, decision of Engineer-in-Charge shall be final.
- XIV) The contractor shall arrange to render efficient service as outlined in this specification. However, in case the contractor fails to maintain the service to the satisfaction of the Engineer- in – charge of the department and any expenditure incurred therein for alternative arrangements by the Engineer-in-charge shall be recovered from the contractor.
- XV) At the time of acceptance of the tender, the contractor shall furnish the details of staff members along with contact details to HBCSE who will look after maintenance work of Electrical Systems.
20. The contractor or his representative should not remove, disturb, and dislocate the existing equipment and its parts from its positions until and unless it is authorized by the Engineer-in – Charge. The entire installation should be intact at any time of inspection as was handed over to him at the time of initial taking over of its maintenance and operation. Care shall also be taken not to damage installation by improper handling.
21. The material requires replacement shall be of same quality/manufacturer and specifications.
22. The replacement of ACB's, Contactors, Geysers, Lights, etc. Which are under warranty/guarantee will be replaced by the AMC provider. HBCSE will provide only invoices and other expenses will be borne by the AMC provider.
23. All the technicians/ electricians and helpers posted on duty shall sign the attendance prescribed for the purpose. Any absence/default in this regard would involve proportionate deduction of AMC charges payable to the service provider. Repeated absence/default in this regard shall lead to termination of contract.
24. All break-down calls shall be attended to immediately and on the same day. Breakdown calls that could not be attended to on the same day for exceptional reasons shall be attended to on the next day without fail.
25. Transportation of All Electrical Units from the office buildings to the service provider's workshop, from one building to another and from the service provider's workshop to the office buildings, will be at the cost of the service provider.
26. To take the Electrical AMC related materials out of the campus for repair/ replacement it is the responsibility of the contractor to take prior approval and request for a valid **GATE PASS** for the parts of machine or any such material.
27. The Service Provider is responsible for the payment of Minimum Wages (under Central Act) to the personnel deployed by it. The Service Provider is also responsible for compliance of the provisions of all the statutes applicable in its case.
28. **Cancellation of Contract** - In cases of poor workmanship and non-compliance of tender/agreement or services provided by the contractor are not found to be satisfactory, the contract shall be terminated by the department by

giving **30 days' notice** even before the expiry of contract period and shall be forfeited the security deposit without assigning any reason what so ever. No further justifications in this regard will be entertained by HBCSE. The decision of Engineer-In-Charge on behalf of Centre Director HBCSE will be final and binding to the contractor.

- 29.No waste material shall be left over during the repair works under each item on any day.
- 30.Police Verification Certificate of all workers shall be obtained by Contractor.
- 31.HBCSE will not provide any space at site for worker hutments. Contractor s workman should follow the COVID-19 related all the protocol declared by Ministry of Health / State Government and Local Municipal Corporation.
32. **However, on special occasions such as breakdown or during any official functions the agency shall attend to other works also, with additional staff, as per the instructions of the Engineer – in –charge.**
- 33.The agency should maintain a complaint register. All complaints received / attended / materials received from the department, used in works, balance etc. shall be entered in this register up to date. The Register shall be always open for the clients / representatives to register the complaints and the departmental Engineers for verification
- 34.The scope of the work covers, replacement of all types of switches, plugs, call bells, lamps, ceiling fans, exhaust fan bearings, chokes, starters, igniters, holders, HRC fuses, other electrical accessories, etc . Cleaning of street light fittings, removing and re-doing of end terminations and minor excavations, refilling around street light poles / cable entry points where ever required shall be done without extra cost.
- 35.The contractor should keep an account of the materials received and consumed in the work. The dismantled materials should be handed over to the Electrical Department immediately after replacement. Any discrepancy in the account of the materials shall be the responsibility of the contractor and suitable recovery will be made for any shortage of materials at the prevailing market rate from the contractor's bill.
36. The complaints recorded in the complaint register / reported over phone shall be attended immediately not exceeding half an hour. Any breakdown / repair beyond the scope of the work shall be reported to the EIC immediately. The agency should maintain a Mobile telephone and the number be made available to all concerned.
37. Any workman, who is in the opinion of the Engineer-officers, not efficient or otherwise unsuitable for any reason whatsoever, shall immediately be removed by the contractor, from site of work, on receipt of the intimation in wiring by the Engineer-in-Charge. The decision of the Engineer-in-Charge shall be final.
38. All Electrical works (both internal and External) shall be carried out in accordance with the provision of :
(i) Indian Electricity Act 1910
(ii) Indian Electricity Rule 1956 and Regulations framed thereunder
(iii)The Electricity Act 2003
(iv)The rules and bye-laws of the Local Electricity Supply Authorities
- 39.The agency staff should visit and check up all Panels, Main Switches, distribution Boards, Switch panels, cable looping boxes, all control panels and wiring related to Light, Ceiling / Exhaust Fan, Call bell points, Plug points, Street Lights, etc. regularly as a preventive maintenance. A register should be maintained in this respect. Any repair work done / observation made at site are to be entered in the register. Clients' signature should be obtained in the register on completion of works.
The registers to be maintained by the agency are -
a) Complaints register which will also indicate details of attended the complaints.
b) Register for material movement.
c) Daily record of routine/preventive maintenance / cleaning works carried out by the agency. The above two Registers shall be maintained neatly in formats approved by the Engineer- in-charge).

ANNEXURE I
APPLICATION FORM
(On Company's Letterhead)

Date: _____

To,
The Centre Director,
Homi Bhabha Centre for Science Education, TIFR, V. N. Purav Road Mankhurd, Mumbai – 400088.

Sir,

1. Being duly authorized to represent and act on behalf of
(hereinafter referred to as “the Applicant”) and having reviewed and fully understood all the pre-qualification information provided, the undersigned hereby applies to be pre-qualified by yourselves as a tenderer for award of work(s) for **‘Annual Maintenance Contract (Comprehensive) for Electrical systems including Substation, devices, fixtures etc. installed at HBCSE-TIFR for the year 2023-24’** as per specification attached.

2. Attached to this letter are copies or original documents defining:

- (a) the applicant's legal status
- (b) the principal place of business
- (c) the place of incorporation (for applicants who are corporations) or the place of registration and thenationality of the owners (for applicants who are partnerships or individually owned firms)
- (d) Annexure no. II to IX

3. Your department and its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents and information submitted in connection with this application, and to seek clarification from our bankers and clients regarding any financial and technical aspects. This letter of application will also serve as authorization to any individual or authorized representative or any institution referred to in the supporting information, to provide such information deemed necessary and requested by you to verify statements and information provided in this application, or with regard to the resources, experience, and competence of the Applicant.

4. Your department and its authorized representatives may contact the following persons for further information on general, personnel, technical and financial enquiries.

Details	Contact 1	Contact 2
Name		
Contact No.		
E-mail		

5. This application is made with the full understanding that:

- (a) Bids submitted by applicants will be subject to verification of all information submitted at the time of bidding
- (b) I have checked all terms & Conditions and all the clauses included in this contract document, I accept to abide and follow to conditions. I also understand that failing to satisfy the above the contract may lead to the cancellation of this contract and forfeiture of the Performance Guarantee with Security Deposit.
- (c) Your department reserves the right to:
 - i. Amend the scope and value of the contract / bid under this project; in such event, bids will only be called from pre-qualified bidders who meet the revised requirements; and
 - ii. Reject or accept any application, cancel the pre-qualification process, and reject all applications without assigning reasons or incurring any liability thereof; and
- (d) Your department shall not be liable for any such actions and shall be under no obligation to inform the applicant.

6. The undersigned declares that statements made and the information provided in the duly completed application are true and correct in every detail.

Signed and sealed, Name

For and on behalf of

ANNEXURE - II

CONTRACTOR DETAILS

(If any details are not relevant the bidder can write N.A. in front)

Sr.No	Description	Details
1.	Name of tendering company/ firm	
2.	Name of directors	
A	Office Address	
B	Telephone no.	
C	E-mail address	
4.	Bank details	
A	Bank name & address:	
B	Account type:	
C	Account no:	
D	IFSC code:	
E	Email address:	
5.	Registration details :	
A	PAN NO. (attach copy of proof)	
B	GST REGISTRATION NO.(attach copy of proof)	
C	E.P.F. REGISTRATION NO.(attach copy of proof)	
D	E.S.I. REGISTRATION NO. – Mandatory (attach copy of proof)	
6.	The Bidder should have the Registered /Branch Office in Mumbai/ Navi Mumbai/ Thane/ other nearby areas. (attach copy of proof)	
7	The Bidder should be a company registered under the Companies Act, 2013 (attach copy of proof)	
8	Bidder should provide copy of the License under Contract Labour (Regulation and Abolition) Act. (attach copy of proof)	
9	The Bidder should possess valid ISO - 9001 certification. Copy of certificate has to be attached with the Technical Bid. (attach copy of proof)	
10	Valid Electrical Contractor License No. issued by Chief Electrical Inspector, Govt. of Maharashtra or any other competent authority	
11	Valid Electrical Wireman License No. of the Electrician to be working on site issued by Chief Electrical Inspector, Govt. of Maharashtra or any other competent authority	

Signature and seal of Authorized Signatory of bidder

ANNEXURE – III
FINANCIAL CAPABILITIES

Financial Year	Annual Turn Over in Indian Rupees (or equivalent to Indian Rupees) as per Audited Balance Sheet
2020-2021	Rs.
2021-2022	Rs.
2022-2023	Rs.

NOTE: The above data is to be supported by audited balance sheets and to be submitted with tender documents.

(Attach copies of audited balance sheets duly certified by the chartered accountant for all three years. Audited Balance sheet should mention the membership number of chartered accountant issued by ICAI along with full address.)

Signature and seal of the Authorized Signatory of the bidder

ANNEXURE –IV

EXPERIENCE OF COMPLETION OF PROJECTS OF SIMILAR NATURE & COMPLEXITY

(During last **Five** years ending last day of month previous to the one in which applications are invited)

Sl. No.	Name of work / project and location	Owner or sponsoring organization	Cost of Work in Lakhs	Date of commencement as per contract	Date of completion	Name and address/ telephone number of officer to whom reference may be made	Remarks

NOTE: Please attach supporting documents (completion certificates along with order copies) for the above information.

Signature and seal of the Authorized Signatory of the bidder

ANNEXURE - V

LITIGATION DETAILS (COURT CASES/ARBITRATION)

Year	Name of the work	Name of the Client, with Address	Title of the court Case/Arbitration	Detail of the Court/ Arbitrator	Status Pending/ Decided	Disputed Amount (Current Value, the equivalent) in case of Court Cases/arbitration	Actual Awarded Amount (Rs) in decided Court Cases/arbitration

Signature and seal of Authorized Signatory of bidder

ANNEXURE - VI

LIST OF WORKS IN HAND

Name of work	Name & address of the establishment under whom the work is being executed	Value of the work in Lakhs	Completion time as per the contract	Position of the works in progress	Remarks
1	2	3	4	5	6

Signature and seal of Authorized Signatory of bidder

ANNEXURE –VII

CERTIFICATE FOR SITE INSPECTION
(To be submitted on Company's Letter Head)

Certified that we.....(Name of bidder) from M/s.....(name of Bidder firm) have visited the site on dated and assessed the nature and amount of work involved before submitting our offer. We will be able to complete the works within the stipulated time and also certified that we will be able to supply the material/executing the work as per specification to suit the site conditions.

Signature of bidder with Seal & Date



ANNEXURE-VIII

FORM OF AGREEMENT

(To be submitted after issue of WO on Rs.100 Stamp paper)

This Agreement is made on the _____ day of _____ 2022 between Tata Institute Of Fundamental Research (HBCSE-TIFR), Mumbai for the entering into work(s) for '**Annual Maintenance Contract (Comprehensive) for Electrical Systems including Substation, devices & fixtures at Homi Bhabha Centre for Science Education (HBCSE), V. N. Purav Marg, Mankhurd, Mumbai - 400088, Maharashtra, India**' as per the document (hereinafter called "The Employer") who enters into this Agreement of the one part and M/s _____ (herein after called "The Contractor") of the other part.

Whereas the Employer is desirous that certain works should be executed by the Contractor, viz. _____ ("the Works") and has accepted a Bid by the Contractor for the execution and completion of the works and the remedying of any defects therein.

Now this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
 - (a) The Letter of Award;
 - (b) The said Bid;
 - (c) The General and Special Conditions of Contract;
 - (d) Prequalification document
 - (e) Instructions to Bidders and Specific Conditions of Contract;
 - (f) The Specification;
 - (g) Scope of Work
 - (h) The Price Bid
 - (i) Annexures
 - (j) Any other relevant documents referred to in this Agreement or in the aforementioned documents
3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of this work.
4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the Contract Price or only such other sums as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year first before written.
Signed, Sealed, and Delivered by the Said.

Binding Signature for and on behalf of HBCSE-TIFR-Mumbai

Binding Signature of Contractor _____

In the presence of
Witness (1):

(Name & Signature)

Witness (2):

(Name & Signature)

ANNEXURE -IX

PROFORMA FOR PERFORMANCE BANK GUARANTEE

(On a stamp paper of appropriate value from any Nationalized Bank or Scheduled Bank)
(To be submitted after issue of WO)

1. In consideration of the TATA INSTITUTE OF FUNDAMENTAL RESEARCH (hereinafter called "The HBCSE-TIFR") having agreed under the terms and conditions of Work Order No.
Dated..... made between HBCSE-TIFR and M/s
.....(hereinafter called "the said Contractor{s}") for the work
(hereinafter called "the said Work Order") having agreed to production of an irrevocable bank Guarantee for Rs..... (Rupees only), as a security / guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said Work Order, we..... (Indicate the name of the Bank) (hereinafter referred to as "the Bank") hereby undertake to pay to the HBCSE-TIFR an amount not exceeding Rs.
(Rupees only) on demand by the HBCSE-TIFR.
2. We..... (indicate the name of Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the HBCSE-TIFR stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees only).
3. We, the said bank, further undertake to pay to the HBCSE-TIFR any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) shall have no claim against us for making such payment.
4. We..... (indicate the name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Work Order and that it shall continue to be enforceable till all the dues of the HBCSE-TIFR under or by virtue of the Work order have been fully paid and its claims satisfied or discharged or Purchase Officer on behalf of the HBCSE-TIFR certifies that the terms and conditions of the said Work Order have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.
5. We..... (indicate the name of Bank) further agree with the HBCSE-TIFR that the HBCSE-TIFR shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Work Order or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the HBCSE-TIFR against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Work Order and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the HBCSE-TIFR or any indulgence by the HBCSE-TIFR to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).
7. We, (indicate the name of Bank) lastly undertake not to revoke this guarantee except with the previous consent of the HBCSE-TIFR in writing.
8. This guarantee shall be valid up to....., unless extended on demand by HBCSE-TIFR. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee, all our liability under this guarantee shall stand discharged.

Signed and sealed

Dated the day of 2022 for (indicate the name of Bank)

* * (Note: The Letter of Intent shall form part of the Agreement)

ANNEXURE -X

BID SECURITY DECLARATION (EMD)

(To be submitted on Company's Letterhead)

Date:

To,
Centre Director,
Homi Bhabha Centre for Science Education – TIFR,
V. N. Purav Marg,
Mankhurd, Mumbai - 400088.

Tender No. _____

I/we have gone through the tendering conditions pertaining to the Tender and General Conditions of Contract, Special Conditions of Contract and Additional Conditions of Contract, if any.

We, the undersigned, declare that:

I / We understand that, as per terms and conditions of tender, bids must be supported by a Bid Security Declaration In lieu of Earnest Money Deposit.

I / We hereby accept that I / We may be disqualified from bidding for any contract with you for a period of (03) Three years from the date of disqualification as may be notified by you if,

- I. I am /We are in a breach of any of the obligations under the bid conditions, or
- II. I/We have withdrawn or unilaterally modified/amended/revised, my/our Bid during the bid validity period specified in the form of Bid or extended period, if any.
- III. On acceptance of our bid by HBCSE, I/we failed to deposit the prescribed Performance Bank Guarantee or fails to execute the agreement or fails to commence the execution of the work in accordance with the terms and conditions and within the specified time.

Signature of bidder with Seal & Date

Name & designation of the authorized person signing the Bid-Securing Declaration Form:

Duly authorized to sign the bid for and on behalf of: _____ (complete name of Bidder firm)

Dated on _____ day of _____ month, _____ year.

(Note: In case of a Joint Venture, the Bid Security Declaration must be in the name of all partners to the Joint Venture that submits the bid).

Annexure - A

SCOPE OF AMC WORK

The scope and nature of services to be provided by the contractor shall include scheduled preventive maintenance services which cover periodic and break down servicing, along with replacement of defective devices, fixtures, spare parts etc., if required during the contract period.

The HBCSE has around 4.34 Acres of campus area including Main Building with Canteen & dining area, NIUS facility building with NIUS hostel having own Indoor Sports Centre, Olympiad facility & Olympiad Guest House with in-house Gymnasium facility for staff members, students and research scholars. Apart from that we have Two nos. of Pump houses, Two Nos. of Electrical Substations with Transformers controlling main power supply for all buildings inside the campus premises along with Flood lights, Volleyball ground etc., and associated Electrical, Air conditioning, Fire Alarm Systems.

The rate quoted for services shall include the charges for deputing manpower i.e. One licensed Electrician (Wireman) and One helper/ Assistant (both as per clause No.18 of Special Conditions of Contract) on all working days i.e. From Monday to Saturday (including Bank holidays & Sunday as per requirement of EIC) from 9.00 AM to 6:00 P.M and routine maintenance service. In case of emergencies the contractor should arrange to send the Electrician on site (even on Sundays & Bank holidays) at any point of time between 6:00PM till 9:00AM as per the requirement and instructions of EIC at no any extra cost without compromising with the daily attending requirement of the Centre.

The Scope of works include [but not restricted] the following-

HBCSE has a requirement of Electric power to continuously run its lab equipment's, computer systems & Air-Conditioning system. Hence, Timely Maintenance is the essence of this contract. All efforts are to be made with up to date maintenance in achieving this, by using predictive and pro-active maintenance techniques at times, and, by strictly adhering to preventive maintenance practices and schedules. Contractors shall engage and deploy experienced technical staff who has experience in trouble shooting to meet this kind of requirements. So engaged technicians shall have ability to resolve/ trouble shoot and rectify the electrical complaints with complete Technicalities.

Electrical contractors who have carried out similar works with good track records and must have Electrical contractor license shall be considered for engagement.

The detailed scope of work is as follows:

1. Operation, routine, preventive and breakdown maintenance of 2 No's of HT 11KV sf6 ring main unit circuit breakers, 4 no's of 440V LT Air blast circuit breakers.
2. Routine and preventive maintenance of electrical switch gear and drives, pump house panel.
3. Operation, routine, preventive and breakdown maintenance of 2Nos. of 11KV/440V substations it's consists of 1000KVA (dry type) & 500KVA (oil cooled type) transformers and controlling/protective accessories.
4. Operation, routine, preventive and breakdown maintenance of Battery banks & ups.
5. Operation, routine, preventive and breakdown maintenance of Bus Ducts.
6. Operation, routine, preventive and breakdown maintenance of Capacitor Banks.
7. Operation, routine, preventive and breakdown maintenance of LT panel, cables & Wirings.
8. Operation, routine, preventive and breakdown maintenance of 1000A DB panel.
9. Operation, routine, preventive and breakdown maintenance of two Pump Houses (which are inside the HBCSE Compound) comprises of electrical switchgear and motors.
10. Operation, routine, preventive and breakdown maintenance of 440V Lighting distribution board, Power distribution boards & Air-conditioning Distribution Systems.
11. Operation, routine, preventive and breakdown maintenance of UV Electric insect killer machine, indication lamps, relays, energy meters, trivector meters, current transformers, potential transformers, Ammeter, voltmeter, multifunction meters, various types of MCB's, MCCB's, fuses etc.
12. **Operation, routine, preventive and breakdown maintenance of the following Lighting and heating systems.**
 - a. Street Lights & Flood Lights: approx. 40 Nos.
 - b. Ceiling fans: 700 Nos.
 - c. Exhaust Fans: approx. 250 Nos.
 - d. Wall mounted fan: 10 Nos.
 - e. Industrial fan : 5 Nos.
 - f. Geysers: approx. 120 Nos.
 - g. All related power points: approx. 15000-20000 Nos.
 - h. Pedestal fans: 15 Nos.

- i. Conversion tubes: 1500 Nos.
- j. Led tube lights: 400 Nos.
- k. Small tubes: 15 Nos.
- l. PL Lamps: 400 Nos.
- m. Surface led light: 100 Nos.
- n. Spot light: 40 Nos.
- o. 2x2 Led panel light: 50 Nos.
- p. LED Bulb: 120 Nos.
- q. Sodium vapour lamp: 10 Nos.
- r. Incandescent lamp: 5 Nos.
- s. UV Insect killer : 5 Nos.
13. Operation and maintenance of safety devices and earth pits.
14. Operation and maintenance of Electrical systems in complete HBCSE premises.
15. Upto date documentation & keeping work records of every assigned work by departmental supervisor or EIC.
16. Any addition or alterations made in the system during the tenure of this contract (whether by the AMC contractor or any other firm or by HBCSE), have to be maintained by the contractor.
17. All small fabrication works, repairs, servicing of machines / equipment / parts therein shall have to be carried out by the contractor within specified time. Contractor shall never say 'no' to any of the requirement of HBCSE, which is in the area of AMC's technical services, as found reasonable to be entrusted onto the contractor by EIC.
18. All fire alarm calls and other related functional requirement calls of HBCSE shall be attended and followed up in the best interest of the centre and its activities.
19. While carrying out any of the works, if the dust is generated / the same flies and settles in the surrounding area, the same (dust) should be thoroughly cleaned. Vacuum cleaner and wiping materials shall be used in cleaning. If any marking, scars are seen, the same to be cleanly wiped off. All attempts to be made in avoiding dust / dirt / markings etc., while working.
20. Providing all kinds of labour and the expertise required to attend to the above work is included in the scope of work. However, consumable, workshop expenses, new addition and alteration work will be paid extra as per actual rate or agreed rate as applicable.
21. **Contractor should conduct all types of tests of LT ACB Breakers, Dry, Oil type transformers, VCB's and Earth pits, contractor is liable to furnish certificate for all test reports.**
22. AMC shall include supply of all material spares, replacement /repairs accessories related to the above equipment has to be supplied and used during maintenance, which shall not be paid extra **(except for works in Annexure-B)**.

Special Conditions:

1. All works to be carried out in accordance with relevant Indian Standards and as per Indian Electricity rule as amended and as per IEEE rules. The contractor must obtain necessary clearance from Electrical Inspectorate. Panel, Fittings, Equipment's, Systems etc., all the components, accessories, Sub-Assembly, assemblies etc. Which are attachments or parts needed for the purpose. Any other work which are incidental or part of the above, but not specifically spelt out will also be included in the scope.
2. For carrying out above job the contractor must make his own arrangements for tools, tackles and measuring equipment, measuring meters, safety and protective devices for carrying out the work.
3. For some of the emergency load points power availability must be monitored round the clock.
4. Contractors should deploy electrical staff having experience in handling such sites and have ability to rectify the issues at the earliest with any material required.
5. As the work involved is quite specialized and continuous monitoring is required, absenteeism of the contractor's employees will not be tolerated. **The EIC is authorized to make penal deductions in the bills for the absenteeism and non-compliance of the work.** The contractor will ensure proper supervision all the time. In case of deficiency penalty will be imposed.
6. All the labours and expertise are included in the scope of work. No extra payment will be made for carrying out wiring work, routine breakdown and preventive maintenances.
7. It is presumed that contractor will deploy skilled manpower as required.
8. **All the breakdown calls should be attended immediately, in case frequency / work demands more manpower, Contractor will arrange additional manpower so as not to disturb the research activities at no extra cost.**
9. It is fully contractor's responsibility to deploy qualified Electrical Wireman license holder & helper with relevant Qualifications, License with hands on experience (Minimum 3 to 4 Years) to handle electrical, Fire alarm System etc. Equipment's specified in the scope of work. They should be well conversant with Indian Standard, Indian Electricity Rule and acts as applicable and should have knowledge of electrical and Industrial safety practices.
10. Contractor will ensure consistency of work and work force, correct trouble shooting, good workmen ship follow all safety procedures and will make all necessary efforts to maintain healthy environments and reliable services.
11. It is purely contractor's responsibility to get his staff acquainted with the site condition, operation and maintenance procedure, Equipment detail, Safety devices, Scope of work etc.

12. Contractor shall depute adequate number of staff to carry out routine work wiring work, addition project work, attending fuse call, preventive and breakdown maintenance so as not disturb research activity.
13. Contractor will ensure that the deployed staff should have basic qualification and capable of handling work as stipulated in scope of work. In case of delay, repetition of work, noncompliance, inadequate staff etc. Penalty will be imposed as per the penalty clause mentioned in terms and condition.
14. Minimum wage of the staff should not be less than minimum Wage Act applicable to the respective category/experience.
15. Contractor will submit the details of minimum wages as per Minimum Wage Act. As applicable to the respective category/Experience at the time of submission of Tender bid.
16. Contractor will submit their detailed scheme to carry out above work along with the tender. In case of error in typing, report of different figures, only stringent condition will apply.

Scheduling of AMC work:

In a broad manner, the AMC work can be scheduled as follows (All at no extra cost)

Regular maintenance:

1. Attend to all types of routine/preventive maintenance work such as checking /cleaning , tightening of all electrical accessories and switch gears, DBs, AB switch/Isolators, LT breakers, LT panels, feeder, Distribution panel, Power distribution boards, Lighting distribution boards, Ac distribution boards, motors, Ups, Battery's, switch boards meter rooms and cleaning the same at regular intervals.
2. Operation and maintenance of Electrical system at HT & LT levels, protection, control and auxiliary equipment's.
3. Hourly logging of system parameters and attending to all rectification works.
4. TATA power/ Adani supply failure and reverting to them for supply on its resumption (ensuring that the supply is stable). Hourly logging of system parameters and attending to all rectification works.
5. Monitoring of all emergency loads electrical and recording of system parameters and condition. Necessary corrective action to be taken if things are not found normal.
6. Updating and maintenance of all other registers.
7. Breakdown maintenance and alteration works (with special importance to critical areas, labs, lecture halls, seminar halls, important offices of Dean & Centre Director).
8. Attending to any other work as entrusted by EIC time to time.
9. Earth resistance measurement of all the Earth electrodes of HBCSE (approx. 50 Nos.), at no extra cost, updating of relevant records.
10. Checking, fitting cleaning and fault rectification and recording of following:
 - i . Street and security lights within the campus and in the road leading to campus.
 - ii. Periphery lights
 - iii. Path way lights
 - iv. Lights and fans in all buildings, canteen buildings and cafeteria
 - v. Lecture hall and seminar hall lights
 - vi. Common area lights of all buildings and passages of all floors, main entrance porch lights, spot lights etc,
 - vii. Checking of battery charger and battery condition of protective system batteries, recording the relevant Parameters.
 - viii. Lighting and power points in all HBCSE premises.

Detailed Maintenance schedule of various Equipment's in HBCSE

1. Transformers:

A) Daily:

1. Checking Oil & Winding temperatures on hourly basis against rated values and recording them in relevant Log book.
2. Observe and record parameters such as Load, Voltage, Frequency, Power Factor etc.
3. Visual Inspection for overheating if any at terminal connections and observation for any unusual internal noise.
4. Observation of oil levels in main conservator tank OLTC conservator and examining for oil leaks from the Transformer, if any.
5. Check the position of tap-changer.

B) Monthly:

1. Inspection of Oil level in main tank and bushings. If it comes below a prescribed level the cause of leakage should be found.
2. Check earth and terminal connections.
3. General cleaning of transformer, Inspection for any cracks or chippings of the bushing and checking of Tightness of connections.
4. Checking the colour of silica gel in the breather and also oil level of the oil seal. If silica gel colour changes from Blue to pink then the silica gel is to be reconditioned or replaced.

C) Quarterly:

1. Checking of all connections on the transformer for tightness such as bushings, tank earth connection.
2. Clean the external surface of transformer.

D) Half-yearly:

1. Wipe all iron cores of a cast resin transformer. At this time, be careful not to be wounded by sharp parts or Projecting parts. If possible, use a vacuum cleaner to get rid of dust or small fragments.
2. Clean a coil with a damp rag. Germicidal alcohol can be used. However, don't drench a rag with alcohol. Dry Coils after cleaning.
3. Inspect and tighten wiring connections at all terminals. Check wiring for open circuit, short circuit and damaged insulation.

E) Annually:

1. Measurement of winding resistance.
2. Measurement of Turns ratio test at all taps.
3. Check the oil level and refill if necessary. If the oil gets spoilt, it should be replaced.
4. Check the calibration of temperature indicators and relays.
5. Checking of neutral earth and equipment body earth once in a year. The Agency is liable to furnish certificate for this work.
6. Testing of transformer oil of main tank & OLTC oil for BDV and moisture content.
8. Insulation Resistance Test.
9. Magnetic core balancing test.
10. Checking of magnetizing current value.
11. Vector group test.
12. The contractor is liable to furnish certificate for all test reports of transformers.

2. CIRCUIT BREAKERS:**A) Daily Maintenance:**

1. Visual inspection.
2. Checking the operation of Spring Charging Motor.
3. During the winter ice formation on contacts to be checked.

B) Monthly Maintenance:

1. Cleaning of circuit breaker body and bushings.
2. Checking breaker Operation (Local/Remote operation).
3. Checking the tightness of wires.
4. Tightening of nuts and bolts.
5. Checking anti-condensation protection.
6. Checking and sealing of cable entry holes.
7. Use of anti-corrosion spray where required.

C) Quarterly Maintenance:

1. Checking the breaker for leakage of SF6 Gas.
2. Oiling and greasing of all moving parts.
3. Checking the operation of tripping and closing circuit.
4. Gas temperature and pressure should be checked frequently.

D) Half Yearly Maintenance:

1. Measuring the IR values of Power and Control Circuits.
2. Checking the mechanism of the moving parts.
3. Operation of control and Auxiliary circuits.

E) Yearly Maintenance:

1. Bus bar and chamber should be tighten.
2. Overload devices, relays, instrument transformers and contactors should be checked for proper operation.
3. Perform contact resistance test, trip test and moisture test on gas.
4. Calibrate temperature and pressure switches and gauges.
5. Entire breaker should be well examined and insulators must be wiped clean.
6. Contractor should Perform relays test and static contact resistance measurement test, Timer test, Megger test and the contractor is liable to furnish Certificate for all test reports of Circuit breakers.

3. Maintenance of sandwich type Bus-bar:

- 1) Clean the bus-bar area with the help of denatured alcohol and vacuum cleaner or Air blower.
- 2) If you find any loose connection or spark, black out the particular and adjust bus-bar before tightening the Nuts.
- 3) If you find any metal piece or nut bolts missing or in side bus bar ensure to remove it as same can cause short Circuit or fire.
- 4) Insulation between the 3 phases must be check.
- 5) Insulation resistance test performed on the bus-bar by using of Megger.
- 6) The bus bars are mechanical supported inside the switchboard by means of insulators, which may be of rubber Or ceramic materials (bad conductors). Check for any damages in the insulator part.
- 7) Check the tightness of the wire connections, which is connected to the circuit breakers.

4. LT PANELS:

Daily Maintenance:

- 1) Visual Inspection
- 2) Checking whether indication lamps, selector switch, ammeter, voltmeters, energy meters, door locks, etc., are Working. If it is not working replacing with new one.
- 3) Ensuring the closing of all the panel doors etc. If you find any holes the holes should be covered with Monoplast.
- 4) Checking whether all relays, are functioning properly.
- 5) Checking of D.C. supply.
- 6) Checking of control scheme for healthiness.

Quarterly Maintenance:

1. Checking of heater circuit & rectification if required.
2. Checking handles and doors & rectification if required.
3. Checking and sealing of cable entry holes.
4. Tightening of all earthing connections.
5. Checking of mechanical/electrical interlocks, interlocks within the switchboard to ensure proper functioning.

Yearly Maintenance:

1. Measurement and recording of IR values for Main Bus bar.
2. Checking of all terminations for tightness.
3. Checking of CT, PT and Relays connections for tightness.
4. Measurement of insulation resistance value of circuit breaker.
5. Checking of control circuit.
6. Visual inspection of earth connections and checking of tightness.

5. Protective Relays:

1. Visual and Mechanical Inspection
 2. To inspect relays for physical damage and deterioration.
 3. To inspect gaskets and covers for damage and excessive wear.
- Electrical Testing
- a) To use an appropriate testing kit for the relay testing.
 - b) To conduct electrical testing kit for the relays in accordance with manufacture's recommendations.
 - c) To test the following function of the over current relays:
 - Pick up contacts.
 - Timing tests.
 - Instantaneous pick-up test.
- Seal-in units should be tested to ensure that the contacts hold closed with the minimum specified current Applied.

6. 300KVAR Auto power factor correction (Capacitors Bank Panel):

A) Daily Maintenance:

- 1). Visually inspect the capacitors.
- 2). Check the plastic parts are not blackened and do not show signs of burning or hardening.
- 3). Check the contactor, once connected, does not rattle or vibrate.
- 4) Check that there are no faulty segments on the display.
- 5) Check that the auto power factor keyboard is operating properly.

B) Monthly Maintenance:

- 1) Check fuses inside the panel visually, and test continuity by multimeter if it is failed replace it.
- 2) Check for lose connection on contactors and should be tighten.
- 3) Check any carbon on contactor terminals.

- 4) Keep the capacitor terminals clean.
- 5) Inspect cables and terminals. They should be clean should not be hardened or overheated.

C) Half Yearly Maintenance:

- 1) Clean inside the cabinet and ventilation grills.
- 2) Check visually the capacitors shape if it abnormal.
- 3) Energized APFC Panel manually and Place the clamp-meter on out-going of Capacitor Bank Panel Cable.
- 4) Check the Current on all 3 phases, the reading should be approximately balanced.
- 5) Check Earthing to capacitor bank mounting frames and enclosure.
- 6) Remove possible metallic and non-metallic particles, clean the inside of the cabinet & Clean ventilation Grilles.
- 7) Check that the main switch turns on and off without having to force the mechanism.
- 8) Check the capacitance value of individual capacitors if it failed then replace it.

D) Yearly Maintenance:

- 1) Carry out a dielectric rigidity test by applying voltage between the terminals of capacitor and earth.
- 2) Check the capacity of capacitors at the different steps.
- 3) Check the tightness of all terminal connections.

7. Power, Lighting, AC distribution boards or panels:

A) Daily Maintenance:

1. Visual inspection & proper doors closing.
2. Check whether indication lamps, selector switch, ammeter, MCBs etc. are working.
3. Visually inspect primary controls for deterioration and overheating.
4. Check for malfunctions like loose connections, short circuits, signs of burning and small explosions.

B) Quarterly Maintenance:

1. Check if all the panels are ingress protected.
2. Checking of termination of incoming and outgoing cables.
3. Routing of cables for new loads if required (only flexible cables and indoor).
4. At the time of adding new cable proper tags and ferruling must be done. e. Cleaning of the panel.
5. Checking and sealing of cable entry holes.
6. Tightening of all earthing, neutral link and incoming outgoing connections.
7. Clean thoroughly, vacuum and visually inspect exterior and interior low voltage switchboards, circuit Breakers, inlets, panel boards, electric distribution systems for wear and tear.

8. EARTHING SYSTEM:

1. Checking the Value of earth resistance of the combined earth electrode (Equipment and neutral separately) Twice in a year. The Contractor is liable to furnish Test certificate in this regard.
2. Checking of earth leads to all equipment/panels/DB for its continuity after tightening all connections.
3. Pouring of water, salt and char coal addition for improvement of earth resistance and proper closing of earth pit chamber regularly.

9. CABLE NETWORK:

1. Visual inspection of cables.
2. Checking all cable terminals & joins for overhauling /loose connections and tightening, terminating, Rejoining, if required termination will be done by the Contractor.
3. Annual Checking and recording of IR values of all major power cables with Megger of suitable range.

10. LIGHTING FIXTURES, SWITCHES, SOCKETS, MOTOR-PUMPS AND FANS ETC:

1. Routine maintenance/servicing of all Light fixtures, replacement of new LED Lamps, capacitors, ballast, fans, exhaust fans, motor , Plugs, sockets, Switches, Fuses, etc. located at various Locations in the sub-station and HBCSE Buildings.

11. OTHER WORKS:

1. All related minor works such as drilling of holes, soldering, fixing of lighting fixtures, fixing of additional Switches with necessary additional wiring, Cable saddling, etc. shall be carried out by the Contractor.
2. Replacement for old defective circuits, replacement of lighting cables / components, disconnection of cables, Etc. shall be carried out by the tenderer at no additional charges. However, any material changes required for This work shall be borne by

Annexure 'A'
(To be submitted on Company's Letterhead)

Schedule Rates of Items for Rate Contract under Electrical AMC for year 2023-24			
Sl. No.	Description of Items	Unit	Rate (in Rs.)
1	Annual maintenance contract (comprehensive) for Electrical systems including sub-station, devices and fixtures. Complete as mentioned in Annexure 'A'.	Lump Sum	
Total			
GST 18%			
Grand Total			

Amount (in Words) – Rupees _____
_____ only.

Seal & Signature of the Bidder

Annexure – B
(To be submitted on Company's Letterhead)

Bills of Quantities

Sl. No.	Description of Items	Unit	Rate (Rs.)
1.0	Supply, fixing and testing of NEW point wiring/ cabling using the copper wires of standard approved make by EIC and its laying through standard approved make PVC (hard or flexible) conduits / casing capping at any heights with proper connections on both ends including drilling of holes, misc. material, tools, accessories & labour etc. complete as per instructions and directions of EIC. Make: Havells/Polycab or standard approved equivalent		
a.	1.5 Sq.mm. (FRLS)	Per meter	
b.	1.5 Sq.mm.(FRLSH)	Per meter	
c.	2.5 Sq.mm.(FRLS)	Per meter	
d.	2.5 Sq.mm.(FRLSH)	Per meter	
e.	4.0 Sq.mm.(FRLS)	Per meter	
f.	6.0 Sq.mm.(FRLS)	Per meter	
h.	10.0 Sq.mm.(FRLS)	Per meter	
i.	16.0 Sq.mm.(FRLS)	Per meter	
j.	2 X 1.5 sq.mm (FRLS)	Per meter	
k.	2 X 2.5 sq.mm (FRLS)	Per meter	
l.	2 X 4.0 sq.mm (FRLS)	Per meter	
m.	2 X 6.0 sq.mm (FRLS)	Per meter	
n.	3 X 2.5 sq.mm (FRLS)	Per meter	
o.	3 X 4.0 sq.mm (FRLS)	Per meter	
p.	3 X 6.0 sq.mm (FRLS)	Per meter	
q.	2C X 1.5 Sq.mm Flexible cable	Per meter	
r.	3CX 1.5 Sq.mm Flexible cable	Per meter	
s.	2C X 2.5 Sq.mm Flexible cable	Per meter	
t.	3C X 2.5 Sq.mm Flexible cable	Per meter	
u.	2C X 4.0 Sq.mm Flexible cable	Per meter	
v.	3C X 4.0 Sq.mm Flexible cable	Per meter	
w.	4C X 4.0 Sq.mm Flexible cable	Per meter	
x.	2C X 6.0 Sq.mm Flexible cable	Per meter	
y.	3C X 6.0 Sq.mm Flexible cable	Per meter	
z.	4C X 6.0 Sq.mm Flexible cable	Per meter	
2.0	Supply, erection, laying, connection and testing of XLPE insulated Aluminium Armored conductor/ cable, at any heights erected with standard lugs, laid in existing control panel /distribution boards including removal of old damaged concealed/ open cables and disposal of non-serviceable material outside campus premises etc. complete as per specification of standard approved make by EIC. Make: Finolex // KEI / Universal / Polycab.		
a.	2 Core X 4.0 Sq.mm.	Per meter	
b.	3 Core X 2.5Sq.mm	Per meter	
c.	3 Core X 4.0 Sq.mm	Per meter	
d.	3 Core X 6.0 Sq.mm	Per meter	
e.	4 Core X 4.0 Sq.mm.	Per meter	
f.	4 Core X 6 Sq.mm.	Per meter	
g.	4 Core X 10 Sq.mm	Per meter	
h.	4 Core X 16 Sq.mm	Per meter	
3.0	Supply, laying, connection and testing of XLPE insulated Copper Armored cable, erected with standard lugs, laid in existing control panel /distribution boards at any heights including removal of old damaged concealed/ open cables and disposal of non-serviceable material outside campus premises etc. complete as per specification of standard approved make by EIC.		

	Make: Finolex // KEI / Universal / Polycab		
a.	2 Core X 2.5Sq.mm.	Per meter	
b.	2 Core X 4.0Sq.mm.	Per meter	
c.	2 Core X 6.0Sq.mm.	Per meter	
d.	2 Core X 10.0Sq.mm.	Per meter	
e.	3 Core X 2.5Sq.mm	Per meter	
f.	3 Core X 4.0Sq.mm	Per meter	
g.	3 Core X 6.0Sq.mm	Per meter	
h.	3 Core X 10.0Sq.mm	Per meter	
i.	4 Core X 4.0 Sq.mm.	Per meter	
j.	4 Core X 6.0 Sq.mm.	Per meter	
k.	4 Core X 10.0 Sq.mm.	Per meter	
4.0	Supply, installation, testing and commissioning of independent Fan/Light point wiring with 3 nos. x 1C x 1.5 Sq.mm(2+1E) 1.1 KV grade FRLS copper wire laying (from LDB panel to modular board /switch board) with 6Amps,250V one-way modular switch, modular plate and step type regulator for fan including all accessories and connections, tools etc. complete as directed by the Engineer-in- char Make: Havells/ Polycab or approved equivalent.	Per point	
5.0	Supply, installation, testing and commissioning of power point wiring with 3nos. x 1c x 2.5 Sq.mm (Phase, Neutral, Earth) with 1.1 kV grade FRLS PVC insulated copper wire within the PVC cable raceway (will be paid separately) from PDB panel to power switch boards Each power socket outlet cluster comprises of the following 3 No's of flush type 6 modular socket outlet clusters (it consists of 2 nos. of 16 A socket and 2 nos. of 16 A switches) complete with all accessories as directed by the Engineer-in-charge. Make: Havells/Polycab or standard approved equivalent	Per point.	
6.0	Supply, installation, testing and commissioning of secondary point wiring for additional Fan/Light point wiring in PVC trunking (casing-capping) with 2 nos. x 1C x 1.5 Sq.mm 1.1 KV grade FRLS copper wire of M/s Havells/Polycab or standard approved equivalent with modular type switch, earthing and all required accessories, tools etc. complete as directed by the Engineer-in- charge.	Per point	
7.0	Supply, fixing, testing and commissioning of NEW Power, AC, Lighting triple pole neutral distribution boards including Supplying, erecting & terminating FR XLPE insulated, galvanized steel formed wire armoured (strip) cable 1100 V aluminium conductor, erected with glands & lugs, on wall/ trusses/pole or laid in trench/ pipe with proper terminations on both ends including steel clamps, drilling of holes, tools, accessories, proper earthing & labour etc. as directed by EIC. Complete. Cable Cable Make: Finolex / KEI / Universal / Polycab Distribution Board Make: Legrand/L&T		
a.	4 Core X 10 Sq.mm	Per meter	
b.	4 Core X 16 Sq.mm	Per meter	
c.	3.5 Core X 25 Sq.mm	Per meter	
d.	3.5 Core X 35 Sq.mm	Per meter	
e.	3.5 Core X 50 Sq.mm	Per meter	
f.	3.5 Core X 70 Sq.mm	Per meter	
g.	Single pole MCB of 4 way /phase (12 poles)	Each	
h.	Single pole MCB of 8 way /phase (24 poles)	Each	
i.	Single pole MCB of 12 way /phase(36 poles)	Each	
j.	Triple pole MCBs total 4way/phase(12 poles)	Each	
k.	Triple pole MCBs total 8way/phase(24 poles)	Each	
l.	Triple pole MCBs total 12way/phase(36 poles)	Each	
8.0	Removing, shifting, fixing, connection and testing of EXISTING point wiring using the existing wires and its laying through existing PVC (hard or flexible) conduits / casing capping with proper terminations on both ends including drilling of holes, fixing of existing points, tools, accessories & labour, disposal of non-serviceable material outside campus premises etc., complete check as per instructions and directions of EIC. NOTE: In case if NEW wires/ conduits/ casing capping/ switch and sockets will be used to replace existing damaged/ old one, that will be paid	Per meter	

	separately.		
9.0	Removing, shifting, fixing, connection and testing of EXISTING cabling using the existing cables and its laying with proper terminations on both ends including drilling of holes, fixing of existing points, tools, accessories & labour disposal of non-serviceable material outside campus premises etc. complete check as per instructions and directions of EIC. NOTE: In case if NEW cables/ conduits/ casing capping/ switch and sockets will be used to replace existing damaged/ old one, that will be paid separately.	Per meter	
10.0	Supply, fixing and testing of new accessories of M/s Anchor /Legrand or any approved make, ISI marked and any required tools etc. complete as directed by EIC.		
a.	Single pole 6/10A one way modular switch	Each	
b.	Single pole 15/16A, one way modular switch	Each	
c.	3 pin 5/6 A, modular socket outlet with safety shutter	Each	
d.	3 pin 16 A, modular socket outlet with safety shutter	Each	
e.	6 pin 6A & 16 A, modular socket outlet with safety shutter	Each	
f.	Combine plates 16A	Each	
g.	Modular type switch with indicator 16A	Each	
h.	Socket two module 16A	Each	
i.	Electronic step regulator for fan (2 modular) type.	Each	
j.	Telephone socket outlet modular type.	Each	
k.	Modular blanking plate	Each	
l.	S.P .5/6A, one way piano type switch	Each	
m.	S.P .15/16A, one way piano type switch	Each	
n.	3 pin 5/6 A, piano type socket outlet	Each	
o.	6 pin 15/16 A, piano type socket outlet	Each	
p.	Modular type 3 pin 6A multi socket with safety shutter	Each	
q.	Modular type 3 pin 16A multi socket with safety shutter	Each	
r.	3 pin plug socket 6A	Each	
s.	3 pin plug socket 16A	Each	
t.	Ceiling Fan capacitor	Each	
11.0	Supply and fixing of NEW HMS PVC conduits FRLS grade of standard approved make by EIC and its fixing with Stainless Steel clamps at all heights including ladders, scaffolding, drilling, tools, equipment's, cutting, transport, labour, wastage, etc. as per site condition complete. As directed by EIC. Make: Finolex/ Sudhakar/ Astral or standard approved equivalent. Note: The breaking work in walls for accessing the concealed conduits will be paid separately.		
a.	20 mm	Per meter	
b.	25 mm	Per meter	
c.	32 mm	Per meter	
12.0	Supply and fixing of NEW PVC casing capping patti duly fixed with Stainless Steel screws and fixed firm on the wall/gypsum board partition/furniture(wherever required) at desirable height and location, including, transportation, cutting, drilling, tools of standard approved make as per site condition and as directed by EIC. Make: Precision/Legrand or standard approved equivalent Note : The breaking work in walls for accessing the concealed conduits will be paid separately.		
a.	20mm	Per meter	
b.	25mm	Per meter	
c.	32mm	Per meter	
d.	40mm	Per meter	
13.0	Supply and fixing of NEW PVC raceway/box trunking duly fixed with Stainless Steel screws and fixed firm on the wall/gypsum board partition/furniture(wherever required) at desirable height and location, including, transportation, cutting, drilling, tools of standard approved make		

	as per site condition and as directed by EIC. Make: Precision/Legrand or standard approved equivalent Note: The breaking work in walls for accessing the concealed conduits will be paid separately.		
a.	50x16/20 mm	Per meter	
b.	50x50 mm	Per meter	
c.	75x50mm	Per meter	
d.	75x75mm	Per meter	
e.	100x50mm	Per meter	
f.	100 x 50 mm cable race way (with halfway partition runway)	Per meter	
14.0	Supply and fixing of of NEW PVC flexible pipe of standard ISI marked of required size at desirable height and location as per site condition and as directed by EIC including, transportation etc. complete including ladders, scaffolding, , tools, equipment's, labour, wastage, etc. as per site condition complete. As directed by EIC. Note: The breaking work in walls for accessing the concealed conduits will be paid separately.		
a.	1'(25mm)	Per meter	
b.	2'(50mm)	Per meter	
15.0	Supply and installation of NEW PVC surface modular switch box with double mounting plate ONLY of any required size and modules as per site requirements of standard approved make by EIC and its fixing at desired location in level at any heights including removal of old plate and its disposal outside campus premises, drilling of holes, disposal of non-serviceable material outside campus premises etc. complete as directed by EIC. Make: Legrand/Anchor Roma or standard approved equivalent.		
a.	1 Module	Each	
b.	2 Module	Each	
c.	3 Module	Each	
d.	4 Module	Each	
e.	6 Module	Each	
f.	8 Module	Each	
g.	12 Module	Each	
h.	16-18 Modules	Each	
16.0	Supply, fixing, testing of shock proof NEW Power modular switch box/board of M/s Anchor/Legrand any required size and heights modules as per site requirements of standard approved make by EIC and its fixing at desired location in level including breaking of walls for accessing concealed conduits, removal of old plate and its disposal, drilling of holes, etc. complete as directed by EIC. NOTE: The breaking work in walls for accessing the concealed conduits will be paid separately.		
a.	Single Module	Each	
b.	Two modules	Each	
c.	Four modules	Each	
d.	Six modules	Each	
e.	Eight modules	Each	
f.	Twelve modules	Each	
g.	Eighteen modules	Each	
17.0	Supply and fixing of NEW unbreakable concealed type modular switch box with double mounting plate of any required size and modules as per site requirements of standard approved make by EIC and its fixing at desired location in level at any heights including removal of old plate and drilling of holes, disposal of non-serviceable material outside campus premises etc. complete as directed by EIC. Make: Legrand/Anchor Roma or standard approved equivalent. Note: The breaking work in walls for accessing the concealed conduits will be paid separately.		

a.	1 Module	Each	
b.	2 Module	Each	
c.	3 Module	Each	
d.	4 Module	Each	
e.	6 Module	Each	
f.	8 Module	Each	
g.	12 Module	Each	
h.	16-18 Modules	Each	
18.0	Supply, connection, testing and commissioning of modular type socket outlet clusters components fixing on the PVC cable raceway/wall with all internal wiring complete in all respect as detailed below Complete with all accessories as directed by the Engineer-in-charge. Make: Anchor/ Legrand / Myrah or standard approved equivalent.		
a.	4 modular switch board with back box consists of One modular Step type fan regulator and 2 nos. of 6A switches.	Each	
b.	8 modular switch board with back box consists of 2nos. of Step type fan regulators and 4 nos. of 6A switches.	Each	
c.	12 modular switch board with back box consists of 2nos. of Step type fan regulators and 8 nos. of 6A switches.	Each	
19.0	Replacement of TUBES inside the existing ceiling hanging fluorescent lighting fixture of M/s. Phillips make (TCS 3981/228 HFE D6 2XTL-5 of 28W) with NEW LED tube lighting of M/s. Phillips, Wipro, Surya or approved equivalent matching the existing fixture sizes at same position and heights and disposal of non-serviceable material outside the campus premises. As directed by EIC complete.		
a.	LED light fitting 1 x 2'-9/10W	Each	
b.	LED light fitting 1 x 4'-22W	Each	
c.	LED light fitting 1 x 4'-36/40W	Each	
d.	LED light fitting 10W	Each	
e.	LED light fitting 20W	Each	
f.	LED light fitting 40W	Each	
20.0	Supply, installation, testing and commissioning of the Existing/NEW fluorescent lighting fixture with NEW slim LED lighting batten Consisting of Polycarbonate Housing with top diffuser of surface mounting type of M/s. Phillips, Wipro, Surya or approved equivalent of any sizes ,at any heights with all accessories, scaffolding/ladders etc. Complete as required and as per directions of EIC. NOTE: Disposal of non-serviceable material outside the campus premises.		
a.	4 feet 17W LED batten	Each	
b.	4 feet 22W LED batten	Each	
c.	4 feet 33W LED batten	Each	
d.	4 feet 40W LED batten	Each	
e.	4 feet 50W LED batten	Each	
f.	2 feet 12W LED batten	Each	
21.0	Supply, fixing and installation of NEW 2'X2' LED panels concealed type including removal of OLD 2'X2' LED fixture (if any) placing of new fixture at desired location and height in grid false ceiling without disturbing the ceiling and its installation, connection, disposal of non-serviceable material outside the campus premises etc. complete as directed by EIC. Make: Bajaj/Syska or approved equivalent.		
a.	LED 1' x 1' 36W	Each	
b.	LED 1' x 1' 40W	Each	
22.0	Supply, fixing and installation of NEW 10W LED bulb of M/s Philips/Wipro with NEW holder and connection at desired height and location including removal of existing light fixture (if any) as directed by EIC.	Each	

a.	Supply, fixing and testing of NEW 10W LED bulb of M/s Philips/Wipro at desired height and location including removal of existing bulb and disposal of non-serviceable material outside the Campus premises. As directed by EIC.	Each	
23.0	Supply, fixing and installation of NEW surface LED square/ circular down light having pressure die-cast aluminium housing, polystyrene diffuser having , CRI>80, CCT upto 6500K, Beam Angle of 120 deg., max. ripple of 5%, THD<10%, p.f. >0.95, operating range of 120-270V, surge protection of 2.5 kV, Life class of 50,000 Hrs. at L70B50, including driver, having mount arrangement with board for surface type or spring loaded mounting clips complete with 3 years warranty. Similar to existing fixtures and of M/s. Phillips, Wipro or any standard approved make by EIC and fixing at desired height and location including disposal of non-serviceable material outside campus premises as directed by EIC.		
a.	7/8W	Each	
b.	11/12W	Each	
c.	14W	Each	
24.0	Supply, fixing and installation of NEW Street light fitting of IP65& IK07 class standard approved make by EIC at desired height and location on existing light poles/ parapets including removal of existing damaged fittings (if any) and keeping at an approved location within a lead of 100m., and any other spares if required as per site conditions necessary for complete installation etc. complete as directed by EIC. Make: Phillips/ Wipro or any standard approved.		
a.	18-22W	Each	
b.	23-25W	Each	
c.	26-30W	Each	
d.	40-50W	Each	
e.	60W	Each	
f.	70-75W	Each	
g.	100W	Each	
25.0	Supply, fixing and installation of NEW Flood light fitting of IP65&IK07 class of M/s Bajaj/Oreva/Havells or standard approved make by EIC at desired height and location on existing light poles/ parapets including removal of existing damaged fittings (if any) and keeping at an approved location within a lead of 200m., and any other spares if required as per site conditions necessary for complete installation etc. complete as directed by EIC.		
a.	30W	Each	
b.	50W	Each	
c.	70W	Each	
d.	100W	Each	
26.0	Supply, fixing and installation of New Stick Shape PL-S 2P 11W/865 CFL, Cool Daylight make M/s. Phillips, Wipro, Surya or approved equivalent of any sizes ,at any heights with all accessories, scaffolding/ladders etc. Complete as required and as per directions of EIC.	Each	
27.0	Supply, fixing and installation of NEW UV Fly killer/bug catcher Light fitting Machine indoor of M/s. Pest-o-flash or standard approved equivalent having 2 x 20W UV tube lights to cover min area of 500 sq.ft with powder coated M.S/ steel body suitable to work on 230V,AC supply having top mounting arrangement with SS chain complete and 3 core 1 mtr. Flexible wire with 1 year warranty to fix at desired height and location including removal of existing damaged. (If any) complete as directed by EIC.	Each	
a)	Supply, installation and testing of 20W UV tube lights of M/s Philips make or equivalent of standard approved make of any sizes, at any heights with all accessories, scaffolding/ladders etc. Complete as required and as per directions of EIC.	Each	

28.0	Supply, installation and testing and commissioning of energy saving ceiling fan ,max energy consumption of 28W, 5 Star energy efficiency rated Ceiling fan of white colour, of any model and make as approved by EIC with Mild Steel D-hook hanger of heavy duty type with 2 Nos. of Stainless Steel M10 X 75mm anchor fasteners including fixing of round covering plate on the same as required and as per site conditions complete with all accessories, tools, scaffolding/ ladders, equipment, spares etc. as directed by the Engineer-in-charge Make: Orient Electric/ Crompton or standard approved equivalent.		
a.	900/1050 mm dia	Each	
b.	1200mm dia	Each	
29.0	Supply, fixing and testing of NEW 400mm pedestal fan only of M/s. Usha mist/ Bajaj esteem/ Havel's gatik or standard approved equivalent at desired height and location including removal of existing damaged fan (if any) and disposal of non-serviceable material outside campus premises complete as directed by EIC.	Each	
30.0	Supply, fixing and installation of NEW exhaust fan medium duty with louvers of M/s. Unique, Bajaj or standard approved equivalent at desired height and location including removal of existing damaged fan (if any) and keeping at an approved location within a lead of 100m and disposal of non-serviceable material outside campus premises etc. complete as directed by EIC		
a.	Dia. 8"	Each	
b.	Dia. 10"	Each	
31.0	Supply, fixing and installation of NEW 12" dia. Heavy duty Exhaust fan only of M/s. Almonard or standard approved equivalent at desired height and location including removal of existing damaged fan (if any) and keeping at an approved location within a lead of 100m. Disposal of non-serviceable material outside campus premises etc. complete as directed by EIC.	Each	
32.0	Removing, shifting, fixing and testing of EXISTING ceiling fan of M/s. Crompton, Orient, or standard approved equivalent at desired height and location including transportation, removal of existing damaged fan (if any) and keeping at an approved location within a lead of 100m etc. complete as directed by EIC.		
a.	1200mm	Each	
b.	1400mm	Each	
c.	Dismantling the existing ceiling fan /exhaust fan / cabin fan / bracket fan complete with accessories, G.I down rod, frame, disposal of non-serviceable material outside campus premises etc. complete as directed by EIC	Each	
33.0	Supply, fixing and installation of NEW Bakelite fuse fitting base with carrier including removal of existing damaged Fuse base, all other spares necessary for installation should be included in rate complete as directed by EIC.		
a.	6A	Each	
b.	16A	Each	
c.	32A	Each	
d.	63A	Each	
e.	100A	Each	
34.0	Supply, fixing and installation of NEW HRC cartridge fuse including removal of existing damaged HRC Fuse cartridge, all other spares necessary for installation should be included in rate complete as directed by EIC.		
a.	32A	Each	
b.	63A	Each	
c.	100A	Each	
d.	200A	Each	
e.	400A	Each	

35.0	Supply, fixing and installation of NEW HC type fuse links including removal of existing damaged HC Fuse , all other spares necessary for installation should be included in rate complete as directed by EIC.		
a.	63A	Each	
b.	100A	Each	
c.	200A	Each	
d.	300A	Each	
36.0	Supply, installation, testing & commissioning MCB of M/s Legrand or approved equivalent complete as directed by Engineer in charge.		
a.	1 Pole,6A	Each	
b.	1 Pole, 16A	Each	
c.	1 Pole, 25A	Each	
d.	1 Pole, 40A	Each	
e.	2 Pole,6A	Each	
f.	2 Pole,16A	Each	
g.	2 Pole,25A	Each	
h.	2 Pole,32A	Each	
i.	3 Pole ,32A	Each	
j.	3 Pole,40/63A	Each	
k.	4 Pole ,32A	Each	
l.	4 Pole,63A	Each	
37.0	Supply, installation, testing and commissioning of 4 pole MCB with standard approved metal box enclosure for 4 pole 32A MCB on surface/recess/wall/partition whenever required at any height and size having both side termination with tinned lugs including earthing and all accessories, tools etc. complete as directed and instructed by the Engineer-in-charge. Make: Legrand or standard approved equivalent.	Each	
38.0	Supply, installation, testing and commissioning of 2 pole MCB with standard approved metal box enclosure with 2 Pole 25A MCB on surface/recess/wall/partition whenever required at any height and size having both side terminations with tinned copper lugs, including earthing and all accessories, tools etc. complete as directed by the Engineer-in-charge. Make: Legrand or standard approved equivalent	Each	
39.0	Supply, commissioning and testing of RCCB of M/s Legrand or approved equivalent electromagnetic type 30/100/300mA sensitivity with earth leakage trip indication complete as directed by Engineer in charge.		
a.	2 Pole, 16/25A	Each	
b.	2 Pole, 32A	Each	
c.	2 pole, 40A	Each	
d.	2 pole, 63A	Each	
e.	4 Pole, 16/25A	Each	
f.	4 Pole, 32A	Each	
g.	4 pole, 40A	Each	
h.	4 pole, 63A	Each	
40.0	Supply, erecting & commissioning Isolator of M/s Legrand complete as directed by Engineer in charge.		
a.	2 Pole,40A	Each	
b.	3 Pole,40A	Each	
c.	3 Pole,63A	Each	
d.	3 Pole,100A	Each	
e.	4 Pole,40A	Each	
f.	4 Pole,63A	Each	
g.	4 Pole,100A	Each	
41.0	Supply, installation and testing of NEW MCCB of M/s. L&T make or any standard equivalent approved by EIC including removal of OLD damaged MCCB (if any) and any required tools etc. complete as directed by EIC.		
a.	3P 100A,16kA	Each	
b.	3P 125A,16kA	Each	

c.	3P 150A,16kA	Each	
d.	3P 200A,25kA	Each	
e.	3P 250A,36kA	Each	
f.	3P 400A,36kA	Each	
g.	3P 630A,36kA	Each	
h.	4P 100A,36kA	Each	
i.	4P 125A,36kA	Each	
j.	4P 200A,36kA	Each	
k.	4P 250A,36kA	Each	
l.	4P 400A,36kA	Each	
m.	4P 630A,36kA	Each	
42.0	Supply, fixing and installation of NEW 4 Pole change over switch/switch Fuse unit of M/s. L&T make or standard approved equivalent including removal of existing damaged unit and disposal of non-serviceable material outside the campus premises, all other spares necessary for installation should be included in rate complet as directed by EIC..		
a.	32A	Each	
b.	40A	Each	
c.	63A	Each	
d.	100A	Each	
e.	160A	Each	
f.	200A	Each	
g.	400A	Each	
h.	630A	Each	
43.0	Supply, installation and testing of NEW 4 pole Power contactors, relays of M/s. Schneider/ L&T make or any standard equivalent approved by EIC including removal of OLD damaged Power contactor (if any) and any required tools etc. complete as directed by EIC.		
a.	25 Amps	Each	
b.	40 Amps	Each	
c.	63A	Each	
d.	100 Amps	Each	
44.0	Supply, installation and testing of NEW ML 1.5 Power contactors, relays of M/s. Schneider/ L&T make or any standard equivalent approved by EIC including removal of OLD damaged Power contactor (if any) and any required tools etc. complete as directed by EIC.	Each	
45.0	Supply, installation and testing of NEW Power contactors, relays of M/s. Schneider/ L&T make or any standard equivalent approved by EIC including removal of OLD damaged Power contactor (if any) and any required tools etc. complete as directed by EIC.		
a.	MNX -25A	Each	
b.	MNX- 45A	Each	
c.	MNX-70A	Each	
46.0	Telephone Wiring:		
a.	Supplying & erecting 2 pair telephone copper cable 0.5 mm dia. with high density polyethylene insulation, polyester taped, Nylon Rip Cord & grey colour sheathed with FR PVC, conforming to ITD specification laid in provided PVC casing capping/conduit as per direction of EIC. Make: Havells, Polycab, or approved equivalent	Per meter	
b.	Supply, laying, effective terminations, testing and commissioning of 0.5mm dia. 2 pair copper conductor from I/O hub(Telephone junction box) to work station(point), with providing RJ-11, 0.5mm Connector and ferrules at both ends. The telephone wiring shall be laid inside the 25mm (1") PVC casing Patti (will be paid separately) including cable and all necessary accessories & hardware etc. complete in all respect as per instructions and directions of EIC. NOTE: Supply, fixing and testing of RJ-11 telephone socket flush type standard approved make including all necessary accessories & hardware etc. complete in all respect as per instructions and directions of EIC. Will be paid separately.	Per Point	

	Make: Havells, Polycab, or approved equivalent		
c.	Supply, Fixing, Connection, Testing and Commissioning of RJ-11 telephone socket flush mounting type in White colour, of standard approved make including all necessary accessories & hardware etc. complete in all respect as per instructions and directions of EIC. Make: Legrand/ABB, or approved equivalent	Each	
47.0	Data Cable Wiring :		
a.	Supplying and installing cat-6 LSZH cable suitable for networking as per specification complete as directed by the Engineer-in-charge. Make: Havells, Polycab, or approved equivalent.	Per meter	
b.	Supply, laying, effective termination, testing and commissioning of tinned copper conductor CAT 6 LSZH UTP data cable of standard approved make and model including its laying from I/O hub to workstation (point) through 25mm (1") PVC casing Patti (will be paid separately) including cable and all necessary accessories & hardware etc. complete as per instructions and directions of EIC. Make: Havells, Polycab, or approved equivalent. NOTE: Supply, fixing, connection and testing of modular type RJ45 with safety shutter and RJ45 connector type Cat-6 Patch cord of 2 Mtrs will be paid separately	Per point	
c.	Supply, fixing, connection and testing of modular type computer RJ45 with safety shutter, duly erected on provided plate and box white colour of standard approved make including its internal connection complete in all respect. Including all necessary accessories & hardware etc. complete as per instructions and directions of EIC. Make: D-Link or approved equivalent.	Each	
d.	Supply, fixing, connection and testing of RJ45 connector type Cat 6 Ethernet cable (Patch cord) of 2mtr. Of Grey colour of standard approved make including all required materials, tools etc. complete as per the direction of Engineer-in-charge. Make: D-Link or approved equivalent.	Each	
48.0	Disconnection and removing of existing old electrical installations & fixtures with cables inside the respective room/s, stacking it at approved location or disposal of non-serviceable material outside the campus premises with all required tools etc. all as per the instructions directions of Engineer-in-charge.	Per point	
49.0	Breaking in walls: All types of breaking in walls/RCC surfaces at any heights using chisel/ hammer etc. for accessing concealed conduits, new concealed wiring, including labour, scaffolding, tools, and making the surface good after work completion in all respect with minor plastering, putty application and painting to make the surface uniform, and disposal of non-serviceable material/ debris out of the campus premises (whenever required) etc. complete as per EIC.	Sqm.	

Note: 1- Above items rate should be inclusive of all taxes (except GST) & service charges. GST will be paid separately.

Note: 2- The above AMC is for 01 year. However, the bidder shall quote item wise rate in BOQ and the payment shall be made on actual measurement basis as per site requirement. In case the AMC is further extended beyond 01 years the rates for the items in Annexure B will be finalized considering the price escalation and market rates with mutual understanding between HBCSE and the vendor. If the rates finalized by HBCSE are not acceptable to the vendor at that time, the tender may be cancelled fully.

Note: 3- The spare materials / spare parts used / new installations of units for replacement of old/ damaged parts/ unit must be of standard approved make (**Genuine spare parts- as specified in Annexure- X i.e. 'list of approved material makes'**) only by the EIC. The material brought on site as a spare for replacement should be used post approval of EIC/ Supervisor only. If any material used and found to be of inferior quality at any point of contract period or of non-approved, make & model should be replaced with the new approved spare by the contractor at its own cost. Otherwise the same will be replaced by HBCSE and the cost for the same will be deducted as a penalty from bills.

ANNEXURE – C

LIST OF APPROVED MATERIAL MAKES

Sr. No.	Item	Approved make
1.	Switches/ Sockets	Legrand, Anchor, Roma, or approved equivalent
2.	Luminaries/ Light fittings	Phillips, Havells, Wipro, Bajaj or approved equivalent
3.	MCB/MCCB/RCBO/ RCCB/ ELCB	Legrand, Siemens, Schneider, L&T or approved equivalent
4.	Copper Wires/ Cables (FR & FRLSH)	Havells, Polycab or approved equivalent
5.	Casing/ Capping	Precision, Legrand approved equivalent
6.	Switch disconnecting fuse	Anchor, Havells, ABB, Siemens
7.	Contactors	Siemens, L&T, MGL, ABB
8.	Water Heater (Geysers)	Racold, AO Smith
9.	APFC relay	Siemens, Havells, L&T, ABB
10.	Change over switch	L&T, HPL
11.	Tube Light fittings	Wipro, Crompton, Philips
12.	Exhaust fan & Ceiling Fan	Orient, Bajaj, Crompton
13.	Fire Alarm Panel	Siemens, Ravel
14.	HT VCB	Siemens, ABB, L&T, Crompton greaves, Areva
15.	LT ACB	Siemens, ABB, L&T, Crompton greaves, Areva
16.	HT Cable	KEI, XLPE, Universal , NICCO, Torrent
17.	LT Cable	PVC, XLPE, Polycab, Havells, Finolex,
18.	Dry Type Transformer	Kirloskar , Voltamp, ABB, Electrotherm, Po Werlite
19.	Oil Type Transformer	Kirloskar, Voltamp, ABB, Crompton, Electrotherm, Po Werlite
20.	DG Sets & AMF Panel	Cummins, Kirloskar, Sterling, Catterpillar
21.	Cable Joint Kit	Raychem, Denson, M-Seal
22.	Distribution Box	Legrand, Schneider, C&S, L&T, Siemens, Mitsubishi
23.	Capacitor	Havells, Schneider, Epcos
24.	Push Button	Siemens, L&T, Schneider
25.	Indicating lamps	Siemens, L&T
26.	Timers	L&T, Siemens
27.	Selector Switch	L&T, Siemens
28.	Automatic Transfer Switch	Havells, L&T, HPL, Cummins
29.	CTS	L&T, Kappa, Rishabh, Intrans
30.	PTS	L&T, Erega
31.	Connectors	L&T, Schneider, Siemens
32.	Protection Relay	L&T, Siemens
33.	Analog/Digital Meter/Load Manager/ MFM	L&T, Schneider, HPL, Legrand
34.	Cable Glands	Siemens, Crompton, Comet
35.	Cable Lugs	Johnson, Dowells, Hex
36.	Bus duct	L&T, Schneider, C&S, Siemens, Legrand
37.	Rigid FR PVC Conduit	Precision, Polycab, FRLS
38.	Accessories of conduit	Precision, Polycab, FRLS
39.	Modular Type Switches & Sockets	Legrand, Anchor, Havells
40.	PVC Tape	Anchor, Nippon, Steel grip, Apex
41.	M.S. Conduit	BEC, AKG, Steel Craft
42.	Call Bell	Anchor, Orpat, Max
43.	Aluminium Floor Raceway	Legrand, MK
44.	GI Floor Raceway	Legrand, MK
45.	PVC Wall Raceway	Legrand, MK
46.	Fuses	HRC, ABB, L&T

47.	Distribution boards	Legrand ,L&T
48.	Battery	Exide, Amara raja, Hbl
49.	UPS	Luminous, V-guard, Zebronics.

Note: For any other materials to be used in AMC apart from the one listed above can only be used on prior written approval of EIC only.

