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### NOTICE FOR INVITING TENDER

The **Registrar, University of Allahabad, Allahabad** on behalf of Vice Chancellor invites online item rate bids from **approved and eligible electrical contractors registered with CPWD, MES, BSNL, BRO, Indian Railway, UP-PWD and eligible original equipment manufacturer/ authorized dealer** for the following work(s):-

S. No.	NIT NO.	Name of work and location	Estimated cost put to bid	Earnest Money	Period of Completion	Date of Publishing	Last date & time of submission of bid, EMD, e-tender processing fee and other Document as specified in the bid document	Time & date of opening of tender
1	2	3	4	5	6	7	8	9
1	<b>10/UE(EL)/ALLD/2022-23</b>	<b>SITC of Air Conditioners and Allied works etc. for Senate Hall, Senate Campus at University of Allahabad, Prayagraj.</b>	<b>Rs. 63,78,400/-</b>	<b>Rs. 1,27,568/-</b>	<b>90 Days</b>	<b>23.03.2023</b>	<b>Up to 03:00 PM on 10/04/2023</b>	<b>At 03:30 PM on 11/04/2023</b>

Registrar  
University of Allahabad



***PART-A***

**TECHNICAL CUM PREQUALIFICATION**

**INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR E-TENDERING FORMING PART OF BID DOCUMENT AND TO BE POSTED ON WEBSITE**

1. The intending bidder must read the terms and conditions carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
2. Information and Instructions for bidders posted on website shall form part of bid document.
3. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website [www.eprocure.gov.in](http://www.eprocure.gov.in) & [www.allduniv.ac.in](http://www.allduniv.ac.in).
4. But the bid can only be submitted after depositing of original EMD in the office of University Engineer, Allahabad University within the period of bid submission and uploading the mandatory scanned documents such as Demand Draft or Pay order or Banker's Cheque or Deposit at call Receipt or Fixed Deposit Receipts and Bank Guarantee of any Scheduled Bank towards EMD in favor of Finance Officer, University of Allahabad as mentioned in NIT, receipt for deposition of original EMD to office of the University and other documents as specified.
5. Those contractors not registered on the website mentioned above, are required to get registered beforehand.
6. The intending bidder must have valid class-III digital signature to submit the bid.
7. Contractor can upload documents in the form of **JPG** format and **PDF** format.
8. Contractor must ensure to quote rate of each item.

**List of Documents to be scanned and uploaded within the period of bid submission:**

- I. Treasury Challan/Demand Draft/Pay order or Banker's Cheque /Deposit at Call Receipt/FDR/Bank Guarantee of any Scheduled Bank against EMD.
- II. Enlistment Order of the Contractor in appropriate class of composite category.
- III. Certificate of Registration for Sales Tax /Service Tax/ VAT/GSTN.
- IV. Copy of receipt of deposition of original EMD issued from Office of the University Engineer, Allahabad University.
- V. Certified Copy(Certification authority not less than Executive Engineer) of Work executed of similar nature during the last seven years:
  - (1) One similar works, each of value not less than Rs. 51,02,720/-
  - (2) Two similar works, each of value not less than Rs. 38,27,040/-
  - (3) Three similar works, each of value not less than Rs.25,51,360/-

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## RECEIPT OF DEPOSITION OF ORIGINAL EMD

(Receipt No. .... / date .....) )

1. Name of Work: ***SITC of Air Conditioners and Allied works etc. for Senate Hall, Senate Campus at University of Allahabad, Prayagraj.***

2. NIT No. : **10 /UE(EI)/ALLD/2022-23.**

3. Estimated Cost : 63,78,400/-

4. Amount of Earnest Money Deposit : 1,27,568/-

**1. Last date of submission of Bid: date.....UPTO 3:00 P.M.**

1. Name of Contractor: ..... #

2. Form of EMD ..... #

3. Amount of Earnest Money Deposit ..... #

4. Date of submission of EMD ..... #

.....

Signature, Name and Designation of EMD  
Receiving person along with office stamp

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## E-Tendering

1. Item rate bids are invited on behalf of Vice Chancellor, University of Allahabad, Allahabad from approved and eligible contractors of composite category of CPWD for the work of **“SITC of Air Conditioners and Allied works etc. for Senate Hall, Senate Campus at University of Allahabad, Prayagraj, Prayagraj., Allahabad”**. The enlistment of the contractors should be valid on the last date of submission of bids. In case the last date of submission of bid is extended, the enlistment of contractor should be valid on the original date of submission of bids.
  - 1.1 The work is estimated to cost **Rs.63,78,400/-**. This estimate, however, is given merely as a rough guide.
2. Agreement shall be drawn with the successful bidders on prescribed Form. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
3. The time allowed for carrying out the work will be **90 days** from the 15<sup>th</sup> day of issue of LOA or first date of handing over of the site, whichever is earlier, in accordance with the phasing, if any, indicated in the bid documents.
4. (i) The site for the work is available.
5. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen on website [www.eprocure.gov.in](http://www.eprocure.gov.in) & [www.allduniv.ac.in](http://www.allduniv.ac.in)
6. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
7. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
8. Earnest Money in the form of Treasury Challan or Demand Draft or Pay order or Banker's Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of Finance Officer, University of Allahabad, Allahabad) shall be scanned and uploaded to the e-Tendering website within the period of bid submission. The original EMD should be deposited in the Office of University Engineer, Allahabad University within the period of bid submission. The Office of the University Engineer shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by the tender inviting authority.  
 This receipt shall also be uploaded to the e-tendering website by the intending bidder up to the specified bid submission date and time.  
 Copy of Enlistment Order and certificate of work experience and other documents as specified in the bid document shall be scanned and uploaded to the e-Tendering website within the period of bid submission. Further, certified copy of all the scanned and uploaded documents as specified in bid document shall have to be submitted by the lowest bidder only within a week physically in the office of University Engineer.

**Online bid documents** submitted by intending bidders shall be opened only of those bidders, **whose original EMD deposited with Office of the University**

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**Engineer, Allahabad University, Allahabad** and other documents scanned and uploaded are found in order.

9. The bid submitted shall become invalid if:
- (i) The bidder is found ineligible.
  - (ii) The bidder does not deposit original EMD with Office of the University Engineer, Allahabad University.
  - (iii) The bidder does not upload all the documents (including VAT registration/Sales Tax registration/GSTN) as stipulated in the bid document including the copy of receipt for deposition of original EMD.
  - (iv) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted **physically by the bidder** in the office of bid opening authority.
  - (v) If a tenderer quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section/sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
10. The contractor whose bid is accepted will be required to furnish **performance guarantee of 10% (Ten Percent)** of the bid amount within the period of 15<sup>th</sup> days from the date issue of LOA. This guarantee shall be in the form of Fixed Deposit Receipts drawn in favor of Finance Officer, University of Allahabad. In case the contractor fails to deposit the said performance guarantee within the period including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee.
- The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses / registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board **Provident Fund Code No. if applicable and also ensure the compliance of aforesaid provisions by the sub contractors, if any engaged by the contractor for the said work** and Programme Chart (Time and Progress) within the period as prescribed below.

	<p>i) Time allowed for submission of Performance Guarantee, Programme Chart (Time and Progress) and applicable labour licenses, or proof of applying thereof from the date of issue of letter of acceptance</p> <p>ii) Maximum allowable extension <b>with late fee @ 0.1% per day of Performance Guarantee amount beyond the period as provided in (i) above</b></p>	<p>15 Days</p> <p><b>7 Days</b></p>
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11. Description of the work is as follows: **SITC of Ductable Type Air Conditioners Units and Allied works etc. for Tilak Bhawan, Senate Campus at University of Allahabad, Prayagraj.**, Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids 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

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- require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidders shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidders implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the local conditions and other factors having a bearing on the execution of the work.
12. The competent authority on behalf of the Vice Chancellor, University of Allahabad does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
  13. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
  14. The competent authority on behalf of Vice Chancellor, University of Allahabad, Allahabad reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.
  15. The contractor shall not be permitted to bid for works in the University if his near relative is posted as an employee in any capacity in the university. He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any faculty/officer/staff in Allahabad University. Any breach of this condition by the contractor the university will recommend CPWD/MES/Indian Railways , BSNL, UPPWD and OEM to remove the firm from the approved list of contractors of CPWD/MES/Indian Railways , BSNL, UPPWD and OEM.
  16. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.
  17. **The bid for the works shall remain open for acceptance for a period of 30 days.** If any bidders withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the University shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.
  18. This notice inviting Bid shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting



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Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:-

- (a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

## **19.**

- 19.1.1 The bidders must associate himself, with agencies of the appropriate class eligible to bid for each of the minor component individually.
- 19.1.2 The eligible bidders shall quote rates for all items of major component as well as for all items of minor components of work.
- 19.1.3 Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.
- 19.1.4 Security Deposit will be worked out separately for each component corresponding to the estimated cost of the respective component of works.
- 19.1.5 The main contractor has to associate agency(s) for minor component(s) conforming to eligibility criteria as defined in the bid document and has to submit detail of such agency(s) to the University Engineer within prescribed time. Name of the agency(s) to be associated shall be approved by the University Engineer or person authorized by him for minor component(s).
- 19.1.6 In case the main contractor intends to change any of the above agency/agencies during the operation of the contract, he shall obtain prior approval of the University Engineer. The new agency/agencies shall also have to satisfy the laid down eligibility criteria. In case the University Engineer is not satisfied with the performance of any agency, he can direct the contractor to change the agency executing such items of work and this shall be binding on the contractor.
- 19.1.7 The main contractor has to enter into agreement with contractor(s) associated by him for execution of minor component(s). Copy of such agreement shall be submitted to the University Engineer. In case of change of associate contractor, the main contractor has to enter into agreement with the new contractor associated by him.
- 19.1.8 Running payment for the composite work will be made to the main contractor.
- 19.1.9A. The composite work shall be treated as complete when all the components of the work are complete. The completion certificate of the composite work shall be recorded by the University Engineer after record of completion certificate of all other components.
- 19.1.9B. Final bill of whole work shall be finalized and recommendation for payment will be made by the authorized Electrical Engineer in charge of minor component(s) and forward the bills to the University Engineer for further action.
- 19.1.9C. In case of any dispute arising out of any content the decision of the Vice Chancellor, UoA will be final & binding upon both the parties.
- 19.1.9D. All disputes are subject to Jurisdiction of Allahabad.

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# ITEM RATE TENDER & CONTRACT FOR WORKS

(A) Tender for the work of: SITC of Air Conditioners and Allied works etc. for Senate Hall, Senate Campus at University of Allahabad, Prayagraj.

(i) To be opened in presence of tenderers who may be present at **03:30 PM** hours on **date 11/04/2023** in the office of **University Engineer or other suitable place, University of Allahabad, Allahabad.**

## TENDER

I/We have read and examined the notice inviting tender, Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Quantity & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the University of Allahabad within the time specified in the tender document viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

We agree to keep the tender open for 30 days and not to make any modification in its terms and conditions.

A sum of **Rs. ....** is hereby forwarded in Treasury Challan or Demand Draft or Pay order or Banker's Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of Finance Officer, University of Allahabad, Allahabad) **issued by a** scheduled bank as earnest money a sum of Rs. .... as in the form of Demand Draft drawn in favor of Finance Officer, University of Allahabad or as deposit receipt in the Account Office.

A copy of earnest money in receipt treasury challan/deposit at call receipt of a scheduled bank/fixed deposit receipt of scheduled bank/demand draft of a scheduled bank/bank guarantee issued by a scheduled bank in form of DD/Deposit Receipt is scanned and uploaded (**strike out as the case may be**). If I/We fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said the Vice Chancellor, University of Allahabad or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that the Registrar, University of Allahabad or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained.

Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

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I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for tendering in University of Allahabad in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Registrar, University of Allahabad shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State. I/We have filled and signed the tender documents on each page and the same are enclosed herewith.

Dated

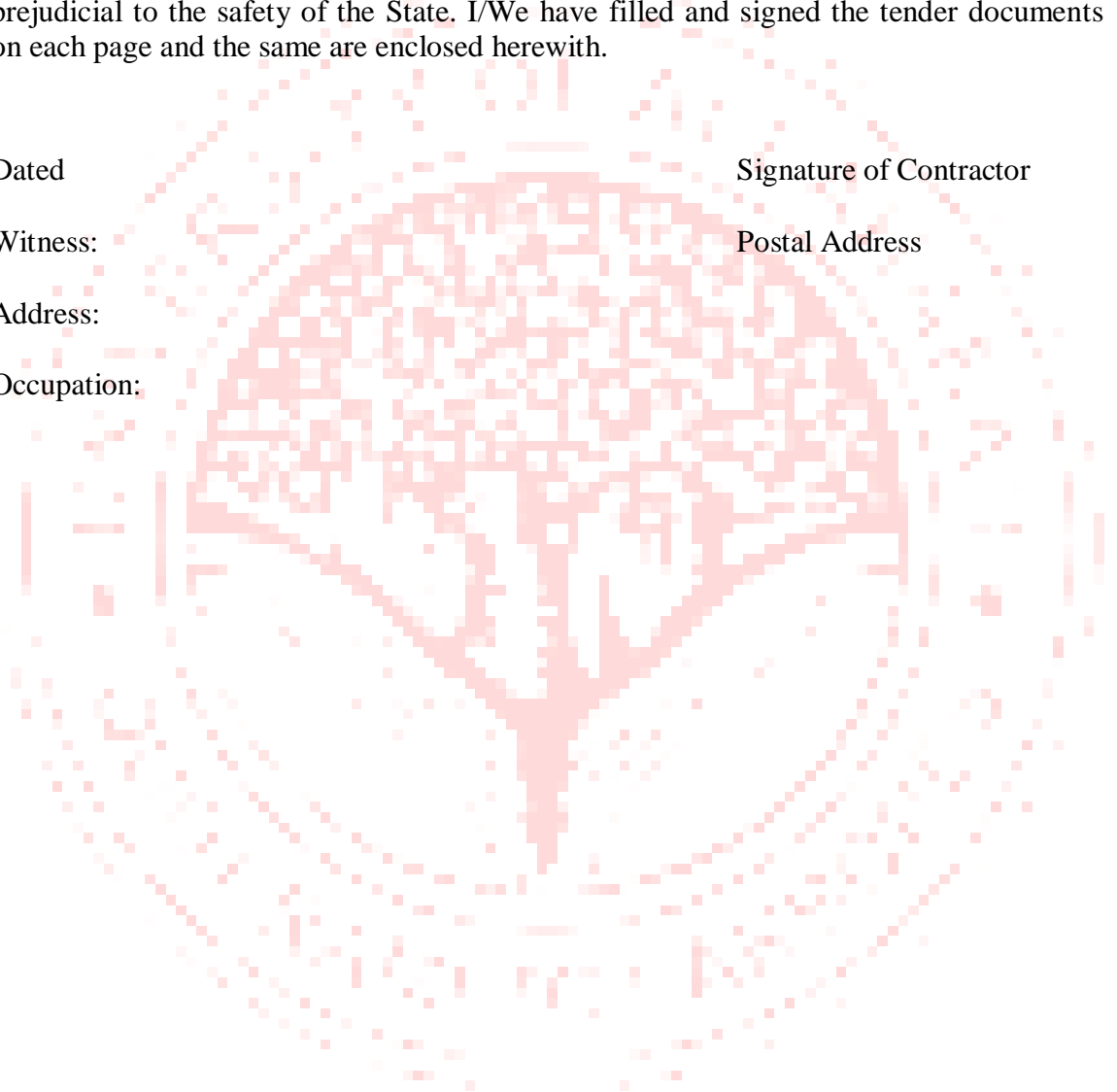
Signature of Contractor

Witness:

Postal Address

Address:

Occupation:



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### PROFORMA OF SCHEDULES

<b>Name of Work:- SITC of Air Conditioners and Allied works etc. for Senate Hall, Senate Campus at University of Allahabad, Prayagraj.</b>		
<b>Estimated cost of the work:</b>		Rs. <b>63,78,400/-</b>
<b>Earnest money</b>	Rs. <b>1,27,568/-</b> (To be returned after receiving performance guarantee)	
<b>Performance Guarantee</b>	10% of the tendered value of the work	
<b>Security Deposit</b>	10% of the tendered value of the work which will be deducted from the final bill and will be released after defect liability period of 12 months. Once the security deposit is deducted the performance guarantee will be returned to the Contractor.	

## GENERAL REQUIREMENTS FOR THE TENDER

**Name of Work: SITC of Air Conditioners and Allied works etc. for Senate Hall, Senate Campus at University of Allahabad, Prayagraj.**

- 1 The tenderer is advised to read and examine the tender documents for the work and the set of drawings available with the University Engineer. He should inspect and examine the site and its surroundings by himself before submitting his tender.
- 2 Separate schedule of quantity is included in this tender for civil and electrical items of work. If the tenderer wants to offer any unconditional rebates on their rates, the same should also be offered in the respective components of civil and electrical schedule separately. The contractor shall quote the item rates in figures and words accurately so that there is no discrepancy in rates written in figures and words.
- 3 Time allowed for the execution of work is 30 days.
- 4 The contractor(s) shall submit a detailed program of execution in accordance with the master programme/milestone within ten days from the date of issue of award letter.
- 5 Contractor has to arrange and install required quantity of tools, plants, scaffolding during the currency of work and nothing extra will be paid on this account.
- 6 Quality of the project is of utmost importance. This shall be adhered to in accordance with the provisions of CPWD/PWD specifications and guidelines given in the relevant paras.
- 7 The contractor (s) shall make his own arrangements for electricity and water required for the execution of work.
- 8 Only those specialized agencies/firms who have satisfactorily executed works as per following criteria during last 3 years are eligible for the specialized works-
  - (a) Three similar works each costing not less than 40% of estimated cost for concerned sub head.
  - Or**
  - (b) Two similar works each costing not less than 60% of estimated cost for concerned sub head.
  - Or**
  - (c) One similar work costing not less than 80% of estimated cost for concerned sub head.

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Approval of the specialized agencies for each specialized work shall be obtained from the University Engineer within one month of award of work. Even if, such specialized items of work shall be executed by the specialized agencies, the work shall be deemed to be executed by the tenderer for all purposes and the responsibility of the quality of items of works executed etc. shall continue to be that of the tenderer only.

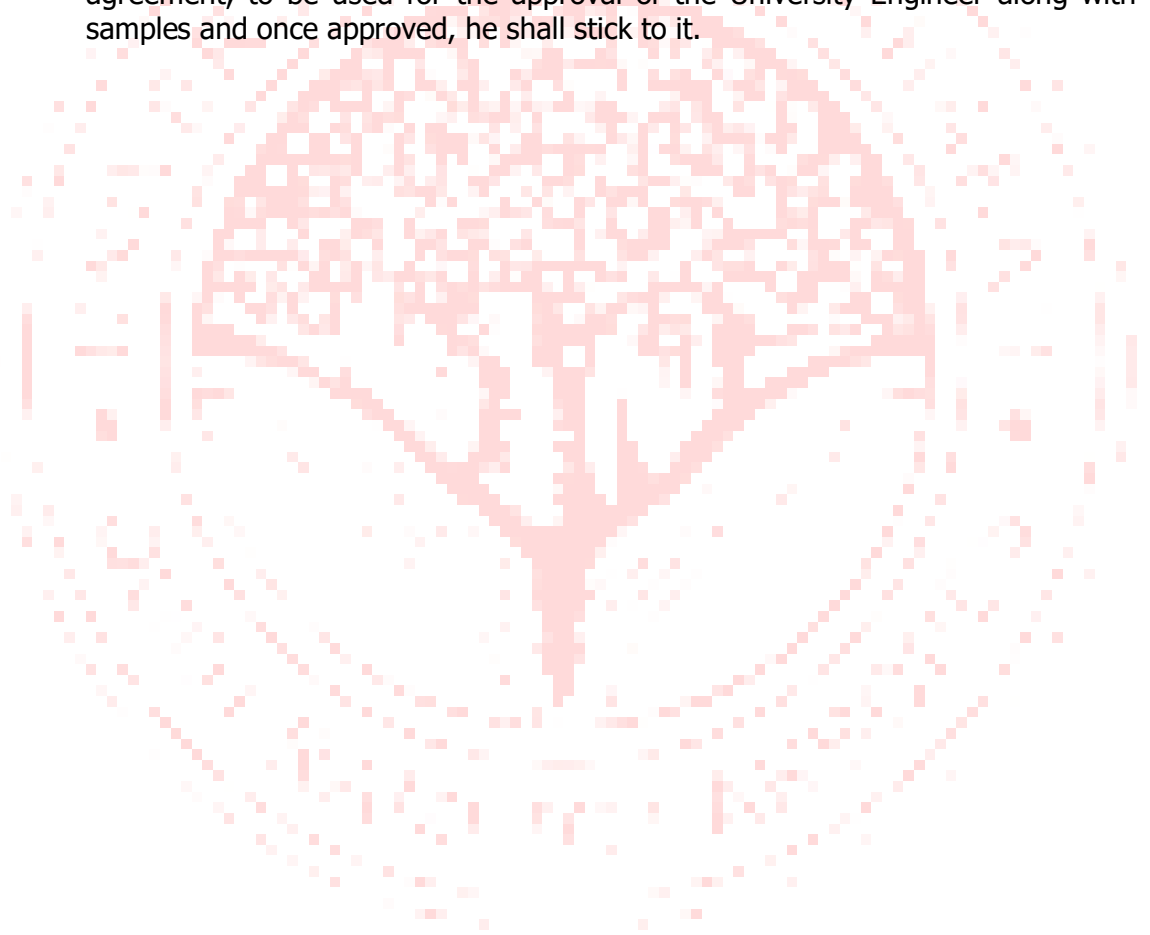
- 9 Contractor has to deploy required Plant and machinery on the project. In case the contractor fails to deploy the plant and machinery whenever required and as per the direction of the University Engineer, he (University Engineer) shall be at a liberty to get the same deployed at the risk and cost of the contractor.
- 10 The contractor shall submit the running bills in the shape of the computerized MB in pages of A-4 size as per the standard format of University of Allahabad.
- 11 The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time.
- 12 The contractor will submit the photograph of the work site before starting the work, photographs of execution of work and photographs of completed work.



***PART-B***

# MATERIAL AND QUALITY ASSURANCE

1. The contractor shall ensure quality control measures on different aspects of electrical works including materials, workmanship and correct work methodologies to be adopted. He shall have to submit quality assurance programme within two weeks of the award of work. The quality assurance programme should include method statement for various items of work to be executed along with check lists to enforce quality control.
2. The contractor shall get the source of all other materials, not specified elsewhere in the document, approved from the University Engineer. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the University Engineer for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials not specified in the agreement, to be used for the approval of the University Engineer along with samples and once approved, he shall stick to it.





# GENERAL TERMS AND CONDITIONS

- 1 The order of preference in case of any discrepancy as indicated in condition may be read as the following:
  - i) Nomenclature of items as per schedule of quantities.
  - ii) Particular specification and special condition, if any.
  - iii) CPWD/PWD specifications.
  - iv) Architectural Drawings
  - v) Indian standard specifications of B.I.S.
  - vi) Sound Engineering Practice

A reference made to any Indian Standard specification in these documents, shall imply to the latest version of that standard. Including such revision/amendments as issued by the bureau of Indian standard upto last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian standard applicable to the work at site.
- 2 Except for the items, for which particular specifications are given or where it is specifically mentioned otherwise in the description of items in the schedule of quantities the work shall generally be carried out in accordance with the "CPWD/MES/Indian Railways & BSNL specifications (with upto date corrections slips) and instructions of University Engineer. Wherever CPWD /MES /UPPWD/Indian Railways & BSNL specifications are silent the latest IS codes/specification shall be followed.
- 3 Unless otherwise provided in the Schedule of Quantities/Specifications, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the work and nothing extra shall be payable to him on account of the same.
- 4 The proposed building is a prestigious project and quality of work is paramount importance. Contractor shall have to engage well experienced skilled labour and deploy modern T&P and other equipment to execute the work.
- 5 a) The contractor (s) shall inspect the site of work before tendering and acquaint himself with the site conditions and no claim on this account shall be entertained by the department.

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- b) The contractor (s) shall get himself acquainted with nature and extent of the work and satisfy himself about the availability of materials and conveyance of materials required for construction.
- 6 The tenderer shall see the approaches to the site. In case any approach from main road is required by the contractor, the same shall be made good, improved and maintained by the contractor at his own cost. No payment shall be made on this account.
- 7 The contractor (s) shall give to the Municipality, Police and other authorities all necessary notices etc. that may be required by law and obtain all requisite Licenses for temporary obstructions, enclosures etc. and pay all fee, taxes and charges which may be leviable on account of these operations in executing the contract. He shall make good any damage to the adjoining property whether public or private and shall supply and maintain light and other illumination on for cautioning the public at night.
- 8 The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night speed limit boards red flags, red lights and providing barriers. He shall be responsible for all dangers and incidents caused to existing / new work due to negligence on his part. No hindrances shall be caused to traffic during the execution of the work.
- 9 Contractor shall provide permanent bench marks and other reference points for the proper execution of work and these shall be preserved till the end of work. The contractor shall make his own arrangement for obtaining electric connection(s) if required and make necessary payments directly to the department concerned.
- 10 Other agencies doing works related with this project may also simultaneously execute their works and the contractor shall afford necessary facilities for the same. The contractor shall leave such necessary holes, openings etc. for laying/burying in the work, pipes cables, conduits, clamps, boxes and hooks for fan clamps etc. as may be required for the other agencies. Nothing extra over the Agreement rates shall be paid for doing these.
- 11 Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on account of the same.

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- 12 The contractor shall fully comply with all legal orders and directions of the Public or local authorities or municipality and adhere by their rules and regulations and pay all fees and charges for which he may be liable in this regard. Nothing extra shall be paid/reimbursed for the same.
- 13 The wiring work shall be carried out in the manner complying in all respects with the requirements of the relevant bylaws and regulations of the local body under the jurisdiction of which the work is to be executed or as directed by the University Engineer or his authorized subordinate and nothing extra shall be paid on this account.
- 14 The contractor shall give a performance test of the entire installation(s) as per standard specifications and Indian electricity rule 1956 (amended by time to time) before the work is finally accepted by making his own arrangements for all type of electrical installation testing etc. and nothing extra whatsoever shall be payable for the same.
- 15 If as per local Municipal regulations, huts for labour are not to be erected at the site of work, the contractor shall be required to provide such accommodation at a place as is acceptable to the local body and nothing extra shall be paid on this account.
- 16 It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.
- 17 The structural and architectural drawings shall at all times be properly co-related before executing any work. However, in case of any discrepancy in the item given in the schedule of quantities appended with the tender and Architectural drawings relating to the relevant item, the former shall prevail unless otherwise given in writing by the University Engineer.
- 18 The contractor shall maintain in perfect condition, all portions executed till completion of the entire work allotted to him. Where however phased delivery of work is contemplated these provisions shall apply separately to each phase.
- 19 The entire royalty at the prevalent rates shall have to be paid by the contractor on all the boulders, metals, shingle sand etc. collected by him for execution of the work, directly to the Revenue authority or authorized agents of the State Government concerned or the Central Government, as the case may be.

**20 PROGRAMME CHART**

- i) The contractor shall prepare an integrated programme chart for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the programme within the stipulated period or earlier as indicated in the mile stones **under clause 5** of the contract and submit the same for approval to the University Engineer within ten days of the award of the contract.
- ii) The programmes chart should include the following:-
- a) Descriptive note explaining sequence of various activities.
  - b) Net work (PERT/CPM/BAR CHART)
  - c) Programme for procurement of materials by the contractor
  - d) Programme of procurement of machinery/equipment's having adequate capacity commensurate with the quantum of work to be done within the stipulated period by the contractor.
- 21 If it appears to the University Engineer that the actual progress of work does not conform to the approved programme referred above the contractor shall produce a revised programme showing the modifications to the approved programme to ensure completion of the work within the stipulated time for completion.
- 22 The submission for approval by the University Engineer of such programme or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibilities under the contract. This is without prejudice to the right of University Engineer to take action against the contractor as per terms and conditions of the agreement.
- 23 If the work is carried out in more than one shift or during night no claim on this accounts shall be entertained.
- 24 Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.

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25 The contractor shall be responsible for the watch and ward/guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the department. No extra payment shall be made on this account.

26 The contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by department.

27 The contractor shall take instructions from the University Engineer for stacking of materials. No excavated earth or building materials etc. shall be stacked/collected in areas where other buildings, roads, services, compound walls etc. are to be constructed.

Any trenching and digging for laying sewer lines/water lines/cables etc. shall be commenced by the contractor only when all men, machinery's and materials have been arranged and closing of the trench(s) thereafter shall be ensured within the least possible time.

28

i) The contractor shall submit for the approval of University Engineer names of specialized agencies of repute along with their technical capacity proposed to be engaged by him, who must have executed satisfactorily works of value as specified in mandatory conditions.

ii) The works shall be carried out in accordance with the Architectural drawings (if any) and structural drawings (if any), to be issued from time to time by the University Engineer. Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings issued for the work and satisfy himself that the information available thereof is complete and unambiguous. The discrepancy, if any shall be brought to the notice of the University Engineer before execution of the work. The contractor alone shall be responsible for any loss or damage executing by the commencement of work on the basis of any erroneous and or incomplete information.

iii) The contractor shall take all precautions to avoid accidents by, exhibiting caution boards day and night, speed limit boards, red flags, red light and providing necessary barriers and other measures required from time to time. The

contractor shall be responsible for all damages and accidents due to negligence on his part.

- iv) Other agencies will also simultaneously execute and install the works of electrification, air conditioning, lifts, fire-fighting etc. for this work and the contractor shall provide necessary facilities for the same. The contractor shall leave such recesses, holes openings etc. as may be required for the electric, air-conditioning and other related works (for which inserts, sleeves, brackets, conduits base pinion, clamps etc. shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work & brick work, if required and nothing extra shall be payable on this account.
  - v) The contractor shall conduct work so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the University Engineer and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.
  - vi) All Architectural drawings given in the tender other than those indicated in nomenclature of items are only indicative of the nature of the work and materials/fixings involved unless and otherwise specifically mentioned. However, the work shall be executed in accordance with the drawings (if any) duly approved by the University Engineer.
- 29 Samples of all materials and fittings to be used in the work in respect of brand manufacturer and quality shall be got approved from the University Engineer, well in advance of actual execution and shall be preserved till the completion of the work. Articles bearing BIS/ISI certifications mark shall only be used unless no manufacturer has got BIS/ISI mark for the particular material. Any material/fitting whose sample has not been approved in advance and any other unapproved material brought by the contractor shall be immediately removed as soon as directed.

Unless otherwise specified in the schedule of quantities the rates for all items shall be considered as inclusive of pumping/bailing out water, if necessary, for which no extra payment shall be made. Those conditions shall be considered to

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include water from any source such as inflow of flood, surface and sub-soil water etc. and shall apply to the execution in any season.

- 30 On completion of work, the contractor shall submit at his own cost four prints of "as built" drawings to the University Engineer within 30 days of completion of work. These drawings shall have the following information:
  - a) Route of all piping and their diameters including conduits pipes & vertical stacks.
  - b) Ground and invert levels of all drainage pipes together with locations of all manholes and connections upto outfall.
- 31 Condition regarding secured advance: - No advance will be made.
32. In the event of any dispute the decision of the Vice Chancellor, University of Allahabad, Allahabad will be final and binding upon both the parties.
33. The court in the City of Allahabad alone shall have jurisdiction related to the work.
34. Before execution of work the L-1 firm will submit the shop drawing for Air Conditioning and allied works
35. Stander warrantee certificate for various components of the Air-Conditioner will be provided by the agency before handing over the completed work.
36. The defect liability period of the carried out of work including free services will be 3 years from the date of handing over the completed works.
37. For prompt service of the installed system it is desirable that the interested bidders must have proper establishment in the city of Prayagraj.
38. Since the work will be carried out in the building of Heritage importance the contractor will ensure minimum intervention to the structure of the building.

## PARTICULAR SPECIFICATION & SPECIAL CONDITION OF WORK

### 1. EARTH WORK

Any trenching and digging for laying sewer lines/water lines/cables etc. shall be commenced by the contractor only when all men, machinery's and materials have been arranged and closing of the trench(s) thereafter shall be ensured within the least possible time.

### 2. STANDARDS OF ACCEPTANCE- As per CPWD/ UPPWD specifications

- 2.1 The contractor shall give a performance test of the entire installation(s) as per standing specifications before the work is finally accepted by making his own arrangements for water supply, electricity etc. and nothing extra whatsoever shall be payable for the same.
- 2.2 The work in general shall be carried out as per CPWD/UPPWD specifications. Rate includes all materials, labour and all the operations mentioned in the respective items unless and otherwise specifically mentioned.
- 2.3 The contractor shall give a satisfactory performance test of the entire installation (s) as per IE Rules before the work is finally accepted and nothing extra shall be payable to the contractor on this account.
- 2.4 The contractor shall be responsible for all the protection of sanitary, water supply fittings and fixtures against pilferage and breakage during the period of installation until the completion / handing over of the work.

### ***PENALTY***

Further in the event of failure on the part of second party to complete the work the second party will be [penalized@0.5%](#) per week of such smaller amounts as the University may decide on the work remains unfinished subject to maximum of 5% of the tender amount.



## PROFORMA OF SCHEDULES

***Specification to be followed for execution of work:***

***For Electrical Items of Work:***

*CPWD/UPPWD General Specification for electrical works with up to date corrections along with IE Rules and Indian Standards amended upto date,*



**ANNEXURE*****List of mandatory machinery, tools and plants & testing Equipment to be deployed by the contractor at site***

- |     |   |               |
|-----|---|---------------|
| 1.  | <i>Electrical wire drawing equipment.</i>                           | <i>2 Set.</i> |
| 2.  | <i>Torque wrench for nut/bolt/screws.</i>                           | <i>2 Nos.</i> |
| 3.  | <i>Conduit die set.</i>   | <i>2 Set.</i> |
| 4.  | <i>Pipe vice.</i>   | <i>1 No.</i>  |
| 5.  | <i>Bench vice.</i>  | <i>1 No.</i>  |
| 6.  | <i>L.T.Megger 500/1000 volts.</i>                                   | <i>1 No.</i>  |
| 7.  | <i>Multimeter.</i>  | <i>1 No.</i>  |
| 8.  | <i>Hydraulically operated &amp; hand operated crimping machine.</i> | <i>1 No.</i>  |
| 9.  | <i>Earth tester.</i>  | <i>1 No.</i>  |
| 10. | <i>Portable Ordinary drilling machine.</i>                          | <i>2 Nos.</i> |
| 11. | <i>Portable Hammer drilling machine.</i>                            | <i>2 Nos.</i> |
| 12. | <i>Overhead conduit puller.</i>                                     |               |

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### **WILLINGNESS CERTIFICATE**

*Name of Work:* **SITC of Air Conditioners and Allied works etc. for Senate Hall, Senate Campus at University of Allahabad, Prayagraj.**

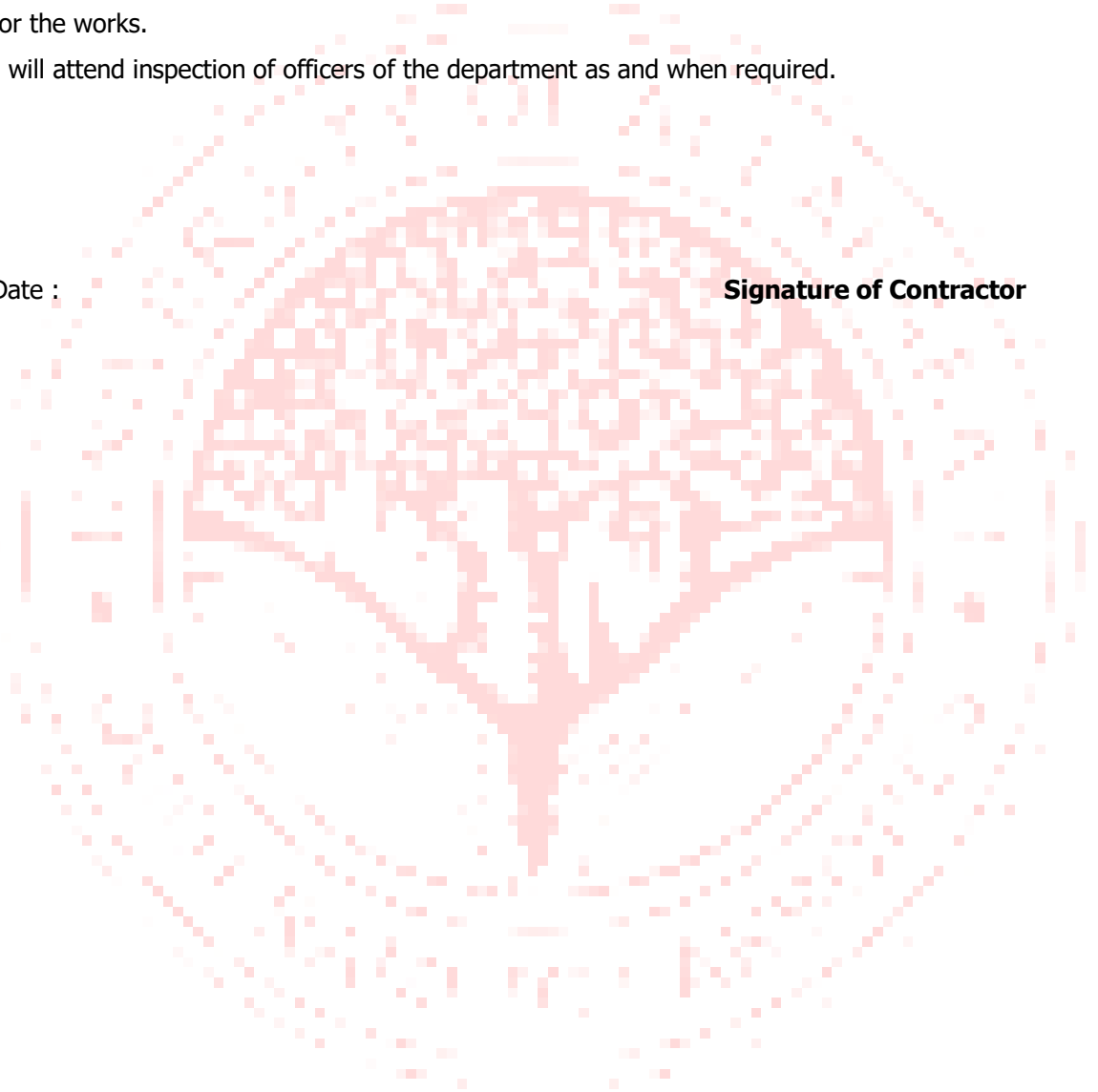
***I hereby give my willingness to work as electrical contractor for the above mentioned work.***

I will execute the work as per specifications and conditions for the agreement and as per direction of the Engineer-in-charge. Also I will employ full time technically qualified supervisor for the works.

I will attend inspection of officers of the department as and when required.

Date :

**Signature of Contractor**



## **SPECIFICATION**

1- *The work shall be carried out strictly in accordance with CPWD/UPPWD specifications for Electrical Works and in accordance with Indian Electricity Rules, 1956, Indian Electricity Act, 2003 as amended up to date, PWD specifications and as per instructions of the Engineer-in-Charge including as below and nothing will be paid extra.*

- (a) *All material shall be got approved from Engineer-in-Charge before use. One sample flat/Bay shall be made for approval of final location of switch boards/ fittings etc. and then only work shall be executed in other flats/bays.*

*All damages done to the building during execution of Electrical work shall be the responsibility of the contractor and the same will be made good immediately at his own cost to the satisfaction of the Engineer-in-Charge. Any expenditure incurred by the department in this condition shall be recovered from the contractor and decision of the Engineer-in-Charge about recovery shall be final.*

- (b) *All hardware items such as screws, thimbles, G.I. wires etc. which are essentially required for completing an item as per specifications will be deemed to be included in the item even when the same have not been specifically mentioned. All hardware materials such as nuts/bolts/screws/ washers etc. to be used in the work shall be zinc/cadmium plated iron.*

- (c) *CONDUIT LAYOUT shall be prepared by contractor and got approved before execution of work. In case contractor does not do so before start of work, recovery @ 2(two)% of tendered amount of IEI work shall be made from the bill. Minimum No.of Junctions to be kept, & if required junctions to be kept underneath the fitting locations in corridor/rooms so that junctions are not visible after fittings are fixed/in position. Drop of conduit shall be well planned w.r.t. location of fitting/D.B. and criss crossing to be avoided. All chases in walls shall be cut using electrical chisels/cutters. For this purpose electricity shall be arranged by contractor. In case contractor fails to do chase cutting by electrical chisels/cutters and resorts to manual methods, a recovery of Rs.50/- per point shall be made from contractor's bill.*

*Whenever point wiring items is executed in casing capping system PVC box of PRESTOTEAK or equivalent make shall be provided in place of MS box.*

*In case cable in the lift shaft is also to be fixed, contractor shall have to liaison with CIVIL/Lift agency to make use of the scaffolding provided by them.*

- (d) *Any conduit which is not to be wired by the contractor shall be provided with GI fish wire for wiring by some other agency subsequently. Nothing extra shall be paid for the same.*

*Copper wire upto 4 sqmm. may be single stranded or multi stranded whereas wires above 4 sqmm. shall be multi-stranded conductor. Termination of multi-stranded conductors shall be done using crimping type thimbles at both the ends. Nothing extra shall be paid for the same.*

- (e) *All metal boxes to be applied primer and painted, then only should be installed else recovery @Rs.20/- per point should be made from contractor's bill. Boxes shall have socket arrangement for tightening screws, instead of simple holes in M.S.sheet. Boxes shall be again painted at the time of wiring.*

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- (f) *For Submain Wiring, Colour Code for different phases and Neutral (R.Y.B. black) to be maintained. While circuit wiring, wiring for fan point, wiring for light point shall be done with different colours for easy identification. Wiring for neutral shall be done with black colour and all connections to fans & fittings wherever visible shall be made with white PVC insulated copper wire or wherever cover sleeve may be provided. At Switch board, Switch shall be fixed in a logical manner w.r.t. fittings layout.*
- (g) *Unless specifically approved by the University Engineer as per the recommendations of AE(EI)/Engineer(EI)/JE(EI), loose wire box, above DB shall not be provided however DB's shall have loose wire box of same make.*
- All connections to MCB's shall be made using thimble/lugs.*
- All DB's i/c incoming & outgoing MCB's shall be suitably numbered with PAINT for location/circuits. DB shall be fixed in recess suitably (30 mm. approx. projected from unplastered wall) to ease opening of door. Top of DB to match with door frame height as per site conditions.*
- (h) *Phenolic laminated sheet shall be of Egg white colour, and shall be filed/rounded at edges and of minimum 3mm thick.*
- (i) *All fittings and fans should be properly earthed through the protective conductor. Provision of earth bars in main boards, earth terminal block in DB's & earth studs in all metal boxes shall be made, connection to this stud shall be crimped. A clamp type termination should be made in the termination of earth strips (where provided) to pipe electrodes to provide surface type contact.*
- (j) *The earthing shall be carried out in the presence of the Engineer-in-charge or his authorized representative.*
- (k) *The size at switch box for providing Modular Plate type Switch/Socket shall be properly settled to take care of all necessary switches/screws/fan regulators. Blanking plate if required shall also be provided at no extra cost.*
- (l) *For point wiring in steel conduit all piano type switches or all modular type switches/sockets/telephone outlets/T.V. outlets shall be of only one make.*
- (m) *Whenever supply items like fans & fittings etc. are also included in the Schedule of work, such items shall be executed only after completion of at least 75% of the wiring items.*
- (n) *The contractor shall make his own arrangement at his own cost for electrical/general tools and plants required for the work.*

2- *The work shall be carried out according to approved drawings/details which shall be subsequently issued to the successful tenderer for execution of work and as per instructions of the Engineer-in-Charge who will have the right to change the layout as per requirement at site and the contractor shall not have any claim due to change in layout.*

*The work shall be carried out in engineering like manner. The bad workmanship will not be accepted and defects shall be rectified at contractor's cost of the satisfaction of the Engineer-in-Charge. The programme of electrical works are to be co-ordinate in accordance with the building work and no claim for idle labour will stipulated in the tender, electrical work shall have to be completed along with completion of civil work.*

*All the debris of the electrical works should be removed and the site should be cleared by the contractor immediately after the accruing of debris. Similarly any*

*rejected material should be immediately cleared off from the site by the contractor.*

*Watch and ward of the material/equipment shall be the responsibility of the contractor till handing over of installation to the department.*

*The contractor or his representative is bound to sign the site order book as and when required by the Engineer-in-Charge and to comply with the remarks therein.*

- 3- *The entire installation shall be at the risk and responsibility of the contractor until these are tested and handed over to the department. However if there is any delay in construction from the department side, the installation may be taken over in parts, but the decision on the same shall rest with Engineer-in-Charge which shall be a binding on the contractor.*

*Some of the items of work, if already executed: on that case the successful tenderer shall have to use these items for completing the work. For wiring, the existing conduit wherever required shall be used by the contractor. The recovery will be made for these items as accepted rate of similar items.*

- 4- *The secured advance is not allowed.*

- 5- *Test Certificate Test certificate (if required) for the work carried out shall also be submitted failing which recovery @1% tendered amount (electrical component) shall be made from final bill.*

- 6- *Panels: Drawing of panel shall be submitted for approval within 30 days from award of work and fabrication to be taken up only after approval of such drawing. Before painting proper surface treatment shall be done and than powder coated. These shall be offered for inspection during fabrication.*

- 7- *Quantities indicated in Schedule of work are only tentative; contractor shall consult AE-in-Charge before procurement. Payment shall be made only for the quantities actually executed and measured.*

- 8- *Time Period: Contractor has to plan his activities, so that electrical work is to be carried out in close co-ordination with CIVIL work and in no case CIVIL work be delayed because of delay in electrical work and the work has to be completed accordingly.*

- 9- *The makes for items shall be as per list attached.*

- 10- *Storage: Responsibility for storage space for execution of work shall be of main contractor.*

- 11- *Power & Water Supply: Responsibility for supply of power and water for execution of work shall be of main contractor.*

- 12- *Material to be used in the work shall be ISI marked as applicable. The material in required quantity to be used in the work shall be got approved from the Engineer-in-charge before its use at site. The Engineer-in-charge shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not as per specifications.*

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- 13- Contractor shall preserve the copies of invoices, test certificates; gate passes etc. to prove the genuineness of material/purchases. The responsibility of procurement, genuine material of specialized works shall rest with the contractor.
- 14- Contractor is advised to visit site before quoting rates for determining site conditions. No claim or argument shall be entertained in this regard at later stage.
15. **No inspection out side the country is permissible if required so the same will be deemed to be waived off and necessary test report shall be submitted along with the equipment.**



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**Acceptable Makes for Internal Electrical Installations**

(1)	PVC insulated copper wires i/c Control cables, TV/ Telephone Cable	KEI/Universa/R.R.Kable/Finolex/Lapp Kabel/L&T/Havells/ Gloster
	XLPE insulated PVC sheathed Al. Cable upto 1.1 KV grade.	Polycab/Finolex/L&T/Universal/Rallision/ Nicco/KEI/Grandlay/Gloster/ Havells
(2)	PVC conduit including its accessories.	Precision/Asian/Diamond/Modi/AKG.
(3)	MS Conduit & Accessories	BEC/ AKG/NIC/Steel Kraft /M-Kay/JPC
(4)	MCCB, Timer, SFU, FSU, HRC Fuses, Cable Management System/DLP Trunking.	Siemens/L&T/Schneider/ Legrand/ ABB/C&S/Bhartiya Cutler Hammer/ Havells
(5)	Piano Switches/ Sockets/ T.V./Telephone Outlet	Anchor/Rider/Leader / Havells.
(6)	Modular type Switches/ Sockets T.V./Telephone Outlet/ Call bell/Buzzer	Legrand/Siemens/L&T/ ABB/Moeler/ M.K./Anchor/ Havells/Philips.
(7)	Ammeter/Voltmeter	AE/IMP/Rishabh/HPL. (Only Digital type to be used)
(8)	Selector Switch	Kayee/Siemens/Bhartiya Cutler Hammer/ L. & T.
(9)	Change over Switch	HPL/H-Elcon. /L. & T./ Siemens/ Havells
(10)	Indicating Lamps	Teknic/Siemens/L & T./Vaishnov.
(11)	Panel Board/Feeder Pillar/Meter Board	Tricolite Electric Industries (Pvt.)Ltd./ Advance Panel and Switchgears Pvt.Ltd./ Adlec Mundka/ Associated Switch gears Projects Ltd./Prestine/ Neptune/Sudhir Gensets Ltd./ Advance Power Control System Pvt.Ltd./Control & Switch gears Pvt.Ltd./Sterling Willson/ Milestone/Unilec.
(12)	Rising Main	L & T/MDS-Legrand/C&S/ Schneider/GE.
(13)	Energy Meter/ Multifunctional/Intelligent Energy Meter.	Siemens/HPL/L&T/Hensel/AE/RISHABH
(14)	G.I.Pipe	Jindal Hissar / TATA / SAIL / TT Swastik
(15)	Fluorescent / CFL/LED/Flood Light/Street Light fitting.	Philips/ Crompton/ Bajaj/ Havells
(16)	Lamps.	GE/Osram/Philips/Crompton/Bajaj/Wipro/ Havells
(17)	Angle Holder/Batten Holder	Anchor/ Havells
(18)	GEYESER	Racold/Bajaj/Crompton/Jaguar/ Havells
(19)	Internet Cable	D-Link/Avaya/Lucent/Finolex/HCL/ Havells
(20)	MCB & MCB DB.	L&T/Schneider/ Legrand/ ABB/C&S/Hager/Havells.
(21)	Ceiling Fan/ Exhaust Fan (Only energy efficient Fans, consuming $\leq 50$ W and CMM $\geq 200$ for 1200 mm & 60 W and CMM $\geq 240$ for 1400 mm shall be used).	Crompton/Orient /Khaitan/Bajaj /Usha/Havells.
(22)	AC Units	Carrier, Daikin, Hitachi, O-Genral, Voltas, Mitsubishi electric.

If any item not covered under the above table the same will be decided by Engineer-in-charge.





***PART C***



**PART-C**  
**FINANCIAL BID**  
**SCHEDULE OF QUANTITY**

**Name of work:-** SITC of Air Conditioners and Allied works etc. for Senate Hall, Senate Campus at University of Allahabad, Prayagraj.

<i>Sl No.</i>	<i>Description</i>	<i>Unit</i>	<i>Quantity</i>	<i>Rate (Rs.)</i>	<i>Amount (Rs.)</i>
<b>1</b>	<b><u>TOWER AC,CASSETTE AC AND SPLIT AC</u></b>				
a	<b>3.8 TON TOWER AC</b>	Nos.	20		
b	<b>3.8 TON CASSETTE AC</b>	Nos.	2		
c	<b>1.8 TON HI-WALL TYPE UNIT</b>	Nos.	1		
<b>2</b>	<b><u>Installation Charges of IDU and ODU:</u></b>				
a	Lifting , sifting ,positioning and installing of Tower units. Vacumising etc.	Nos	20		
b	Lifting ,sifting ,positioning and installing of Cassette units. Vacumising etc.	Nos	2		
c	Lifting ,sifting ,positioning and installing of Hi-wall units. Vacumising etc.	Nos	1		
<b>3</b>	<b><u>Refrigerant Piping &amp; Insulation</u></b>				
	Supply & installation charges for Interconnecting refrigerant pipe work for tower, Cassette And Hi-wall Unit suitable for refrigerant flow.	Rmt	300		
<b>4</b>	<b><u>Drain Piping</u></b>				
	Providing and fixing rigid UPVC piping complete with fittings, supports as per specifications and duly insulated with 6 mm thick closed cell nitrile rubber insulation.				
	20 mm dia.	Rmt.	300		
<b>5</b>	<b><u>IDU 's –Floor Mounted Frame Tower AC</u></b>				
	Supply, Installation, Testing & commissioning of steel frame for Indoor units. Complete as per site requirement				
		NOS	20		
<b>6</b>	<b><u>OUTDOOR &amp; INDOOR STAND</u></b>				
	Supply, Installation, Testing & commissioning of MS base frame / platform duly epoxy painted for outdoor units. (For Outdoor units				

	weather protective paint to be provided) Complete as per site requirement etc complete Job				
	ODU 's – Floor Mounted Table Top Type	Nos	43		
<b>7</b>	<b><u>OUTDOOR NET FRAME WORK</u></b>				
	Supply Installation and fixing of Iron Net Frame work For Protection of Outdoor Unit duly epoxy painted weather protective paint to be Provided etc complete Job	Nos	23		
<b>8</b>	<b><u>Electrical fram work</u></b>				
	Supply & Erection of Fabricated & wire metal clad dust and vermin proof floor mounting MS Chanel base with bottom and top cable entries Electrical Control with TPN ACB's and TPN MCCB's.	Nos	1		
<b>9</b>	<b><u>Cable fittings with conduit 4 CORE 1.5 MM</u></b>				
	Supply, Installation, Testing & commissioning of control cum transmission wiring of 4 core x 1.5 sqmm shielded copper wire suitable between indoor and outdoor and indoor units, complete as required.	Rmt.	300		
<b>10</b>	<b><u>Wall And Floor Cutting fitting and plaster</u></b>				
	Brick Wall and floor with marble gray night Cutting fitting for Drain pipe , copper pipe communication cable and power cable Depth 63mmx76mm with plaster complete job	Rmt.	850		
<b>11</b>	<b><u>RB HOLE</u></b>				
	RB hole for copper pipe and drain pipe 450mmx250 & wall packing & Plaster with complete job	Nos	40		
<b>12</b>	<b><u>VTPN</u></b>				
	Designing, Manufacture, Supply installation testing and commissioning of cubical pipe wall mounted control panel for outdoor unit quoted price shall include all necessary internal wiring and earthling. following :-				
<b>A</b>	<b>12 WEY-VERTICAL TPMCB</b>				
	Supply laying and fixing of 12 wey TPMCB	Nos	2		
<b>B</b>	<b>4 pole MCB BOX</b>				
	Supply laying and fixing of 4 pole mcb box	Nos	23		

<b>C</b>	4 pole 32 AMP MCB				
	Supply laying and fixing of 4 pole 32 amp mcb	Nos	48		
<b>D</b>	4 pole 160 AMP MCCB				
	Supply laying and fixing of 4 pole 160 amp mccb	Nos	2		
<b>E</b>	4 pole change over				
	Supply laying and fixing of 4 pole change over	Nos	1		
<b>13</b>	<b><u>Conduite Pipe 32 mm</u></b>				
	Supply, Installation, Testing & commissioning of control cum conduit pipe 32 mm suitable between indoor and outdoor and indoor units, complete as required.	Rmt.	500		
<b>14</b>	<b><u>Power cable</u></b>	-			
<b>A</b>	Supply lying and fixing of 3.5 core 300 sqmm AL cable with conduit pipe direct ground horizontal with sand crusing protecting covering etc. as required.	Rmt.	50		
<b>B</b>	Supply lying and fixing of 3.5 core 120 sq mm AL cable with conduit pipe direct ground horizontal & vertical with clamping protecting covering etc. as required.	Rmt.	550		
<b>C</b>	Supply lying and fixing of 4 core 6 sq. mm Cu cable with conduite pipe direct ground horizontal & vertical with clamping protecting covering etc. as required.	Rmt.	450		
<b>D</b>	supply and fixing of 300 sqmm lug	Nos	8		
<b>E</b>	supply and fixing of 120 sqmm lug	Nos	16		
<b>F</b>	supply and fixing of 300 sqmm gland	Nos	2		
<b>G</b>	supply and fixing of 120 sqmm gland	Nos	4		
<b>15</b>	Chemical copper earthing by GI pipe including accessories and masonry incloser with cover plate having locking arrangement watering pipe etc with salt and charcoal/cock complete as required	Nos	2		
<b>16</b>	Supply and fixing Copper strip 25mmx5mm from earth electrode including connection with brass nut bolt etc as required.	Rmt.	50		
<b>17</b>	<b><u>Fire- Extinguisher</u></b>	-			
<b>A</b>	Supply and fixing 6.5 kg CO2	Nos.	2		
<b>B</b>	Supply and fixing 6.0 kg ABC	Nos.	2		

<b>C</b>	<i>Supply And fixing Wall bracket</i>	<i>Nos.</i>	<i>4</i>		
<b>D</b>	<i>Supply And fixing Bucket with Sand</i>	<i>Nos.</i>	<i>4</i>		
<b>18</b>	<i>Supply and fixing Copper strip 25mmx5mm from earth electrode including connection with brass nut bolt etc as required.</i>	<i>Rmt.</i>	<i>50</i>		

Registrar  
University of Allahabad