



**INDIAN INSTITUTE OF TECHNOLOGY DELHI**  
**HAUZ KHAS, NEW DELHI - 110016**

NAME OF WORK	:	Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi.
ESTIMATED COST	:	<b>Rs. 37,45,854/- (Inclusive GST)</b>
EMD	:	<b>Rs. 74,917/-</b>
N.I.T. No.	:	-
AMC	:	Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi.
Date of Opening	:	<b>30/04/2019</b>

**Name of Work: Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi.**

NIT for the above work has been prepared with the following:

1	Amount of NIT	:	<b>Rs. 37,45,854/-</b>
2	Earnest money	:	<b>Rs. 74,917/-</b>
3	Performance guarantee	:	<b>5% of the tendered cost</b>
3	Completion time	:	12 Months
4	Last date of submission (online)	:	29.04.2019 up to 03:00 PM
5	Date of opening	:	30.04.2019 at 03:00 PM
6	Form of NIT	:	IITD - 8
7	Schedule applicable	:	DSR/Market Rate
8	Material stipulated	:	As per Schedule of Work
9	Chargeable head	:	NPN-10
10	Estimate no.	:	-
11	Work code no.	:	-
12	NIT No.	:	-
13	Type of work	:	Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC systems.

Certified that this NIT contains 1 to 61 pages.

NIT amounting to Rs.37, 45,854/- is approved.

**Sr. F.I.**

**AEE, SS**

**Prof. In-charge-LHC**

**INDIAN INSTITUTE OF TECHNOLOGY DELHI**  
**HAUZ KHAS, NEW DELHI – 110016**  
**NOTICE INVITING E-TENDER**  
**IITD/WORKS(SP-2287)/2019**

Professor -in- charge (LHC) Indian Institute of Technology Delhi, Hauz Khas, New Delhi – 100016 on behalf of Board of Governors invites online **Item Rate Tender** from Specialized Firms/ Contractors of repute for the following work:

1	Name of Work	:	Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi.
2	NIT No.	:	-
3	Estimated cost	:	Rs. 37,45,854/-
4	Earnest Money	:	Rs. 74,917/-
5	Period of completion	:	12 months
6	Last date & time of bid submission	:	29.04.2019 up to 03:00PM
7	Performance Bank Guarantee	:	5% of the tendered amount

The bid forms and other details may be downloaded from Central Public Procurement Portal <http://eprocure.gov.in/eprocure/app>. Aspiring Bidders who have not enrolled / registered in e-procurement should enroll / register before participating through the website <http://eprocure.gov.in/eprocure/app>. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission.

Bidders can access Quotation / tender documents on the website (For searching in the NIC site, kindly go to Quotation Search option and type 'IIT'. Thereafter, Click on "GO" button to view all IIT Delhi Quotations). Select the appropriate Quotation / tender and fill them with all relevant information and submit the completed Quotation / tender document online on the website <http://eprocure.gov.in/eprocure/app> as per the schedule given in the next page.

**No manual bids will be accepted. All bids (both Technical and Financial should be submitted in the E-procurement portal).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. Certificate of Registration of GST. III. Copy of receipt for deposition of original EMD issued from division office of any Executive Engineer (Including NIT issuing EE/AEE)**

**Prof. In-charge -LHC,**  
**For & on Behalf of BOG, IIT Delhi**

**Copy to: -**

1. Dean(Academics)
2. Chairman (PFC)
3. Sr. F/I
4. D.R. (A/Cs)
5. D.R. [SPS]
6. Notice Boards.
7. Office Copy
8. Web site Administrator, IITD

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## SCHEDULE

1	Name of Organization	:	Indian Institute of Technology Delhi
2	Tender / Quotation Type [open / limited / EOI / auction / single]	:	Open
3	Tender / Quotation Category [services / goods / works]	:	Goods/Works
4	Type / Form of Contract [work / supply / auction / service / buy / empanelment / sell]	:	Work& Service
5	Product Category [civil works / electrical works / fleet management / computer systems]	:	Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi.
6	Is Multi Currency Allowed?	:	No
7	Date of issue / publishing /start	:	<b>15.04.2019 up to 03:00PM</b>
8	Document download start date	:	<b>15.04.2019 up to 03:00PM</b>
9	Document download end date	:	<b>29.04.2019 up to 03:00PM</b>
8	Last date & time of uploading of bids	:	<b>29.04.2019 up to 03:00PM</b>
9	Date & time of opening of Technical Bids	:	<b>30.04.2019 up to 03:00PM</b>
10	EMD	:	Rs.74,917/- [For EMD] (To be paid through RTGS/NEFT. IIT Delhi Bank details are as under: Name of the Bank A/C : IITD Revenue Account SBI A/C No. : 10773572622 Name of the Bank : State Bank of India, IIT Delhi, Hauz Khas, New Delhi-110016 IFSC Code : SBIN0001077 MICR Code : 110002156 Swift No. : SBININBB547 (This is mandatory that UTR Number is provided in the on-line quotation/bid. (Kindly refer to the UTR Column of the Declaration Sheet at Annexure-II)
11	No. of covers [1/2/3/4]	:	02
12	Address for communication	:	Prof. G.V.Prakash Professor in Charge(LHC),Works Organization, Hauz Khas, IIT Delhi, New Delhi - 110016
13	Contact No.	:	011- 2659-7199
14	E-mail address	:	<a href="mailto:a26318@admin.iitd.ac.in">a26318@admin.iitd.ac.in</a> ,
15	EMD Exemption	:	May be granted to NSIC / MSME registered firms who are registered for this particular type of work. However, document must be enclosed with Technical bid.

## **INSTRUCTIONS FOR ONLINE BID SUBMISSION**

As per the directives of Department of Expenditure, this Quotation / tender document has been published on the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at:

<http://eprocure.gov.in/eprocure/app>

### **REGISTRATION**

- 1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)) by clicking on the link "Click here to Enroll". Enrolment on the CPP Portal is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSCs to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their userID / password and the password of the DSC / e-Token.

### **SEARCHING FOR QUOTATION /TENDER DOCUMENTS**

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active Quotations / Tender by several parameters. These parameters could include Quotation ID, organization name, location, date, value, etc. There is also an option of advanced search for Quotations, wherein the bidders may combine a number of search parameters such as organization name, form of contract, location, date, other keywords etc. to search for a Quotation published on the CPP Portal.
- 2) Once the bidders have selected the Quotations they are interested in, they may download the required documents / Quotation schedules. These Quotations can be moved to the respective 'My Quotations' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the Quotation document.
- 3) The bidder should make a note of the unique Quotation ID assigned to each Quotation / Tender, in case they want to obtain any clarification / help from the Helpdesk.

### **PREPARATION OF BIDS**

- 1) Bidder should take into account any corrigendum published on the Quotation document before submitting their bids.
- 2) Please go through the Quotation / Tender advertisement and the Quotation / Tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the Quotation document / schedule and generally, they can be in PDF / XLS / RAR / DWF formats. Bid documents may be scanned with 100 dpi with black and white option.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

### **SUBMISSION OF BIDS**

- 1) Bidder should log into the site well in advance for bid submission so that he/she upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the Quotation document.
- 3) Bidder has to select the payment option as "offline" to pay the Quotation fee / EMD as applicable and enter details of the instrument.
- 4) A standard BoQ format has been provided with the Quotation document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the BoQ file, open it and complete the white colored (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

### **OR**

In some cases Financial Bids can be submitted in PDF format as well (in lieu of BOQ).

- 5) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 6) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done.
- 7) The uploaded Quotation documents become readable only after the Quotation opening by the authorized bid openers.
- 8) Upon the successful and timely submission of bids, the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 9) Kindly add scanned PDF of all relevant documents in a single PDF file of compliance sheet.

### **ASSISTANCE TO BIDDERS**

- 1) Any queries relating to the Quotation document and the terms and conditions contained therein should be addressed to the Quotation Inviting Authority for a Quotation or the relevant contact person indicated in the Quotation.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk. The contact number for the helpdesk is 1800 233 7315.



## **GENERAL INSTRUCTIONS TO THE BIDDERS**

- 1) The Quotations will be received online through portal <http://eprocure.gov.in/eprocure/app> . In the Technical Bids, the bidders are required to upload all the documents in .pdf format.
- 2) Possession of a Valid Class- III Digital Signature Certificate (DSC) in the form of smart card/e-token in the company's name is a prerequisite for registration and participating in the bid submission activities through <https://eprocure.gov.in/eprocure/app>. Digital Signature Certificates can be obtained from the authorized certifying agencies, details of which are available in the web site <https://eprocure.gov.in/eprocure/app> under the link "Information about DSC".

Bidders are advised to follow the instructions provided in the 'Instructions to the Bidder' for the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at <https://eprocure.gov.in/eprocure/app>.

## INFORMATION AND INSTRUCTIONS TO BIDDERS FOR E-TENDERING

Professor -in- charge (LHC) - Indian Institute of Technology Delhi, Hauz Khas, New Delhi –100016 on behalf of Board of Governors invites online **Item Rate Tender** from Specialized Firms/ Contractors of repute for the following work:

Sl. No.	N.I.T. No.	Name of work & Location	Estimated cost put to bid	Earnest Money	Period of completion	Last date & time of submission of bid	Time & date of opening of Technical Bid	Time & date of opening of financial bid
[1]	[2]	[3]	[4]	[5]	[7]	[8]	[9]	[10]
1		Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi.	37,45,854.00	74,917/-	12 months	29.04.2019 up to 03:00PM	30.04.2019 up to 03:00PM	To be Intimated after assessing Technical bid.

### 1. Performance Bank Guarantee:

The successful tenderer shall submit an irrevocable performance guarantee of 5% of the tendered amount in addition to other deposit mentioned elsewhere in the contract for his proper performance of the contract agreement within 15 days of issue of letter of acceptance of tender. This guarantee shall be in the form of Demand Draft/Pay order of irrevocable bank guarantee bond of any schedule bank or the State Bank of India in the specified perform a of Government Security, fixed deposit receipt pledged in favour of Professor-in-charge (LHC) or as specified in the letter of acceptance of tender. The performance guarantee shall be initially valid up to the stipulated date of completion plus 60 days beyond. This bank guarantee shall be further renewed and kept valid till the recording of completion certificate.

2. The bidder who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted. The Bidder/Firm/Company should have satisfactorily completed either

- (i) one similar work of value not less than **Rs. 29,96,683.00** or
- (ii) two similar works each of value not less than **Rs. 22,47,512.00** or

(iii) three similar works each of value not less than **Rs. 14,98,342.00**

during last 7 years ending previous day of last date of submission of bids.

3. Earnest Money of Rs. 74,917/-to be deposited on-line as indicated in Schedule.
4. **Similar work means** :Comprehensive Maintenance and operation of water cooled screw chillers and HVAC system with capacity greater than (3 x 220 TR) of each chiller as per schedule of work and General Terms & Conditions and other details given in the Tender document.
5. The intending bidder must read the terms and conditions [both commercial &Additional]& IITD - 6 carefully which will be the part of the Contract. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
6. Information and Instructions for bidders posted on website shall form part of bid document.
7. 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 [e-procure.gov.in](http://e-procure.gov.in).
8. But the bid can only be submitted after depositing requisite tender fee and EMD as specified in the schedule.
9. Copy of enlistment order and certificate of work experience and other documents as specified in the Press Notice / web notice shall be scanned and up-loaded to the e-Tendering website within the period of bid submission. However, certified / original copy of all the scanned and up-loaded documents as specified in press notice web / notice shall have to be submitted by the lowest bidder only within a week physically in the office of e-tendering authority.
10. Online bid documents submitted by intending bidders shall be opened only of those bidders, who has deposited requisite EMD and other documents scanned and uploaded are found in order.
11. Prospective vendors shall have well experienced in similar type of works with Central/State/PSU/Govt. Societies or worked with MNC's multi-storied office complex/well known organization. Completion certificates are required to be got issued by an officer not below the rank of Executive Engineer of similar works completed by the Firm. The work experience certificates submitted by the bidders shall clearly indicate that:
  - a. The similar work executed shall be **as '4' above**
  - b. The completed cost of the work.
  - c. Actual date of completion of the work
12. Attested copy of registration certificates to be submitted. Registration of firms/ Contractors must be valid on the day of submission of Tenders or extended date of submission of Tenders whichever is later.
13. Work means only work under Government/ Public Sector Undertaking / Central Autonomous bodies.
14. The value of executed work shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of submission of financial bid.
15. IITD is committed to follow the principle of transparency, equity and competitiveness in public procurement. Before submission of bid, **each bidder should sign integrity pact at respective places** and submit the bid. If duly signed integrity pact is not submitted by bidder, such bid shall not be considered.
16. Those contractors not registered on the website mentioned above, are required to get registered beforehand. If needed they can be imparted training on online bidding process as per details available on the website.
17. When bids are invited in two / three stages systems and if it is desired to submit revised financial bid it shall be mandatory to submit revised financial bid. If not submitted then the bid submitted earlier shall become invalid.

18. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.
19. The bid submitted shall become invalid if:
  - a. The bidder is found ineligible.
  - b. The bidder does not upload all the documents (including GST registration and EPF & ESI along with up to date filed return), work experience as desired as stipulated in the bid document including the undertaking/ declaration.
  - c. EMD not deposited through RTGS/NEFT as specified / exemption not claimed with supporting documents.
20. The firm shall be registered with EPFO & ESIC.

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

1. Annexure: I -Organization declaration sheet.
2. Annexure II- List of Govt. Organization/Deptt (Attested certificate of work experience as desired).
3. Certificate of Registration for GSTIN.
4. Affidavit as per Notice Inviting Tender Condition 1.2.2. (To be submitted on stamp paper)
5. Acceptance to execute INTEGRITY PACT [see integrity pact]
6. EPF & ESI Registration proof.
7. IITD 7 / 8 duly signed. [ at page-23]
8. MSME / NSIC Registration [If the bidder claims for EMD exemption]
9. Any other document as specified in the NIT.

**Prof. In-charge -LHC,  
For & on Behalf of BOG, IIT Delhi**

**INDIAN INSTITUTE OF TECHNOLOGY DELHI  
NOTICE INVITING E-TENDER**

Professor-in-Charge (LHC), Indian Institute of Technology Delhi, Hauz Khas, New Delhi – 100016 on behalf of Board of Governors invites online **Item Rate Tender** from Specialized Firms/ Contractors of repute for the following work:

- 1.1 The work is estimated to cost **Rs. 37,45,854/-** This estimate, however, is given merely as a rough guide
  - 1.1.1 The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. He will also nominate Division which will deal with all matters relating to the invitation of bids.

For composite bid, besides indicating the combined estimated cost put to tender, should clearly indicate the estimated cost of each component separately. The eligibility of bidders will correspond to the combined estimated cost of different components put to bid.

- 1.2 Intending bidder is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:-

**Criteria of eligibility for submission of bid documents.**

**1.2.1 Criteria of eligibility for CPWD as well as non-CPWD contractors for specialize work.**

The Bidder/Firm/Company should have satisfactorily completed one similar work of value not less than **Rs.29,96,683.00** or two similar works each of value not less than **Rs. 22,47,512.00** or three similar works each of value not less than **Rs. 14,98,342.00** during last 7 years ending previous day of last date of submission of bids.

**1.2.2 To become eligible for issue of bid, the bidders shall have to furnish an affidavit as under :-**

“I / We undertake and confirm that eligible similar works(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 bidding in IIT Delhi in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee (Scanned copy to be uploaded at the time of submission of bid)”

2. Agreement shall be drawn with the successful bidders on prescribed Form No. IITD 7/8 which is available as IIT Delhi Publication. Bidders shall quote their 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 12 months from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.
4. 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 except Standard General Conditions of Contract Form can be seen from the web Site e-procure.gov.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 tender 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 tender as notified.
8. If it is desired to submit revised financial bid then it shall be mandatory to submit revised financial bid. If not submitted then the tender submitted earlier shall become invalid.
9. Earnest Money as specified to be paid through RTGS / NEFT.  
IIT Delhi Bank details are as under:  
Name of the Bank A/C : IITD Revenue Account  
SBI A/C No. : 10773572622  
Name of the Bank : State Bank of India, IIT Delhi,  
Hauz Khas,  
New Delhi-110016  
IFSC Code : SBIN0001077  
MICR Code : 110002156  
Swift No. : SBININBB547  
(This is mandatory that UTR Number is provided in the on-line quotation/bid. Kindly refer to the UTR Column of the Declaration Sheet at Annexure-I)

Interested contractors who wish to participate in the bid has also to make following payments within the period of bid submission:

- (i) Copy of Enlistment Order and certificate of work experience and other documents as specified in the press notice shall be scanned and uploaded to the e-tendering website within the period of bid submission.
10. The bid submitted shall become invalid, if:
  - a) The bidder is found ineligible.
  - b) The bidder does not upload all the documents (including GST registration and EPF & ESI along with up to date filed return), work experience as desired as stipulated in the bid document including the undertaking/ declaration
  - c) EMD not deposited as specified/exemption not claimed with supporting documents.
11. The contractor whose bid is accepted will be required to furnish **performance bank guarantee of 5% (Five Percent)** of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of Deposit at Call receipt of any scheduled bank/Banker' cheque of any scheduled bank/ Demand Draft of any scheduled bank/Pay order of any Scheduled Bank (in case guarantee amount is less than Rs.1,00,000/-) or Government Securities or Fixed Deposit Receipts or irrevocable Bank Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.
12. 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 subsoil (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 bid. A bidder 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 bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

13. The competent authority on behalf of the Board of Governors 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 bidder shall be summarily rejected.
14. 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.
15. The competent authority on behalf of the Board of Governors reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.
16. The contractor shall not be permitted to bid for works in the IITD responsible for award and execution of contracts, in which his near relative is posted a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). 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 Gazetted officer in the IIT Delhi. Any breach of this condition by the contractor would render him liable to be debarred from bidding process in future in IIT Delhi.
17. 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 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.
18. The bid for the works shall remain open for acceptance for a period of **ninety [90] days from the date of opening of financial bids**, if any bidder 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 IIT Delhi shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidder shall not be allowed to participate in the re-bidding process of the work.
19. This notice inviting bid shall form a part of the contract document. The successful bidder / contractor, on acceptance of his bid by the Accepting 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.
  - b) Standard IITD Form –7/8 or other Standard IITD Form as applicable.
20. In case any discrepancy is noticed between the documents as uploaded at the time of submission of the bid online and hard copies as to be submitted physically in IIT Delhi, if so desired by the accepting authority, then the bid submitted shall become invalid and the IIT Delhi shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidder shall not be allowed to participate in the bidding process of the work.

**INTEGRITY PACT**

To

.....,

.....,

.....

**Sub: NIT No. work of.**“Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi..

**Dear Sir,**

It is here by declared that IITD is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the Integrity Agreement, which is an integral part of the tender/bid documents, failing which the tender/bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the IITD.

**Yours faithfully,  
Prof. In-charge -LHC,  
For & on Behalf of BOG, IIT Delhi.**



**[TO BE SUBMITTED DULY SIGNED BY THE BIDDER ALONGWITH BID DOCUMENTS]**

To

**Prof. In-charge -LHC,**  
IIT Delhi, Hauz Khas,  
New Delhi – 110016

**Subject: Submission of Bid for the work of “Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi”.**

**Dear Sir,**

I / We acknowledge that IITD. is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I / We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I / We will sign the enclosed integrity Agreement, which is an integral part of tender / bid documents, failing which I / We will stand disqualified from the tendering process. I / We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I / We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by IITD. I / We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I / We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, IITD shall have unqualified, absolute and unfettered right to disqualify the tenderer /bidder and reject the tender/bid is accordance with terms and conditions of the tender/bid.

**Yours faithfully,**

**(Duly authorized signatory of the Bidder)**

[To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of IITD]

### INTEGRITY AGREEMENT

This Integrity Agreement is made at ..... on this ..... day of..... 20.....

### BETWEEN

The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 16 represented through **Prof. In-charge -LHC**, IIT Delhi  
....., (Hereinafter referred as the  
**'Principal/Owner'**,

(Address of Division)

**'Principal/Owner'**, which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

### AND

.....  
.....  
(Name and Address of the Individual/firm/Company)

through .....  
(Hereinafter referred

(Details of duly authorized signatory)

to as the **"Bidder/Contractor"** and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

### Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No. **9440/62/EW/IITD/2018-19**) (hereinafter referred to as **"Tender/Bid"**) and intends to award, under laid down organizational procedure, contract for **"Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi"**.

(Name of work) hereinafter referred to as the **"Contract"**.

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as **"Integrity Pact"** or **"Pact"**), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

### Article 1: Commitment of the Principal / Owner

- 1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:  
No employee of the Principal / Owner, personally or through any of his / her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

(a) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The

Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.

- (b) The Principal/Owner shall Endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- 2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PoC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.
- 3) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PoC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

## **Article 2: Commitment of the Bidder(s) / Contractor(s)**

- 1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of **fraud or corruption or coercion or collusion** of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- 2) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:
- a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
- b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
- c) The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s) / Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal / Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- d) The Bidder(s) / Contractor(s) of foreign origin shall disclose the names and addresses of agents / representatives in India, if any. Similarly Bidder(s) / Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
- e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is

committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

- 3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practices **means a willful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.**
- 5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

### **Article 3: Consequences of Breach**

Without prejudice to any rights that may be available to the Principal /Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

- 1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. **Such exclusion may be forever or for a limited period as decided by the Principal/Owner.**
- 2) **Forfeiture of EMD/Performance Guarantee/Security Deposit:** If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.
- 3) **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal / Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

### **Article 4: Previous Transgression**

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- 2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
- 3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has

installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

**Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors**

- 1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-contractors/sub-vendors.
- 2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

**Article 6: Duration of the Pact**

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 6 months after the completion of SITC work under the contractor till the continuation of defect liability period (Total Nine years), whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority of IITD.

**Article 7: Other Provisions**

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Head Quarters of the Division of the Principal/Owner, who has floated the Tender.
- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by Board Resolution.
- 4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

**Article 8: LEGAL AND PRIOR RIGHTS**

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....

(For and on behalf of Principal / Owner)

.....  
(For and on behalf of Bidder / Contractor)

WITNESSES:

1. ....  
(signature, name and address)

2. ....  
(signature, name and address)

Place:

Dated :

**INDIAN INSTITUTE OF TECHNOLOGY DELHI**  
**HAUZ KHAS, NEW DELHI - 110016**  
**Percentage Rate Tender / Item Rate Tender & Contract for Works**

Tender for the work of “Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi.”

(A) (I) To be submitted online by **29.04.2019 upto 03:00 PM**

(II) To be opened on **30.04.2019 at 03:00 PM** online

**e-TENDER**

I / We have read and examined the Notice Inviting Tender, schedule, A, B, C, D, E & F, Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, Clauses of Contract, Special conditions, Schedule of Rate & 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 Board of Governors, IIT Delhi within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract 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 ninety (90) days from the due date of its opening / ninety days from the date of opening of financial bid in case tenders are invited on 2/3 envelop system (**strike out as the case may be**) and not to make any modification in its terms and conditions.

A sum of **Rs 74,917/-** is hereby deposited in IIT Delhi Revenue Account No. 10773572622 as earnest money. If I / We, fail to furnish the prescribed performance guarantee within prescribed period I / We agree that the said The Board of Governors, IIT Delhi, HauzKhas, New Delhi - 16 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 the work as specified, I / We agree that The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 16 or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further, I / We agree that in case of forfeiture of Earnest Money & Performance Guarantee as aforesaid I / We shall be debarred for participation in the re-tendering process of the work.

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 IIT Delhi in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge 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.

Dated:

Signature of Contractor

Witness:

Postal Address

Address:

Occupation:

**ACCEPTANCE**

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of The Board of Governors, IIT Delhi, Hauz Khas, New Delhi - 110016 for a sum of (Rupees.....).

The letters referred to below shall form part of this contract agreement:-

(a)

(b)

(c)

For & on behalf of Board of Governors, IIT Delhi

Signature .....

Designation .....

Dated:



## PROFORMA OF SCHEDULES

[Operative Schedules to be supplied separately to each intending tenderer]

### SCHEDULE 'A'

Schedule of quantities (enclosed)

### SCHEDULE 'B'

Schedule of materials to be issued to the contractor

S.No.	Description of item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of issue
← Nil				→

### SCHEDULE 'C'

Tools and plants to be hired to the contractor

S.No.	Description	Hire charges per day	Place of Issue
← Nil			→

### SCHEDULE 'D'

Extra schedule for specific requirements/document for the work, if any.

### SCHEDULE 'E'

Reference to General Conditions of contract [GCC]

**Nil**

1	Name of work	:	Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi.
2	Estimated cost of work	:	<b>Rs. 37,45,854/-</b>
3	Earnest Money	:	<b>Rs. 74,917/-</b>
4	Performance Guarantee	:	5 percent of tendered value
5	Security Deposit	:	5 percent of tendered value

### SCHEDULE 'F'

**GENERAL RULES & DIRECTIONS**

: Officer inviting tender

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2&12.2	:	See below
<b>Definitions:</b>		
2[v]	Engineer – in - charge	: Prof. In-Charge, LHC
2[vi]	Accepting Authority	: Prof. In-Charge, LHC
2[x]	Percentage on cost of materials and labour to Cover all overheads and profits	: 15 percent
2[xi]	Standard schedule of rates	: Market Rate
2[xii]	Department	: E & W, IIT Delhi
9[ii]	Standard IITD Contract Form	: <b>General Conditions of Contract 2010, IITD Form 7/8-2010</b> modified & Corrected up to date of submission of tender

<b>Clause 1:</b>		
[i]	Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance	: <b>15 days</b>
[ii]	Maximum allowable extension with late fees @ 0.1% per day of performance guarantee amount beyond the period provided in (i) above	: <b>1 to 15 days</b>
<b>Clause 2:</b>		
Authority for fixing compensation under clause 2		: <b>Professor-in-charge (LHC)</b>
<b>Clause 2 A:</b>		
Whether Clause 2A shall be applicable		: <b>No</b>
<b>Clause 5:</b>		
Number of days from the date of issue of letter of award for reckoning date of start		: <b>10 [ten] days</b>

Milestone(s) as per table given below:-

Sl. No.	Description of Milestone (Financial)	Time allowed in days (from date of start)	Amount to be with-held in case of non-achievement of mile stone
<b>N O T A P P L I C A B L E</b>			

Time allowed for execution of work	:	12 months
Authority to decide:	:	
Extension of time	:	<b>Prof. In-charge -LHC</b>
Rescheduling of mile stones	:	<b>Prof. In-charge -LHC</b>
<b>Clause Applicable 6 or 6A:</b>	:	Clause 6A
<b>Clause 7:</b>		

Gross work to be done together with net payment adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment	:	Not Applicable
<b>Clause 10 A:</b>		
List of testing equipment to be provided by the contractor at site lab	:	As desired by the Engineer-in-charge relating to work
<b>Clause 10B(ii):</b>		
Whether Clause 10 B (ii) shall be applicable	:	No
<b>Clause 10C:</b>		
Component of labour expressed as percent of value of work	:	15 percent
<b>Clause 10CA:</b>		

S.No.	Material covered under this clause	Nearest Materials (other than cement, reinforcement bars and the structural steel) for which All India Wholesale Price Index to be followed	Base Price of all Materials under clause 10 CA*
1			Nil
2			
3			
4			

\* Base price of all the materials covered under clause 10 CA is to be mentioned at the time of approval of NIT.

#### Clause 10CC

Clause 10 CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column	:	18 months
Schedule of component of other Materials, Labour, POL etc. for price escalation		
Component of civil (except materials covered under clause 10CA)/ Electrical construction Materials expressed as percent of total value of work	:	X : 75 percent
Component of Labour expressed as percent of total value of work	:	Y : 25 percent
Component of P.O.L. expressed as percent of total value of work	:	Not Applicable

#### Clause 11

Specifications to be followed for execution of work	:	CPWD General specification for Electrical work Part I (INTERNAL) Part-II (EXTERNAL) and HVAC with upto date correction.
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#### Clause 12

Type of work	:	Maintenance works including works of up-gradation, aesthetic, special repair, addition/alteration
Clause 12.2. & 12.3		

Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for building work	:	<b>30 percent</b>
Clause 12.5		
Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for foundation work	:	<b>100 percent</b>

**Clause 16**

Competent Authority for deciding reduced rates	:	<b>Prof. In-charge -LHC</b>
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**Clause 18**

List of mandatory machinery, tools & plants to be deployed by the contractor at site:

1.....	2.....	3.....
4.....	5.....	6.....
7.....	8.....	9.....

**Nil**

**Clause 36 (i)**

Requirement of Technical Representative(s) and recovery Rate

Sr. No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical Representative)	Minimum Experience (Years)	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 36( I )	
						Figures	Words

**Nil**

Assistant Engineers retired from Government services that are holding diploma will be treated at par with Graduate Engineers.

## Inventory Details

S.No.	Name of Equipment	Motor (KW) 3 Phase	Motor Current (Amp.)	Blower Air Quantity (CFM)	Filter Suction Area (Sq. Ft.)	Room no. & Area Served by AHU	Motor capacity Supply + Fresh air in (HP)	Make
<b>Mezzanine Floor</b>								
1	AHU-MZ-1, LH-204	2.2	4.2	4600	14.4	Lab., LH-202 & 203	3 + 1.5	Siemens
2	AHU-MZ-2, LH-201	2.2	4.2	5000	13.2		3 + 1	Siemens
3	AHU-GF-1, LH-208	5.5	10	11000	29.6	LH-108 (300 seater)	7.5 + 1	Siemens
4	AHU-GF-2, LH-208	3.7	7.3	5500	14.9	LH-111 (300 seater)	5 + 1	Siemens
5	AHU-GF-3, LH-210	3.7	7.6	5500	14.9		5 + 1	Siemens
6	AHU-GF-4, LH-211	5.5	10	11000	29.6	LH-114 (300 seater)	7.5 + 1	Siemens
7	AHU-GF-5, LH-221	5.5	10	10000	21.4	LH-121 (500 seater)	7.5 + 1	Siemens
8	AHU-GF-6, LH-218	5.5	10	10000	21.4		7.5 + 1	Siemens
9	AHU-GF-7, LH-214A	1.5	3	2500	8.3	LH-212 seater & LH-	2 + 1	Siemens
10	AHU-GF-8, LH-214B	1.5	3	2500	8.3	213 (60 seater)	2 + 1	Siemens
<b>First Floor</b>								
11	AHU- FF-1, LH-303	3.7	7.6	9000	21.6	LH-302 (Physics Lab.)	5 + 1	Siemens
12	AHU- FF-2, LH-307	2.2	4.2	4800	11.9	LH-308 (150 Seater)	3 +	Siemens
13	AHU- FF-3, LH-309	2.2	4.2	4800	11.9	LH-310 (150 Seater)	3 + 1	Siemens
14	AHU- FF-4, LH-315	2.2	4.2	4800	11.9	LH-316 (150 Seater)	3 + 1	Siemens

15	AHU- FF-5 , LH-319	2.2	4.2	4800	11.9	LH-318 (150 Seater)	3 + 1	Siemens
<b>Second Floor</b>								
16	AHU- SF-1 , LH-403	5.5	10	10500	21.9	LH-401 & LH-402 (Elec.Lab )	7.5 + 1	Siemens
17	AHU- SF-2 , LH-407	2.2	4.2	4800	11.9	LH- 408(150 Seater)	3 + 1	Siemens
18	AHU- SF-3 , LH-409	2.2	4.2	4800	11.9	LH- 410(150 Seater)	3 + 1	Siemens
19	AHU- SF-4 , LH-417	2.2	4.2	4800	11.9	LH- 416(150 Seater)	3 + 1	Siemens
20	AHU- SF-5, LH-419	2.2	4.2	4800	11.9	LH- 418(150 Seater)	3 + 1	Siemens
21	AHU- FF-6 , LH-428	3.7	7.6	9000	21.6	LH- 325(500 Seater)	5 + 1	Siemens
22	AHU- FF-7 , LH-427	3.7	7.6	9000	21.6		5 + 1	Siemens
23	AHU-SF-6,LH-423A	1.5	3	2500	8.3	LH-421 LH- 422 (Conf. Room)	2 + 1	Siemens
24	AHU-SF-7,LH-423B	1.5	3	2500	8.3		2 + 1	Siemens
<b>Third Floor</b>								
25	AHU- TF-1 , LH-506	5.5	10	10500	21.9	LH- 503,504 & 505Comp. Lab.	7.5 + 1	Siemens
26	AHU- TF-2 , LH-511	2.2	4.2	4800	11.9	LH- 510(150 Seater)	3 + 1	Siemens
27	AHU- TF-3 , LH-513	2.2	4.2	4800	11.9	LH- 512(150 Seater)	3 + 1	Siemens
28	AHU- TF-4 , LH-522	2.2	4.2	4800	11.9	LH- 520(30 S) LH- 521(60) seat	3 + 1	Siemens
29	AHU- TF-5 , LH-516	5.5	10	10000	21.4	LH- 517,519 (60 seat) 518(30 S)	7.5 + 1	Siemens
30	AHU- TF-6, LH-527	2.2	4.2	4800	11.9	LH- 526(150	3 + 1	Siemens

						Seater)		
31	AHU- TF-7 , LH-528	2.2	4.2	4800	11.9	LH-527(150 Seater)	3 + 1	Siemens
32	AHU- TF-8 , LH-539	5.5	10	10000	21.4	LH-538 (Graphics Lab.)	5 + 1	Siemens
33	AHU- TF-9 , LH-533	3.7	7.6	8500	17.8	LH-535 (Language Lab.)	5 + 1	Siemens
<b>Fourth Floor</b>								
34	AHU- FH-1 , LH-607	2.2	4.2	4800	11.9	LH-605 (30 S), LH- 606(60) Seat	3 + 1	Siemens
35	AHU- FH-2 , LH-601	5.5	10	10000	21.4	LH- 602,604(6 0 S),LH- 603(30 S)	7.5 + 1	Siemens
36	AHU- FH-3 , LH-610	5.5	10	10000	21.4	LH- 611,613(6 0 S),LH- 612(30 S)	7.5 + 1	Siemens
37	AHU- FH-4 , LH-616	2.2	4.2	4800	11.9	LH- 614(30 S),LH- 615(60) Seat	3 + 1	Siemens
38	AHU- FH-5 , LH-624	2.2	4.2	4800	11.9	LH- 622(30 S),LH- 623(60) Seat	3 + 1	Siemens
39	AHU- FH-6 , LH-625	5.5	10	10000	21.4	LH- 619,621(6 0 S),LH- 620(30 S)	7.5 + 1	Siemens
40	AHU-TF-10, LH-602	2.2	4.2	3600	11.6	LH-502 (Comput er Lab.)	3 + 1	Siemens

### Ventilation Fans (Normal & Smoke Exhaust Fans)

S. No.	Fan Description	Fan Ref.	Fan Capacity	Motor kw	Location	HP	MAKE
<b>Basement (Block-C &amp; D)</b>							
1	Exhaust Air Fan	In case of Fire	34300 CFM	15 KW	Zone1, C Block	20HP	ABB
2	Centrifugal Ex. Air Unit	Normal case	34300 CFM	15 KW	Zone1, C Block	20HP	ABB
3	Centrifugal Ex. Air Unit	Normal case	34300 CFM	15 KW	Zone1, C Block	20HP	ABB
4	Exhaust Air Fan	In case of Fire	34300 CFM	15 KW	Zone1, C Block	20HP	ABB
5	Centrifugal Ex. Air Unit	Normal case	8600 CFM	2.2 KW	A-Block	3 HP	ABB
6	Centrifugal Ex. Air Unit	Normal case	2200 CFM	11 KW	Zone4, D Block	15 HP	ABB
7	Centrifugal Ex. Air Unit	Normal case	2200 CFM	11 KW	Zone4, D Block	15 HP	ABB
8	Exhaust Air Fan	In case of Fire	2200 CFM	11 KW	Zone4, D Block	15 HP	ABB
9	Exhaust Air Fan	In case of Fire	2200 CFM	11 KW	Zone4, D Block	15 HP	ABB
10	Centrifugal Ex. Air Unit	Normal case	2200 CFM	11 KW	Zone4, D Block	15 HP	ABB
11	Centrifugal Ex. Air Unit	Normal case	2200 CFM	11 KW	Zone4, D Block	15 HP	ABB
12	Exhaust Air Fan	In case of Fire	2200 CFM	11 KW	Zone4, D Block	15 HP	ABB
13	Exhaust Air Fan	In case of Fire	2200 CFM	11 KW	Zone4, D Block	15 HP	ABB
<b>Basement ( Block - B)</b>							
14	Fresh Air Fan	In case of Fire	27200 CFM	15 KW	Zone2, B1 Block	20HP	ABB
15	Fresh Air Fan	In case of Fire	27200 CFM	15 KW	Zone2, B1 Block	20HP	ABB
16	Centrifugal Fr. Air Unit	Normal case	27200 CFM	15 KW	B1 Block	20HP	ABB
17	Centrifugal Fr. Air	Normal	27200 CFM	15 KW	B1 Block	20HP	ABB



	Unit	case					
18	Exhaust Air Fan	In case of Fire	27200 CFM	15 KW	B2 Block	20HP	ABB
19	Exhaust Air Fan	In case of Fire	27200 CFM	15 KW	B2 Block	20HP	ABB
20	Centrifugal Ex. Air Unit	Normal case	27200 CFM	15 KW	Zone2, B2 Block	20HP	ABB
21	Centrifugal Ex. Air Unit	Normal case	27200 CFM	15 KW	Zone2, B2 Block	20HP	ABB
22	Exhaust Air Fan	In case of Fire	29200 CFM	15 KW	B2 Block	20HP	ABB
23	Exhaust Air Fan	In case of Fire	29200 CFM	15 KW	B2 Block	20HP	ABB
24	Centrifugal Ex. Air Unit	Normal case	29200 CFM	15 KW	Zone3, B2 Block	20HP	ABB
25	Centrifugal Ex. Air Unit	Normal case	29200 CFM	15 KW	Zone3, B2 Block	20HP	ABB
<b>Basement ( Block - B)</b>							
26	Fresh Air Fan	In case of Fire	29200 CFM	15 KW	Zone3 B3 Block	20HP	ABB
27	Fresh Air Fan	In case of Fire	29200 CFM	15 KW	Zone3, B3 Block	20HP	ABB
28	Centrifugal Fr. Air Unit	Normal case	29200 CFM	15 KW	Zone3, B3 Block	20HP	ABB
29	Centrifugal Fr. Air Unit	Normal case	29200 CFM	15 KW	Zone3, B3 Block	20HP	ABB
30	Exhaust Air Fan	In case of Fire	11000 CFM	4 KW	Plant Room	5.5 HP	ABB
31	Exhaust Air Fan	In case of Fire	11000 CFM	4 KW	Plant Room	5.5 HP	ABB
32	Fresh Air Fan	Normal case	11000 CFM	4 KW	Plant Room	5.5 HP	ABB
33	Fresh Air Fan	In case of Fire	11000 CFM	4 KW	Plant Room	5.5 HP	ABB
<b>Mezzanine Floor (Block C &amp;B)</b>							
34	Exhaust Air Fan	Free Cooling	4600 CFM	1.1 KW	AHU-MZ1, C Block	1.5 HP	KRUGER
35	Exhaust Air Fan	Free Cooling	5000 CFM	1.5 KW	AHU-MZ2, C Block	2HP	HAVELLS

36	Exhaust Air Fan	In case of Fire	26600 CFM	11 KW	B1 Block	15 HP	ABB
37	Fresh Air Fan	In case of Fire	26600 CFM	11 KW	B1Block	15 HP	ABB
38	Exhaust Air Fan	Free Cooling	11000 CFM	4 KW	AHU-GF-1	5.5 HP	ABB
39	Exhaust Air Fan	Free Cooling	5500 CFM	1.1 KW	AHU-GF-2	1.5 HP	KRUGER
40	Exhaust Air Fan	In case of Fire	26600 CFM	11 KW	B2 Block	15 HP	ABB
41	Fresh Air Fan	In case of Fire	26600 CFM	11 KW	B2 Block	15 HP	ABB
42	Exhaust Air Fan	Free Cooling	5500 CFM	1.1 KW	AHU-GF-3	1.5 HP	KRUGER
43	Exhaust Air Fan	Free Cooling	1100 CFM	3.7 KW	AHU-GF-4	5 HP	ABB
44	Exhaust Air Fan	In case of Fire	26600 CFM	11 KW	B3 Block	15 HP	ABB
45	Fresh Air Fan	In case of Fire	26600 CFM	11 KW	B3 Block	15 HP	ABB
<b>Mezzanine Floor (Block C &amp; B)</b>							
46	Exhaust Air Fan	Free Cooling	11000 CFM	2.2 KW	AHU-GF-5	3 HP	ABB
47	Fresh Air Fan	In case of Fire	18600 CFM	5.5 KW	Audi-1 Block	7.5 HP	ABB
48	Fresh Air Fan	In case of Fire	18600 CFM	5.5 KW	Audi-1 Block	7.5 HP	ABB
49	Exhaust Air Fan	Free Cooling	10000 CFM	3.7 KW	AHU-GF-6	5HP	ABB
50	Exhaust Air Fan	In case of Fire	18600 CFM	5.5 KW	Audi-1 Block	7.5 HP	ABB
51	Exhaust Air Fan	In case of Fire	18600 CFM	5.5 KW	Audi-1 Block	7.5 HP	ABB
<b>First Floor (Block – C &amp; B1)</b>							
52	Exhaust Air Fan	Free Cooling	9000 CFM	2.2 KW	AHU-FF-1, C Block	3 HP	ABB
53	Hall-2 Exhaust Air Fan	In case of Fire	6200 CFM	2.2 KW	LH-310, B Block	3 HP	ABB
54	Exhaust Air Fan	Free Cooling	4800 CFM	1.1 KW		1.5 HP	KRUGER

55	Exhaust Air Fan	In case of Fire	6200 CFM	2.2 KW	LH-308	3 HP	ABB
56	Exhaust Air Fan	Free Cooling	4800 CFM	1.1 KW		1.5 HP	KRUGER
57	Fresh Air Fan	In case of Fire	6200 CFM	1.1 KW	AHU-FF-2, LH-307	1.5 HP	KRUGER
58	Fresh Air Fan	In case of Fire	6200 CFM	1.1 KW	AHU-FF-2, LH-309	1.5 HP	KRUGER
59	Fresh Air Fan	Free Cooling	4800 CFM	1.1 KW	AHU-FF-4,	1.5 HP	KRUGER
60	Exhaust Air Fan	In case of Fire	6200 CFM	3 KW	LH-316, B3 Block	4 HP	ABB
61	Exhaust Air Fan	Free Cooling	4800 CFM	1.1 KW	AHU-FF-5	1.5 HP	KRUGER
62	Exhaust Air Fan	Free Cooling	6200 CFM	3 KW	LH-318	4 HP	ABB
63	Fresh Air Fan	In case of Fire	6200 CFM	1.1 KW	AHU-FF-4	1.5 HP	KRUGER
64	Fresh Air Fan	In case of Fire	6200 CFM	1.1 KW	AHU-FF-5	1.5 HP	KRUGER

**Second Floor ( Block- B1)**

65	Hall-1 Exhaust Air Fan	In case of Fire	6200 CFM	1.5 KW	LH-408, B Block	2 HP	HAVELLS
66	Hall-1 Exhaust Air Fan	Free Cooling	4800 CFM	1.5 KW	AHU- SF2,	2 HP	HAVELLS
67	Hall-2 Exhaust Air Fan	In case of Fire	6200 CFM	1.5 KW	LH-410, B Block	2 HP	HAVELLS
68	Hall-2 Exhaust Air Fan	Free Cooling	4800 CFM	1.5 KW	AHU- SF3,	2 HP	HAVELLS
69	Fresh Air Fan	In case of Fire	6200 CFM	1.5 KW	AHU- SF3,	2 HP	HAVELLS
70	Fresh Air Fan	In case of Fire	6200 CFM	1.5 KW	AHU- SF3,	2 HP	HAVELLS
71	Exhaust Air Fan	Free Cooling	4800 CFM	1.5 KW	AHU-SF4, LH-417	2 HP	HAVELLS
72	Exhaust Air Fan	In case of Fire	6200 CFM	1.5 KW	LH-416, B3 Block	2 HP	HAVELLS
73	Exhaust Air Fan	Free Cooling	4800 CFM	1.5 KW	AHU-SF-5,	2 HP	HAVELLS
74	Exhaust Air Fan	In case of Fire	6200 CFM	1.5 KW	LH-418, B3 Block	2 HP	HAVELLS

75	Fresh Air Fan	In case of Fire	6200 CFM	1.5 KW	AHU- SF4,	2 HP	HAVELLS
76	Fresh Air Fan	In case of Fire	6200 CFM	1.5 KW	AHU- SF5,	2 HP	HAVELLS
<b>Second Floor ( Block- C &amp; D)</b>							
77	Exhaust Air Fan	Free Cooling	10500 CFM	3.7 KW	AHU-SF1, C-Block	5HP	ABB
78	Exhaust Air Fan	Free Cooling	9000 CFM	3.7 KW	AHU-SF6, C-Block	5HP	ABB
79	Fresh Air Fan	In case of Fire	22750 CFM	7.5 KW	D- Block	10 HP	ABB
80	Fresh Air Fan	In case of Fire	22750 CFM	7.5 KW	D- Block	10 HP	ABB
81	Exhaust Air Fan	Free Cooling	9000 CFM	7.5 KW	AHU-SF7, LH-427	10 HP	ABB
82	Exhaust Air Fan	In case of Fire	22750 CFM	7.5 KW	LH-420, D-Block	10 HP	ABB
83	Exhaust Air Fan	In case of Fire	22750 CFM	7.5 KW	LH-420, D-Block	10 HP	ABB
84	Exhaust Air Fan	Free Cooling	2500 CFM	1.1 KW	AHU-SF8, LH-421	1.5 HP	KRUGER
85	Exhaust Air Fan	Free Cooling	2500 CFM	1.1 KW	AHU-SF8, LH-421	1.5 HP	KRUGER
<b>Third Floor ( Block- D &amp; B1)</b>							
86	Exhaust Air Fan	Free Cooling	10000 CFM	3.7 KW	D-Block	5HP	ABB
87	Exhaust Air Fan	Free Cooling	8500 CFM	2.2 KW	AHU-TF9, D Block	3 HP	ABB
88	Hall-1 Exhaust Air Fan	In case of Fire	6200 CFM	1.1 KW	LH-510, B Block	1.5 HP	KRUGER
89	Exhaust Air Fan	Free Cooling	4800 CFM	1.1 KW	AHU-TF3, LH-511	1.5 HP	KRUGER
90	Hall-2 Exhaust Air Fan	In case of Fire	6200 CFM	1.1 KW	LH-512	1.5 HP	KRUGER
91	Exhaust Air Fan	Free Cooling	4800 CFM	1.1 KW	AHU-TF4, LH-513	1.5 HP	KRUGER
92	Fresh Air Fan	In case of Fire	6200 CFM	1.1 KW	AHU-TF3, LH-511	1.5 HP	KRUGER

93	Fresh Air Fan	In case of Fire	6200 CFM	1.1 KW	LH-513	1.5 HP	KRUGER
<b>Third Floor ( Block- B2)</b>							
94	Hall-1 Exhaust Air Fan	Free Cooling	5000 CFM	1.1 KW	LH-516	1.5 HP	KRUGER
95	Exhaust Air Fan	In case of Fire	2709 CFM	1.1 KW	LH-517	1.5 HP	KRUGER
96	Exhaust Air Fan	In case of Fire	2709 CFM	1.1 KW	LH-519	1.5 HP	KRUGER
97	Hall-2 Exhaust Air Fan	Free Cooling	5000 CFM	1.1 KW	LH-516	1.5 HP	KRUGER
98	Hall-3 Exhaust Air Fan	Free Cooling	4800 CFM	1.1 KW	TF-7, LH-522	1.5 HP	KRUGER
99	Exhaust Air Fan	In case of Fire	3236 CFM	1.1 KW	LH-521	1.5 HP	KRUGER
100	Hall-1 Fresh Air Fan	In case of Fire	1055 CFM	1.1 KW	LH-518	1.5 HP	KRUGER
101	Hall-1 Fresh Air Fan	In case of Fire	2181 CFM	1.1 KW	LH-517	1.5 HP	KRUGER
102	Hall-2 Fresh Air Fan	In case of Fire	2181 CFM	1.1 KW	LH-519	1.5 HP	KRUGER
103	Hall-3 Fresh Air Fan	In case of Fire	2181 CFM	1.1 KW	LH-520	1.5 HP	KRUGER
104	Fresh Air Fan	In case of Fire	1055 CFM	1.1 KW	LH-520	1.5 HP	KRUGER
<b>Third Floor ( Block- B3 &amp; C)</b>							
105	Hall-1 Exhaust Air Fan	Free Cooling	4800 CFM	1.1 KW		1.5 HP	KRUGER
106	Hall-1 Exhaust Air Fan	In case of Fire	6200 CFM	1.1 KW	LH-526	1.5 HP	KRUGER
107	Hall-2 Exhaust Air Fan	Free Cooling	4800 CFM	1.1 KW	LH-527	1.5 HP	KRUGER
108	Hall-2 Exhaust Air Fan	In case of Fire	6200 CFM	1.1 KW	LH-527	1.5 HP	KRUGER
109	Hall-2 Fresh Air Fan	In case of Fire	6200 CFM	1.1 KW	LH-526	1.5 HP	KRUGER
110	Hall-1 Fresh Air Fan	In case of Fire	6200 CFM	1.1 KW	LH-526	1.5 HP	KRUGER

111	Exhaust Air Fan	Free Cooling	10500 CFM	3.7 KW	TF-1, C-Block	1.5 HP	KRUGER
112	Fresh Air Fan	In case of Fire	4650 CFM	1.1 KW		1.5 HP	KRUGER
113	Exhaust Air Fan	In case of Fire	4650 CFM	1.1 KW		1.5 HP	KRUGER
<b>Fourth Floor ( Block- B1)</b>							
114	Hall-1 Exhaust Air Fan	Free Cooling	5000 CFM	1.5 KW	AHU-FF2	2 HP	HAVELLS
115	Hall-2 Exhaust Air Fan	Free Cooling	5000 CFM	1.5 KW	AHU-FF3	2 HP	HAVELLS
116	Hall-1 Exhaust Air Fan	In case of Fire	2709 CFM	1.1 KW	LH-602	1.5 HP	KRUGER
117	Hall-1 Fresh Air Fan	In case of Fire	2181 CFM	1.1 KW	LH-602	1.5 HP	KRUGER
118	Fresh Air Fan	In case of Fire	1055 CFM	1.1 KW	LH-603	1.5 HP	KRUGER
119	Hall-2 Exhaust Air Fan	In case of Fire	2709 CFM	1.1 KW	LH-604	1.5 HP	KRUGER
120	Fresh Air Fan	In case of Fire	2181 CFM	1.1 KW	LH-604	1.5 HP	KRUGER
121	Fresh Air Fan	In case of Fire	2181 CFM	1.1 KW	LH-606	1.5 HP	KRUGER
122	Fresh Air Fan	In case of Fire	1055 CFM	1.1 KW	LH-605	1.5 HP	KRUGER
123	Exhaust Air Fan	In case of Fire	3236 CFM	1.1 KW	LH-606	1.5 HP	KRUGER
124	Exhaust Air Fan	Free Cooling	4800 CFM	1.1 KW	LH-610	1.5 HP	KRUGER
<b>Fourth Floor ( Block- B1)</b>							
125	Hall-1 Exhaust Air Fan	Free Cooling	5000 CFM	1.5 KW	AHU-FF4	2 HP	HAVELLS
126	Hall-1 Exhaust Air Fan	In case of Fire	2709 CFM	1.1 KW	LH-619	1.5 HP	KRUGER
127	Hall-1 Fresh Air Fan	In case of Fire	1055 CFM	1.1 KW	LH-619	1.5 HP	KRUGER
128	Hall-1 Fresh Air Fan	In case of Fire	2181 CFM	1.1 KW	LH-619	1.5 HP	KRUGER
129	Hall-2 Exhaust Air	In case of	2709 CFM	1.1 KW	LH-621	1.5 HP	KRUGER

	Fan	Fire					
130	Hall-2 Exhaust Air Fan	Free Cooling	5000 CFM	1.5 KW	LH-621	2 HP	HAVELLS
131	Hall-2 Fresh Air Fan	In case of Fire	2181 CFM	1.1 KW	LH-621	1.5 HP	KRUGER
132	Hall-3 Exhaust Air Fan	Free Cooling	4800 CFM	1.5 KW	LH-621	2 HP	HAVELLS
133	Hall-3 Exhaust Air Fan	In case of Fire	3236 CFM	1.1 KW	LH-623	1.5 HP	KRUGER
134	Hall-3 Fresh Air Fan	In case of Fire	2181 CFM	1.1 KW	LH-623	1.5 HP	KRUGER
135	Hall-3 Fresh Air Fan	In case of Fire	1055 CFM	1.1 KW	LH-622	1.5 HP	KRUGER
<b>PUMPS</b>							
136	Chiller Pump	Primary Pump	1460 RPM	7.5 KW	1	10 HP	ABB
137	Chiller Pump	Primary Pump	1460 RPM	7.5 KW	2	10 HP	ABB
138	Chiller Pump	Primary Pump	1460 RPM	7.5 KW	3	10 HP	ABB
139	Chiller Pump	Secondary Pump	1455 RPM	18.5 KW	1	25 HP	ABB
140	Chiller Pump	Secondary Pump	1455 RPM	18.5 KW	2	25 HP	ABB
141	Chiller Pump	Secondary Pump	1455 RPM	18.5 KW	3	25 HP	ABB
142	Condenser Pump	Condenser Pump	1470 RPM	30 KW	1	40 HP	ABB
143	Condenser Pump	Condenser Pump	1470 RPM	30 KW	2	40 HP	ABB
144	Condenser Pump	Condenser Pump	1470 RPM	30 KW	3	40 HP	ABB
<b>Cooling Tower</b>							
145	Cooling Tower	Make BELL	Make BELL	5.5 KW	1	7.5 HP	New India
146	Cooling Tower	Make BELL	Make BELL	5.5 KW	1	7.5 HP	New India

147	Cooling Tower	Make BELL	Make BELL	5.5 KW	2	7.5 HP	New India
148	Cooling Tower	Make BELL	Make BELL	5.5 KW	2	7.5 HP	New India
149	Cooling Tower	Make BELL	Make BELL	5.5 KW	3	7.5 HP	New India
150	Cooling Tower	Make BELL	Make BELL	5.5 KW	3	7.5 HP	New India
<b>CHILLER PLANT</b>							
151	Screw Chiller	Voltas	EGWFXR3002ML		1	275 TR	Voltas
152	Screw Chiller	Voltas	EGWFXR3002ML		2	275 TR	Voltas
153	Screw Chiller	Voltas	EGWFXR3002ML		3	275 TR	Voltas



## General Scope of Work

1. Under this contract, the contractor shall provide fully comprehensive maintenance service of the Complete AC plant equipment AHUs, ventilation fans cooling tower etc., prescribed in the schedule of items and inventory and will lay emphasis on planned preventive maintenance practices, safety requirements and proper care of machinery & equipment's to achieve proper inside conditions.
2. The work shall be executed as per CPWD General Specifications for HVAC works 2004, CPWD general specifications for electrical works part I, II & IV as amended up to date, relevant IE rules, relevant IS and as per directions Engineer-in-charge.
  - a) The plant will be serviced four times in the contract period. One of the service will be rendered positively before the onset of summer (January/February) to ensure trouble free working of the plant during the summer. The next service will be rendered in each quarter after the summer season. Break down calls will be attended to during the contract period immediately.
  - b) The compressor will be checked for its proper functioning and if any defect is found, the same will be rectified immediately.
  - c) Checking the functioning of Chiller Unit/AHU/Pumps/Cooling Tower /Controls and all such equipment covered under this contract.
  - d) Free replacement of defective/worn out parts with new or repairing of parts for compressor/thermostat/cut outs.
  - e) Repairing of equipment as prescribed in the schedule of work.
  - f) De- scaling of the condenser will be carried out once in a year or as and when required. If the fouling limit exceeds the prescribed limit, the contractor shall carry out cleaning the tubes at his own expense.
  - g) Cleaning of evaporator coils/replacement of pre-filters based on assessment as and when required based on working parameters of the plant.
  - h) Rectification of defects immediately if noticed during the preventive maintenance visit of the qualified personnel. The contractor shall include emergency call back service at all hours round the clock.
  - i) Rewinding of all motors of AC installation like compressor motor, condenser & chilled water pump (primary and secondary) motors, CT fan motor, AHU Fan motors and ventilation & smoke exhaust fan motors.
  - j) Replacement of spares of microprocessor unit such as motherboard, micro card, electronic parts & all other parts as required to be replaced to keep of the microprocessor unit in the perfect working orders.
  - k) Replacing of the spares parts of all machinery, equipment, electrical panels etc., due to normal wear and tear.
3. **Following consumable material as and when required shall be supplied free cost by the contractor.**
  - a) All oils and greases required for lubrication of compressor, fan bearings, motors bearings, pivots and other moving parts.
  - b) All refrigerants required for topping up. Refrigerant loss if due to negligence shall be made good by the contractor.

- c) Compressor oil once in a year or more as per requirement.
- d) Dryers.
- e) All consumable filter elements/rolls.
- f) All chemicals for the correct chemical treatment of the cooling tower and chilled water system & chemical for de scaling.
- g) All clear material for AC plant room, machinery & equipment.
- h) Gland dori for pump sets.
- i) Any other consumable as may be required to keep the AC plant in perfect working order.
- j) Inspection and maintenance schedule shall be carried out as per Annexure 'A'.
- k) All painting works where ever required.

**4. Following are excluded from the scope of work:-**

- a) Replacement/modification of electrical cabling, electrical switchboard.
  - b) Masonry structure & carpentry work.
  - c) False ceiling.
  - d) Cooling tower structure fills.
  - e) Replacement of sheet metal ducting/grills/diffusers/insulation/piping.
5. Log book as per standard Performa will be supplied by the contractor and have to be filed in by the contractor's staff. The log book will be kept in the plant room will be checked by the Engineer-in-charge or his representative. The contractor will have to take action as per direction of Engineer-in-charge or his representative from time to time.
  6. Contractor shall maintain history cards of each equipment. There will be check list for preventive maintenance to be carried as per attached maintenance schedule. Bidder/OEM
  7. Shall be proving all the necessary maintenance services and the same shall be recorded in the history cards of the equipment with date. Copy of this history card shall be submitted to Engineer-in- charge for the records.
  8. No tools and plant (T&P) will be supplied by the Institute.
  9. Since the plant are catering to the AC requirements of Lecture Hall complex of IIT Delhi, which is a very important building hence the contractor will have to attend any fault/Breakdown immediately, failing which recovery @ Rs.5000/- per compliant/Day shall be made and if the desired staff is not deputed in reasonable time engineer-in-charge will be at liberty to employ staff to get the work done by other agency at the risk and cost of the contractor for which decision of the engineer-in-charge will be final and binding.
  10. WCT shall be deducted from contractor's bill on the value of work done as applicable. In case of any damage to any machine, equipment and building on account of negligence of contractor's staff, the same will have to be made good promptly at his own cost, & to the entire satisfaction of the engineer-in-charge or his representative failing which, suitable recovery will be made from the contractor's bill.
  11. The firm has to intimate their contact numbers to lodge the complaints.
  12. Suitable recovery shall be made from the bill of the contractor for any shortcoming/discrepancy in comprehensive maintenance and operation work and/or non-functioning of AC plant as per client requirement during the contract period.
  13. For carrying out electrical work, the firm shall have to employ workman/contractor having valid electrical license issue by the competent authority.

## General Terms and Conditions of the contract

1. The work shall be carried out as per CPWD general specification of HVAC 2004 with up to date amended and as per direction of Engineer-in-charge.
2. The contractor will have to maintain all equipment as per Annexure-A (enclosed) in schedule of work in proper working condition and hand over the same in similar condition at the time of hand over of plant and improvement in plants subsequently carried out by the department from time to time which are not within the scope of the work.
3. Log book, cleaning material like broom, soft broom, old dhoti, gland packing, grease, Mobil oil, PVC tape, nut bolts, screws, Teflon tape, PVC tape, GLS lamp, soap & duster etc. will be provided by the firm with in scope of work and nothing extra will be paid on this account.
4. The contractor will have to ensure following inside conditions. A penalty of Rs. 500/-per hour will be levied if the inside conditions are not maintained for more than 2 hours on account of improper maintenance / operation of the plant.
  - a) Lecture Hall and Laboratories: DB  $26 \pm 1^{\circ}$  C, RH not exceeding  $55\% \pm 5\%$
5. The contractor will have to depute the following skilled, experienced, AC&R qualified and electrician shall have electrical license holder staff for operation & maintenance of A.C. plant from 6 AM to 2 PM & 2 PM to 10 PM as per details below:
  1. Operator/Mechanic- 1 No. in each shift
  2. Helper - 1 No. in each shift.

6. The contractor will be fully responsible for the conduct of staff deputed by him.
7. The contractor will maintain attendance register for his staff at site, which will be checked by the Engineer-In charge or Superior officer of the Institute.
8. The staff always be deputed as per condition no. 5 above. In case of any unforeseen absence from duty of the operation staff, the same will have to be filled in by making suitable arrangements immediately. However, for not employing of the required staff as per condition no. 5, the recovery will be made from their bill at the following rates, the decision of Engineer- in-charge shall be final and binding on the firm.
9. Necessary interview will be conducted by our Engineer-in-charge for their performance/ capability of handling the equipment.
10. Since the plants are catering to the AC requirement of the contractor have to ensure that all the AHU's and AC plants are maintained in proper working condition. In case of any break down in plants, electrical panel etc. the same shall have to be attended immediately on the same day.
11. The contractor will make his own arrangements of all type tools for electrical and mechanical work for use of their staff. No T & P will be supplied by the department.
12. Water and power will be supplied free of cost for bona-fide use of work only.
13. In case, if it is established that any of the spares and materials supplied by the Department i/c refrigerant, gases etc. are misused or have been wasted by the contractor's staff on account of due to their negligence, inefficiency or any other reasons, recovery will be made from the contractor's bill towards the cost of such spares/materials (at the double rate of present market rates). Decision of the Engineer-in-charge will be final and binding on the contractor.
14. During the running of the contract, the responsibility of physical custody of the plants and its associated equipment as per Annexure-I will rest on the contractor. If any item missing during the surprise visit of Engineer-in-charge the recovery shall be made from the contractor bill. The decision of Engineer-in-charge shall be final and binding on the contract.
15. In case of any damage to any equipment due to negligence of contractor's staff the same will have to be made good by the contractor. Failure to which suitable recovery will be made from the contractor's bills.
16. Logbook as per standard Performa will have to be filled in by the contractor's staff. The logbook shall be kept in the plant room, which will be checked by the Engineer-in-charge. The contractor's staff will have to take action as per direction of Engineer-in-charge from time to time. The logbook shall be supplied by the contractor free of cost.
17. Earth/Insulation test of all equipment will be carried out quarterly and result recorded in the separate register failing which a recovery of Rs. 1,500/- per month will be affected.
18. The site (A.C. Plant room, Cooling Tower, AHU's Centrifugal pumps etc.) will have to be kept clean.
19. The maintenance work as per maintenance manual of the OEM to be carried to be out in time bound manner for which proper records history cards of each chilling machine. AHU's and other equipment etc. will have to be completed/filled by the contractor's staff.
20. After the expiry of the contract, the firm shall have to hand over complete installation to the department in proper working order. However if any repair/ parts is reqd. after defect liability period, the same shall be provided by the department.

21. No claim of their employees/ staff employed for subject work in any form shall be entertained by the Institute.
22. All installation of Lecture Hall complex of IIT Delhi are in complete operational / Healthy condition shall be handed over to the contractor & it will be his responsibility to keep installation in operation & Healthy condition all the time including take all precautions against theft also and handed over back in healthy condition at the end of contract to the department.
23. The Firm/Company will not be allowed to execute/maintain the work through proxy.
24. In case of absence of any staff from duty ,the following recoveries shall be made from the contractor and the contractor will have no claim from the department:-

Mechanic cum operator @ 750/- per day

Helper @ 550/- per day

25. **Payment for AMC works shall be made on quarterly basis.**

**Equipment's Maintenance schedule**

Equipment	Frequency	Activities
Chiller	Monthly	<ol style="list-style-type: none"> <li>1. Check refrigerant level, gas leak test with electronic leak detector. If abnormal, trace and rectify as necessary, inform department in writing on the rectification.</li> <li>2. Inspect level and condition of oil. If abnormal, trace fault and rectify as necessary, inform department in writing on the rectification.</li> <li>3. Check the liquid line sight glasses for proper flow.</li> <li>4. Check all operating pressure and temperature.</li> <li>5. Inspect and adjust, if required, all operating safety controls.</li> <li>6. Check capacity control, adjust if necessary.</li> <li>7. Lubricated vane/linkage/bearings.</li> <li>8. Visually inspect machine and associated components and unusual Sound or noise for evidence of unusual conditions.</li> <li>9. Check lock bolts and chillers springs mount. Review daily operating Log maintenance by departments operating Personnel.</li> <li>10. Providing written report to departments, outlining services carried out.</li> <li>11. Adjustment made, rectification carried out and if the deficiency is of a major nature, Arrange with department for shut-down to rectify equipment.</li> </ol>
Chiller	Six monthly	Checking of control & safeties/microprocessor accessories.
Chiller	Annual (Immediately after award of contract)	<ol style="list-style-type: none"> <li>1. Perform all functions for monthly check.</li> <li>2. Check all flanges for tightness.</li> <li>3. Change oil in oil sump.</li> <li>4. Replace filter.</li> <li>5. Check oil temperature control.</li> <li>6. Check motor terminals.</li> <li>7. Check connections in starter.</li> </ol>
	Annual (Immediately after award of contract)	<ol style="list-style-type: none"> <li>1. Please note that oil filter gasket replacement shall deem to be including in the contract.</li> <li>2. Check motor earthing, mugger motor and connection wiring on each leg.</li> <li>3. Check motor temperature cut-out, tighten motor terminals.</li> <li>4. Check starter contracts, are shield and transformer.</li> <li>5. Check dashpot oil, clean dashpot and replace oil when necessary.</li> <li>6. Test and calibrate overload setting.</li> <li>7. Inspects, calibrate and adjust to original specifications all gauges, safety and operating controls including low temperature and high pressure cutout, oil pressure switch, load limit relay and electrical interlocks. For water cooled condenser systems, inspect condenser.</li> <li>8. Tubes for fouling Carry out Decaling of condenser if fouling exceeds original specifications, the controller shall carry out cleaning of the tubes at his own expense.</li> <li>9. Decaling of chiller.</li> </ol>

		<ul style="list-style-type: none"> <li>10. Check compressor foundation bolts.</li> <li>11. Check evaporator &amp; condenser water flow.</li> </ul>
Water Pumps	Monthly	<ul style="list-style-type: none"> <li>1. Inspects all water pumps.</li> <li>2. Check all seals, glands and pipeline for leaks and rectify as necessary.</li> <li>3. Re-pack and adjust pump glands as necessary.</li> <li>4. Check all pumps bearings and lubricate with oil or grease as necessary.</li> <li>5. Check the alignment and condition of all rubber couplings between pumps.</li> <li>6. Check all bolts and nuts for tightness and tighten as necessary.</li> </ul>
Water Pumps	Annual (Immediately after award of contract)	<ul style="list-style-type: none"> <li>1. Perform all function for monthly checks.</li> <li>2. Check motor earthing, megger motor and connection wiring on each.</li> <li>3. Tighten motor terminals.</li> <li>4. Check starter contacts.</li> <li>5. Test and calibrate overload setting.</li> </ul>
Expansion Tank	Annual (Immediately after award of contract)	Inspection of expansion tank, drain, clean and flush out tanks as necessary.
Piping System	Monthly and Annual	<ul style="list-style-type: none"> <li>1. Check all piping system and repair these where they have leaks.</li> <li>2. Check for damage deterioration of insulation or sheathings necessary.</li> </ul>
Cooling Tower	Annual (Immediately after award of contract)	<ul style="list-style-type: none"> <li>1. Grease the bearing of motor.</li> <li>2. General maintenance &amp; overhaul of motor or as and when required.</li> <li>3. Inspection or nozzles/fills or earlier as per requirement.</li> </ul>
Strainer	Six monthly (Once immediately after award of contracts and again after 6 months period)	Carry out cleaning of strainer.
Air handling units	Monthly inspection	<ul style="list-style-type: none"> <li>1. Inspects all air handling and fan coil units.</li> <li>2. Check all air filter and clean or change filters as necessary.</li> <li>3. Check all water coils, seals and pipelines for leaks and rectify as necessary.</li> <li>4. Check and re-calibrate modulating valves and controls. Adjust and rectify as necessary to ensure compliance to the original specifications.</li> <li>5. Purge air from all water coils.</li> <li>6. Check all fan bearings and lubricates with grease as necessary.</li> <li>7. Check and tension of all belt drives and adjust as necessary.</li> <li>8. Check and clean all the condensate pans, trays and drains.</li> <li>9. Check measure and re-calibrate all sensors if necessary.</li> <li>10. Check, clean and service smoke detectors. Carry out a system test to ensure that the smoke detector will trip the AHU's.</li> <li>11. Check springs vibration isolators for abnormal vibration. Rectify If necessary.</li> <li>12. Coil to be cleaned by (a) spray of high- pressure clean water not</li> </ul>

		<p>exceeding 30 psi. (b) With chemical spray, if necessary.</p> <p>13. Thermometer, pressure gauge meter and temperature meter should be in working condition all the time. In case of any fault in recording of temperature and pressure by the said device(s), the same should be replaced immediately.</p>
Air handling units	Annual (Immediately after award of contract)	<ol style="list-style-type: none"> <li>1. Perform all functions for monthly checks.</li> <li>2. Tighten motor terminals.</li> <li>3. Check starter contacts.</li> <li>4. Test and calibrate overload settings.</li> </ol>
Ventilation	Monthly check and Annual (Immediately after award of contract)	<ol style="list-style-type: none"> <li>1. Check adjust as necessary the air flow of all fans are in compliance with the original specifications.</li> <li>2. Check the tension of all belt drives and adjust as necessary.</li> <li>3. Check and lubricate all fan bearings.</li> <li>4. Tighten motor terminals.</li> <li>5. Check starter contacts.</li> <li>6. Test and calibrate overload settings.</li> <li>7. A System check shall be carried out for all Mechanical ventilation (MV), Pressurization and Exhaust system to verify the performance of the systems.</li> </ol>
Switch Board	Six monthly (Once immediately after award and of contract and again after 6 months period)	<ol style="list-style-type: none"> <li>1. Clean and adjust all switch gear, contactors, relays and associated electrical equipment at intervals not exceeding six months.</li> <li>2. Check and prove operation thermal over load and protection devices.</li> <li>3. Check and ensure tightness of all equipment fastenings and cable terminations within switch boards.</li> <li>4. Vacuum clean all switch boards.</li> </ol>
Piping System	Monthly check and Annual (Immediately after award of contract)	<ol style="list-style-type: none"> <li>1. Check all piping system for leaks and repair these where they have occurred.</li> <li>2. Check for damage &amp; deterioration of insulation or sheathings. Rectify as necessary.</li> </ol>



### **WORKS TO BE DONE ON DAILY BASIS: -**

- The reading of the chiller and condenser pressure, oil pressure oil level, suction and discharge pressure of pumps, voltage and Amps. etc. shall be checked and recorded in the logbooks on hourly basis. Necessary action is to be taken if the readings are not normal.
- To check all the electrical motors and bearings for abnormal noise/heating, contractor has to take necessary action if noise found abnormal.
- To check the water level in makeup water tank and in the cooling tower.
- To drain out the water from A.C. Plant Room/ Cooling Tower, AHU's if required.
- To clear/sweep the areas of A.C. Plant Room/ AHU Room/Cooling Tower etc.
- Filters of the AHU's units are to be made clean regularly.
- The inside and ambient condition i.e. DB, WB & RH of all the committee halls/lounges, rooms etc. shall be recorded on an hourly basis in log book/register.
- To check up all switch gear of electric control panels of AC plant, AHUs etc. for abnormal noise/heating, contractor has to take necessary action, if found abnormal.
- Maintenance schedule of equipment as given in manufacture's O & M manual should also be carried by the contractor.

### **WORKS TO BE DONE ON MONTHLY BASIS:-**

- To check the coupling of pumps etc.
- To check the safety controls and interlocking of various equipment.
- To check and clean the nozzles of the cooling tower and to clear the water basin and sump of cooling tower.

### **WORKS TO BE DONE EVERY THREE MONTHS:-**

- To check the refrigerant system for leak test and to inform the department in case of leakage for rectification by the department.
- To dust off the inside of all the electrical panels.
- To check the lugs/Thimbles/Terminals points of the electrical motors switches, starters, single phase preventers and indication light fuses etc.
- To check the oil level and to fill if required in the gearbox of cooling tower.
- To check the alignment of all the belt driven equipment and to rectify if required.

### **WORKS TO BE DONE ON YEARLY BASIS/WHENEVER REQUIRED:-**

All Painting works.

## IITD -2010 CORRECTION SLIPS

In General condition of contract for IIT Delhi works department 2010 –

Reference	Existing	Modified
Clause 10B (ii), Para-2	Before any installment of advance is released, the contractor shall execute a Bank Guarantee Bond from Scheduled Bank <b>for the amount of advance &amp; valid</b> for the contract period. This shall be kept renewed from time to time to cover the balance amount and likely period of complete recovery, <b>together with interest.</b>	Before any installment of advance is released, the contractor shall execute a Bank Guarantee Bond from Scheduled Bank <b>for the amount equal to 110% of the amount of advance and</b> valid for the contract period. This <b>(Bank Guarantee from Scheduled Bank for the amount equal to 110% of the balance amount of advance)</b> shall be kept renewed from time to time to cover the balance amount and likely period of complete recovery.
Clause 3 (vii)	If the contractor shall obtain a contract with Government as a result of wrong tendering or other non- bona fide methods of competitive tendering.	If the contractor had secured the contract with Government as a result of wrong tendering or other non-bonafide methods of competitive tendering <b>or commits breach of Integrity Agreement.</b>

Reference	Existing Provision	Modified Provision
Page 5, IITD 2010	Page 5, IITD 2010 4A. Applicable for Percentage Rate Tender only (IITD-7) In case of Percentage Rate Tenders, a tenderer shall fill up the usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in Schedule of Quantities at Schedule-A, he will be willing to execute 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 conditions 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. Tender shall have the name and number of the works	Page 5, IITD 2010 4A. Applicable for Percentage Rate Tender only (IITD-7) In case of Percentage Rate Tenders, <b>contractor</b> shall fill up the usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in Schedule of Quantities at Schedule-A, he will be willing to execute the work. <b>The tender submitted shall be treated as invalid if :-</b> <b>1. The contractor does not quote percentage above/below on the total amount of tender or any section/sub head of the tender.</b> <b>2. The percentage above/below is not quoted in figures &amp; words both on the total amount of tender or any section/sub head of the tender.</b>

to which they refer, written on the envelopes.

**3. The percentage quoted above/below is different in figures & words on the total amount of tender or any section/sub head of the tender:** 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 conditions 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. Tender shall have the name and number of the works to which they refer, written on the envelopes.

**New Para 4B is added as below:**

**4B: In case the lowest tendered amount (estimated cost + amount worked on the basis of percentage above/ below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/below on estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.**

**In case any of such contractor refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50% of earnest money shall be forfeited.**

**If the revised tendered amount of two more contractors received in revised offer is again found to be equal , the lowest tender, among such contractors, shall be decided by draw of lots in the presence of SE of the circle, EE(s) in-charge of major & minor component(s) (also DDH in case Horticulture work is also included in the tender), EE(P) or EE(HQ) of the circle & the lowest contractors those have quoted equal amount of their tenders.**

**In case all the lowest contractors those have quoted same tendered amount,**

		<p>refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each contractor.</p> <p>Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.</p>
Reference	Existing Provision	Modified Provision
10A (page 6-7)	<p>In case of Percentage Rate Tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy. <b>However if the contractor has worked out the amount of the tender and if any discrepancy is found in the percentage quoted in words and figures, the percentage which corresponds with the amount worked out by the contractor shall, unless otherwise proved, be taken as correct. If the amount of the tender is not worked out by the contractor or it does not correspond with the percentage written either in figures or in words, then the percentage quoted by the contractor in words shall be taken as correct. Where the percentage quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the percentage quoted by the contractor will, unless otherwise proved, be taken as correct and not the amount.</b></p>	<p>In case of Percentage Rate Tenders only percentage quoted shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy.</p> <p><b>(Remaining part deleted)</b></p>
Reference	Existing Provisions	Modified Provisions
Deviations/ Variations Extent and Pricing	<p><b><u>CLAUSE 12</u></b></p> <p>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</p>	<p><b><u>CLAUSE 12</u></b></p> <p>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</p>

	<p>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 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 works except as hereafter provided.</p>	<p>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 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 works except as hereafter provided.</p> <p><b>The completion cost of any agreement for Maintenance works including works of up gradation, aesthetic, special repair, addition/ alteration shall not exceed 1.25 times of Tendered amount.</b></p>
<p>Deviations, Extra Items, Pricing</p>	<p>12.2</p> <p>In the case of extra items (items that are completely new and are in addition to the items contained in the contract), the contractor may within 90 days of receipt of order or occurrence of the item(s) claim rate, 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 considerations to the analysis of the rates submitted by the contractor, determined the rates on basis of market rates and the contractor shall be paid in accordance with the rates so determined.</p>	<p>12.2</p> <p><b>A. For Project and original works:</b></p> <p>In the case of extra items (items that are completely new and are in addition to the items contained in the contract), the contractor may within 90 days of receipt of order or occurrence of the item(s) claim rate, 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 considerations to the analysis of the rates submitted by the contractor, determined the rates on basis of market rates and the contractor shall be paid in accordance with the rates so determined.</p> <p><b>B. For Maintenance including works of upgradation, aesthetic, special repair, addition/ alteration:</b></p> <p><b>In the case of Extra Item(s) being the</b></p>

		<p><b>schedule items (Delhi Schedule of Rates items), these shall be paid as per the schedule rate plus cost index (at the time of tender) plus/minus percentage above below quoted contract amount.</b></p> <p><b>Payment of Extra items in case of non-schedule items (Non-DSR items) shall be made as per the prevailing market rate.</b></p>
<p>Deviation, Substituted Items, Pricing</p>	<p>In the case of substituted items (items that are taken up with partial substitution or lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following Para.</p> <p>(a) 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).</p> <p>(b) 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)</p>	<p><b>A. For Project and original works:</b></p> <p>In the case of substituted items (items that are taken up with partial substitution or lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following Para.</p> <p>(a) 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).</p> <p>(b) 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). <b>For Maintenance including works of upgradation, aesthetic, special repair, addition/ alteration:</b></p> <p><b>In the case of Substitute Item(s) being the schedule items (Delhi Schedule of Rates items), these shall be paid as</b></p>

		<p>per the schedule rate plush cost index (at the time of tender) plus/minus percentage above below quoted contract amount.</p> <p><b>Payment of Extra items in case of non-schedule items (Non-DSR items) shall be made as per the prevailing market rate.</b></p>
<p>Deviation, Deviated Quantities, Pricing</p>	<p>In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in schedule F, the contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities, the Engineer-in-Charge shall within one month of 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.</p>	<p><b>A. For Project and original works:</b></p> <p>In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in schedule F, the contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities, the Engineer-in-Charge shall within one month of 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.</p> <p><b>B. For Maintenance including works of up-gradation, aesthetic, special repair, addition/ alteration:</b></p> <p><b>In the case of contract items, which exceed the limit laid down in schedule F, the contractor shall be paid rates specified in the schedule of quantities.</b></p>
	<p>12.3 The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work excess of the limits laid down in Schedule F, and the Engineer-in-Charge shall after giving notice to the contractor within one month of occurrence of the excess and after</p>	<p><b>12.3 A. For Project and original works:</b></p> <p>The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work excess of the limits laid down in Schedule F, and the Engineer-in-Charge shall after giving notice to the contractor</p>

	<p>taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.</p>	<p>within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.</p> <p><b>B. For Maintenance including works of up-gradation, aesthetic, special repair, addition/ alteration:</b></p> <p>In the case of decrease in the rates <b>Prevailing in the market</b> of items for the work excess of the limits laid down in Schedule F, and the</p> <p>Engineer-in-Charge shall after giving notice to the contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.</p>
Schedule F	<p>Clause 12</p> <p>No provision.</p>	<p><b>Clause 12</b></p> <p><b>Type of work</b> ___ <b>***</b> _____</p> <p><b>*** To be filled by NIT approving authority either Project and original work or Maintenance works including works of up-gradation, aesthetic, special repair, addition/ alteration.</b></p>



**<< Organization Letter Head >>  
DECLARATION**

I / We, \_\_\_\_\_ hereby declare that all the information and data furnished by our organization with regard to this tender specification are true and complete to the best of our knowledge. I / we have gone through the specification, conditions and stipulations in details and agree to comply with the requirements and intent of specification.

<b>1</b>	Name & Address of the bidder	:	
<b>2</b>	Phone	:	
<b>3</b>	E-mail	:	
<b>4</b>	Contact person name	:	
<b>5</b>	Mobile number	:	
<b>6</b>	GSTIN number	:	
<b>7</b>	PAN number	:	
<b>8</b>	UTR no. [for payment of EMD]	:	
	<b>BANK DETAILS</b>		
<b>9</b>	Bank name	:	
<b>10</b>	Branch address	:	
<b>11</b>	Branch telephone no.	:	
<b>12</b>	MICR Code of the bank	:	
<b>13</b>	IFSC code	:	
<b>14</b>	Bank Account no.	:	
<b>15</b>	Type of account	:	
<b>16</b>	Blank Cheque	:	To be enclosed

We further declare that our organization has not been blacklisted / delisted or put to any holiday by any Institutional agency / Govt. Department / Public Sector Undertaking in the last three years.

[Signature of the bidder]

Name:

Seal of the bidder



## FORM OF PERFORMANCE SECURITY (GUARANTEE)

### BANK GUARANTEE BOND

In consideration of the President of India (hereinafter called "the Government") having offered To accept the terms and conditions of the proposed agreement between.....and..... (Herein after called "thesaid contractor(s)" for the work..... (Herein after called "the said agreement")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 agreement.

1. We .....(Indicate the name of Bank)..... (Hereinafter referred to as "Bank") hereby undertake to pay to the Government an amount not exceeding Rs..... (Rupees.....) only, on demand by the Government.
2. We ..... (indicate the name of Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Government 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.....(Rs. ....) only.
3. We, the said bank, further undertake to pay the Government any money so demand 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 there under and the contractor(s) shall have no claim against us for making such payment.
4. We .....(indicate the name of the 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 agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said Agreement have been fully paid and its claim satisfied or discharged or till Engineer-in-Charge on behalf of the Government certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor(s) accordingly discharges this guarantee.
5. We.....(indicate the name of Bank) further agree with the Government that the Government 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 Agreement 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 Government against the said contractor(s) and to forebear or enforce any of the terms and conditions relating to the said agreement 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 Government or any indulgence by the Government 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.

## ONLINE BID SUBMISSION:

The Online bids (complete in all respect) must be uploaded online in **two** Envelopes as explained below:-

<b>Envelope – 1</b> (Following documents to be provided as single PDF file)			
Sl. No.	Documents	Content	File Types
1.	Technical Bid	Annexure: I -Organization declaration sheet.	.PDF
2.		Annexure II - List of Govt. Organization/Deptt (Attested certificate of work experience as desired).	.PDF
3.		Certificate of registration for GSTIN	.PDF
4.		Affidavit as per NIT condition 1.2.2 to be submitted on stamp paper	.PDF
5.		Acceptance to execute INTEGRITY PACT [see integrity pact]	.PDF
6.		EPF & ESIC Registration proof	.PDF
7.		IITD 7 / 8 duly signed. [ at page-23-24]	.PDF
8.		MSME / NSIC Registration [If the bidder claims for EMD exemption]	.PDF
9.		Any other document as specified in the NIT	.PDF
<b>Envelope – 2</b>			
Sl. No.	TYPES	Content	
1.	Financial Bid	Price bid should be submitted in BOQ format.	. BOQ

**INDIAN INSTITUTE OF TECHNOLOGY DELHI**  
**HAUZ KHAS: NEW DELHI-110016**

**SCHEDULE OF QUANTITY**  
**[BOQ]**

**N/W : Comprehensive Maintenance and Operation of water cooled screw chillers and HVAC system at Lecture Hall complex, IIT Delhi.**

S.No	Description of items	Qty.	Unit	Rate	Amount
1	<p>SUBHEAD-I (Comprehensive maintenance of AC Plant)</p> <p>Comprehensive Maintenance of VOLTAS make 3 X 275 TR capacity water cooled screw chillers i/c allied equipment, pipe line &amp; valves etc. installed at LHC at IIT Delhi as per the following details of equipment and as per terms &amp; conditions.</p> <p>I Inventory of equipment attached.</p> <p>II SCREW CHILLERS = 3 Nos. X 275 TR</p> <p>III COOLING TOWERS = 3 Nos. X 275 TR</p> <p>IV CHILLED WATER PUMPS primary –3 nos.</p> <p>V CONDENSOR WATER PUMPS = 3 Nos.</p> <p>VI All the electrical control panel for AC plant, AHUs and ventilation panels - 1 lot</p> <p>VII AHUs with all component – 1 lot (40 No's )</p> <p>VIII VFD driven secondary chilled water pumps – 3 nos.</p> <p>IX Ventilation &amp; smoke exhaust fans – 1 lot (Inclusive GST) VFD of AHU- 80 No's</p>	12	Per Month		
2	<p>SUB HEAD-II ( Operation of AC Plant)</p> <p>Operation 3 X 275 TR capacity AC plants and Ventilation fans i/c allied equipment, AHUs, cooling tower, condenser water pumps, chilled water pumps (primary and secondary) and connected AHU's as per details in Annexure-I enclosed from 06.00 AM to 2.00 PM &amp; 2.00 PM to 10.00 PM daily on all working days except Sundays as per condition attached. (Inclusive GST)</p>	12	Per Month		
3	<p>Overtime/extra hrs. for the operation of the AC plants ventilation system ( As mentioned at SI. No. 1 above) and allied equipment before 7 after the normal working duty hrs. i.e. 06.00 AM to 02.00 PM &amp; 02.00 PM to 10.00 PM daily (16 hr shift) and for Sundays as and when required. (Inclusive GST)</p>	750	Hours		
	Total-				