



భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Notice Inviting Expression of Interest (EOI)

Name of Work: Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497TR (Phase-I) & 7555TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad campus, Kandi, Sangareddy.




18.08.2026
Executive Engineer - Electrical
IIT Hyderabad

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INDIAN INSTITUTE OF TECHNOLOGY(IIT) HYDERABAD
Notice Inviting Expression of Interest (EOI)
EOI No. IITH/CMD/ELE/EOI/2026-27/15

The Indian Institute of Technology(IIT) Hyderabad, an autonomous Institute under the Department of Higher Education, Government of India invites on behalf of President of India an online Expression of Interest (EOI) bids from the well-established, Experienced and specialized agencies for the work of Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497 TR (Phase-I) & 7555 TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad campus, Kandi, Sangareddy

Copy of valid Registration of Firm (ROF) certificate, PAN card, GST Registration certificate & GSTIN should accompany the Bid and those certificates should be valid on the last date of submission of bid.

1.1	EOI No.:	IITH/CMD/ELE/EOI/2026-27/15	
1.2	Name of work:	Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497 TR (Phase-I) & 7555 TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad campus, Kandi, Sangareddy	
1.3	Location of work:	Indian Institute of Technology (IIT) Hyderabad campus, Kandi-502284, Sangareddy, Telangana, India.	
1.4	Earnest Money Deposit (EMD)	Rs.5,00,000/- only	
1.5	Period of Work:	02 Years	
1.6	Date of Online Publication/Download of EOI document.	19/08/2026 @ 09:00hrs	
1.7	Last Date & Time for receiving of Pre-Bid Queries and to email ID	Date & Time	25/08/2026 @ 17:00hrs
		Email ID	ee.electrical@iith.ac.in
1.8	Date and Time of Pre-bid meeting at Conference Hall, CMD, IIT Hyderabad	27/08/2026 @ 10:30hrs	
1.9	Last Date for Submission of EOI bids	14/09/2026 @ 17:00hrs	
1.10	Date and time for Opening of EOI bids	15/09/2026 @ 17:30hrs	
1.11	Date and Time for Technical Presentation at Conference Hall, CMD, IIT Hyderabad	16/09/2026 @ 10:30hrs	
1.12	Website Link:	https://eprocure.gov.in/eprocure/app	

Note; The EOI document can be downloaded at the website mentioned above.

Sd/-
Executive Engineer-Electrical
IIT Hyderabad

1.0 INSTRUCTIONS TO THE BIDDERS FOR ONLINE BID SUBMISSION

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, preparing 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: <https://eprocure.gov.in/eprocure/app>.

REGISTRATION

1. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “Online bidder Enrollment” on the CPP Portal which 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 addresses 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 III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / 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 DSC’s to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, 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 tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e- mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each 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 tender document before submitting their bids.
- 2) Please go through the tender advertisement and the 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 tender document/schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black-and white option which helps in reducing the size of the scanned document.
- 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 the “My Space” or “Other Important Documents” are 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.

Note: My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.

SUBMISSION OF BIDS

- 5) Bidder should log into the site well in advance for bid submission.
- 6) Bidder should ensure that they can 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.
- 7) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 8) The bidder has to select the payment option as “offline” to pay the tender fee/ EMD as applicable and enter details of the instrument.
- 9) The bidder should prepare the EMD (if any) as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date and time of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise, the uploaded bid will be rejected.
- 10) Bidders are requested to note that they should necessarily submit their financial bids(if any) in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (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.
- 11) 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.
- 12) 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. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system-generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

- 13) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 14) Upon the successful and timely submission of bids (i.e., after Clicking "Freeze Bid Submission" in the portal), 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.
- 15) The bid summary has to be printed and kept as an acknowledgment of the submission of the bid. This acknowledgment may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS

- 16) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 17) 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 details of the helpdesk are 0120-4711508, 0120-6277787, 0120-4001002, 0120- 4001005 and support-eproc@nic.in.

1.1 OBJECTIVE OF THIS EOI:

The IIT Hyderabad is in the process of selecting a well-established, experienced and specialized agency for the work of **Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497 TR (Phase-I) & 7555 TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad campus, Kandi, Sangareddy** through a competitive bidding process to ensure uninterrupted, reliable, and energy-efficient operations of the installed HVAC equipments and systems through a systematic Preventive maintenance, prompt breakdown attendance, and comprehensive repair/replacement of defective components during the contract period.

The objective of this document is to solicit proposal from the interested parties, who satisfy the eligibility criteria set out in this document and who can Comprehensively Operate and Maintain the HVAC Systems at IITH **for a minimum period of 02 years** in a most Energy Efficient and Uninterrupted manner as per the needs of IITH.

Based on the evaluation of EOI bids received, interested parties found acceptable by IIT Hyderabad based on the Technical and Financial selection criteria set out, will be short-listed to participate in the subsequent bidding process. Accordingly, the revised set of Terms and Conditions/Terms of Reference (ToR) will be issued to the short-listed bidders only to submit their Final Technical bid and Price bid to IITH.

It is expected that only the System Integrators /Original Equipment Manufacturers (OEMs)/Specialized agencies having proven experience in the Comprehensive Operation and Maintenance of Large Centralized HVAC systems will respond to this Expression of Interest (EOI) notice.

SCOPE OF THE REQUIREMENT:

The Scope of the work includes, but not limited to the following:

- a) Site survey, Technical feasibility, Regulatory & Policy assessment.
- b) Effectively Operate and Maintain the scoped HVAC systems (both High Side and Low side) installed at various locations and in various bldgs.inside IITH campus.
- c) Providing all necessary labour, material ,services, tools , plant and equipment for the scoped services.
- d) Offer a range of viable project delivery options and extensive proposal, including by but not limited to:
 - i. Operate and maintain the HVAC Plants to the best of its performance and efficiency during the Contract Period.
 - ii. Any other (details to be provided).

1.2 PROJECT DETAILS:

The Project site is the IIT Hyderabad campus. The Indian Institute of Technology Hyderabad (IITH) is a premier institute of science and technology established in 2008. IITH has been consistently ranked in the top 10 institutes in India for Engineering according to NIRF making it one of the most coveted schools for science and technology in the country. The IIT Hyderabad campus is spread across 600 acres of campus in the Kandi Village of Sangareddy District, Telangana, India.

The IIT Hyderabad campus is equipped with centralized HVAC plants of various capacities to meet the air-conditioning requirements of academic, research, administrative, residential, and other support facilities. The installed AC plants comprise:

- HVAC Plant-01: 5400 TR
- HVAC Plant-02: 1855 TR
- HVAC Plant-04: 2475 TR
- HVAC Plant-05: 2100 TR
- AD-04 Buildings: 222 TR

The total installed cooling capacity of the campus is **12052 TR**. These HVAC plants consist of chillers, cooling towers, chilled water pumps, condenser water pumps, Air Handling Units (AHUs), Fan Coil Units (FCUs), ventilation systems, expansion tanks, electrical panels, control systems, and associated piping and accessories.

The HVAC plants are critical infrastructure that operate round the clock to maintain the required indoor environmental conditions for academic, research, and administrative activities. Considering the critical nature of these systems, regular preventive maintenance, prompt breakdown response, and timely replacement of failed components are essential to ensure reliable, energy-efficient, and uninterrupted operation round the clock throughout the campus.

The Location Plan of all the above HVAC Plants inside the IITH campus is enclosed and provided along with this EoI document for ready reference of the Intending Bidders. However it is strongly recommended for the Intending bidders to visit the site and carry out a detailed site survey before submitting their online EoI bids.

1.3 EVALUATION METHODOLOGY:

The Selection Process:

The activities leading to the procurement of the services of the well-established, experienced and specialized companies/contractors for the **Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497 TR (Phase-I) & 7555 TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad campus, Kandi, Sangareddy** will consist of the following key activities:

1. Invitation for EOI : The IIT Hyderabad invites intending bidders to submit the Expression of Interest (EOI) bids for consideration in the subsequent tendering process for selection of well-established, experienced and specialized agency for the **Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497 TR (Phase-I) & 7555 TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad campus, Kandi, Sangareddy**. A Notice inviting Expression of Interest (EOI) will be published in the Central Public Procurement Portal (CPP Portal) of Govt. of India (www.eprocure.gov.in) and also will be uploaded on the IIT Hyderabad website (www.iith.ac.in), as per the standard procedure of IITH. This document with key details of the project and response formats is available for all potential and interested bidders through aforesaid websites.

2. Receipt of bids: The bids from the potential bidders who are interested in participating in the selection process will be received in online mode, on a designated date and time as specified in this document.

3. Evaluation of bids: The information provided by the potential bidders in their EOI, as part of the response to this EOI will be evaluated against the eligibility criteria specified in the EOI to qualify for the subsequent processes of selection. Based on this evaluation, the potential bidders who meet the qualifying (eligibility) criteria will be short-listed. The eligibility conditions have been formulated to assess the competence and capability of the potential bidding firms to meet the requirements of IIT Hyderabad for providing the required services. **For a bidder to be shortlisted for next stage of the evaluation, he must secure at least fifty percent (50%) marks in each attribute (given in the technical evaluation criteria) and sixty percent marks (60%) in aggregate.**

4. Terms of Reference (ToR): A detailed Terms of Reference (ToR) document with information on the specific requirements of IIT Hyderabad will be issued to the short listed bidders. Only the short-listed bidders will be invited formally by IIT Hyderabad to respond to the ToR document and submit their final Technical and Price bids as per the terms and conditions elaborated in the ToR document.

5. Evaluation of the Proposals: The responses from bidders, who submit their final Technical and Price bid against the requirements of IIT Hyderabad specified in the ToR document, will be evaluated and the successful bid will be decided based on the criteria further elaborated in the ToR documents. The method of evaluation will be given in the ToR document.

RIGHT TO TERMINATE THE PROCESS:

- IIT Hyderabad makes no commitments, explicit or implicit, that this process will result in a business transaction with anyone.
- This EOI does not constitute any offer by IIT Hyderabad. The bidder's participation in this process may result in IIT Hyderabad selecting the bidders to engage in further responses, discussions and negotiations towards execution of a final contract. The commencement of any subsequent procurement activity resulting out of this EOI does not signify a commitment by IIT Hyderabad either to continue the activities or to culminate such activities with a definitive contract.
- IIT Hyderabad reserves the right to withdraw this EOI if it determines that such action is in the best interest of the organization without assigning any reason whatsoever.
- Shortlisted bidders would be issued formal Terms of Reference (ToR) document at a later date, provided IITH decides to go ahead with the process.

Authenticity of the Information and Right for Verification:

- IITH reserves the right to verify all statements, information and documents submitted by the potential bidder in response to the EOI. Any such verification or lack of such verification by the IIT Hyderabad shall not relieve the bidder of its obligations or liabilities hereunder nor will it affect any rights of the IITH thereunder.
- In case it is found during the evaluation of the responses or at any time during the subsequent procurement process or before signing of the contract or after its execution and during the period of project execution resulting out of the contract thereof, that one or more of the pre-qualification conditions have not been met by the bidder, or the bidder has made material misrepresentation or has given any materially incorrect or false information, the bidder shall be disqualified forthwith if not yet awarded the contract either by issue of the letter of intent or entering into a contract.

Additional Conditions:

- Timing and sequence of events resulting from this EOI shall be as determined by IITH.
- Responses are subject to rejection if they limit or modify any of the terms and conditions or specifications of this EOI.
- Neither the bidder nor any of bidder's representatives shall have any claims whatsoever against IITH or any of its respective officials, agents, or employees arising out of or relating to this EOI or these procedures (other than those arising under a definitive service agreement with the bidder in accordance with the terms thereof).
- The Bidder shall not bid under any Consortium or Joint Ventures. Bids from a Consortium/Joint venture shall be summarily rejected.
- The decision of the IIT Hyderabad with regards to selection of bidders for issue of ToR documents will be final. The IITH is not bound to assign any reason thereof.
- The bidder should not be under a declaration of ineligibility for corrupt and fraudulent practices issued by Government of India or any State Governments in the country of India. (To be furnished under Notarized Affidavit).
- The bidder must not have any history of defaulting in execution of work orders issued by Government of India or any State Government in the country of India. A self-declaration certificate to this effect should be enclosed. (To be furnished under Notarized Affidavit).
- The bidder hasn't been blacklisted by any Central/State Government institution and there has been no pending litigation with any government department on account of similar services. (To be furnished under Notarized Affidavit).
- No Criminal Proceedings in any Court of Law should pending against the bidding Firm Or its Promoters Or its Directors Or its Executives. (To be furnished under Notarized Affidavit).

1.4 ELIGIBILITY CRITERIA

The interested firms should have the credentials to meet all of the following criteria to become eligible bidders for the selection process of contractor for the **Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497 TR (Phase-I) & 7555 TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad, Kandi, Sangareddy.**

A. BASIC ELIGIBILITY CRITERIA related to Technical and Financial Credentials

1. Bidders shall produce definite proof from the appropriate authority, in the form of a completion certificate which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:

Experience of having successfully completed similar works during the last 07 years ending last day of the month previous to the one in which tenders are invited.

(i) Three similar works completed each of rated capacity not less than 40% of 12052Tr capacity District Cooling Plants/Centralized HVAC Plants

OR

(ii) Two similar works completed each of rated capacity not less than 60% of 12052Tr capacity District Cooling Plants/Centralized HVAC Plants

OR

(iii) One similar work completed each of rated capacity not less than 80% of 12052Tr capacity District Cooling Plants/Centralized HVAC Plants

“SIMILAR WORK” shall mean the work of Supply, Installation, Testing, Commissioning (SITC) of Centralized HVAC system/District Cooling system High side & Low side works i/c HVAC Chillers, Cooling Towers, Pumps, AHUs, CSUs, FCUs, CPM, Pressurization system etc. OR Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operation & Maintenance (O&M) of Centralized HVAC system/District Cooling system High side & Low side works i/c HVAC Chillers, Cooling Towers, Pumps, AHUs, CSUs, FCUs, CPM, Pressurization system etc. in any Institutional Campus/IITs/NITs/IISERs/IIMs/CentralorStateUniversities/Labs/Industries/Commercial complexes / Power Plants/Steel Plants/Banks/PSUs/Data Centres/IT Companies/Pharma Companies/Any Other Reputed Industries and Organizations.

NOTE; 1. The reference similar work completed shall consist of HVAC system of minimum capacity of 4821TR (High Side) as on last day of the month previous to the one in which tenders are invited.

2. The Completion Certificate/Performance Certificate for the reference similar work need to be submitted duly signed/stamped by the concerned Client Department.

2. Turnover: The Average annual financial turnover of the bidder should be at least **Rs.3,00,00,000.00/- only** during the immediate last three (03) consecutive financial years **ending 31st March 2025 or ending 31st March 2026**. The value of annual turnover figures shall be brought to current value by enhancing the actual turnover figures at simple rate of 7% per annum. The signed and stamped certificate from the Chartered Accountant (CA) shall be attached with the bid.

3. Banker's Certificate or Net worth Certificate (as per the prescribed format given in EOI): The bidder shall submit the Banker's certificate or Net-worth certificate as per the below:

Banker's Certificate of the amount equal to **Rs. 4,00,00,000/-only** issued by any scheduled bank,
or

Net worth certificate of minimum amount **Rs.1,00,00,000/-only**, issued by certified Chartered Accountant with UDIN .

4. Bidding Capacity: The bidder should have bidding capacity equal to or more than **Rs.10,00,00,000/- only**. The bidding capacity shall be worked out by the following formula:

Bidding Capacity = {[AxNx1.5]-B}

Where,

A = Maximum turnover in any one year during the last seven years taking into account the completed as well as works in progress. The value of completed works shall be brought to the current costing level by enhancing at a simple rate of 7% per annum.

N = Number of years prescribed for completion of work for which bids have been invited.

B = Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited.

5. To become eligible, the tenderer shall have to furnish an affidavit as per **Form 'J'** of the EOI.

6. The bidder shall have **Employees Provident Fund (EPF) enlistment** and proof of the same shall be attached along with the Technical Bid clearly showing the Provident Fund Code number.

7. The bidder shall have the **Employee State Insurance Corporation (ESIC) enlistment** and proof of the same shall be attached with the technical bid.

8. The bidder shall submit the **Indemnity bond** as per format provided in **Annexure-II**.

9. The bidder shall submit the authorization certificate from the Approved Original Equipment Manufacturer (OEM) of **critical HVAC components i.e., Chillers, HVAC Primary, Secondary, Condensor pumps, Chiller Plant Manager (CPM), VFDs, Cooling Towers** as per the format enclosed as **Annexure- IV**.

10. The bidder shall submit a valid and applicable Electrical contractor license of LT voltage levels along with it's bid.

11. The Intending bidders are **strongly recommended** to have a thorough site survey before quoting their bids to have actual assessment of onsite conditions.

B. Other Eligibility Criteria related to Incorporation of the Firm:

- a) The successful bidder must be having a service support office in Telangana, before the execution of Contract Agreement after the finalization of successful bidder and till the completion of contract agreement. Complete address, contacts and Documentary evidence for the same needs to be provided.
- b) The successful bidder should have full-fledged service setup team of technical staff (Detailed Organization chart needs to submitted) & should have own warehouse in Telangana, to ensure constant and immediate supply of spare part at all times. Or Else he may have to set-up at his own cost the Essential Spares stores within the IITH campus with the total watch & ward facility under his own scope.

- c) The entity should have been operational in India at least for the last three financial years ending with 31.03.2026.
- d) The potential bidder **must not be a Joint Venture (JV) or consortium of firms.**

Note: The bidder shall submit all the necessary documentation in support of the above eligibility criteria.

12. The description of the work is as follows:

Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497 TR (Phase-I) & 7555 TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad campus, Kandi, Sangareddy.

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

12. Tenders with any condition including that of conditional rebates shall be rejected forthwith.

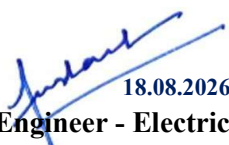
13. Cost of EMD may also be remitted to Institute's account number as per bank particulars given below:

Name of the Account Holder	: Indian Institute of Technology Hyderabad
Account Number	: 30412797764 (Current Account)
Name of the Bank	: State Bank of India
Address of the Bank	: IIT Kandi, IIT Hyderabad Campus, Kandi, Sangareddy, Telangana – 502284
Branch code	: 14182
IFSC code	: SBIN0014182
MICR code	: 502002528
SHIFT code	: SBININBB762

14. The competent authority on behalf of the President of India does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received without the assignment of any

reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.

15. Canvassing whether directly or indirectly, in connection with tenderers is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
16. The contractor shall not be permitted to tender for works if 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). Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Institute.
17. No Engineer of gazette 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 previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.
18. The tender for the works shall remain open for acceptance for a period of Ninety (90) days from the date of opening of EOI bid. If any tenderer withdraws his tender before the said period, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the re-tendering process of the work.
19. This Notice inviting EOI shall form a part of the contract agreement. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of :-
 - a) *Notice Inviting EOI, all the documents including Terms and conditions, Special conditions of contract, additional conditions, Technical specifications and drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.*
 - b) *Standard Contract form (General Conditions of Contract) as posted in the website of the Institute. The bidder is deemed to have gone through and understood the Standard Contract Form and the General Conditions of Contract.*


18.08.2026
Executive Engineer - Electrical
IIT Hyderabad

(Signature of bidder)

1.5 General Conditions of Contract

1. This CAMC contract is currently for Two (02) years but may be extended for another further 1 to 2 years based on satisfactory Performance during the Original Contract period and based on mutual discussions on Terms & Conditions and agreement of both the parties.
2. During AMC/Servicing/Attending breakdown calls of HVAC Systems, existing spares are required to be replaced with new spares for efficient and effective operation of HVAC Systems. In such instances, the agency shall submit the new spares assessment to the Engineer-In-Charge for review and approval for the replacement of spares.
3. Some restrictions may be imposed by the Institutes security staff etc., on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on this account.
4. The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rules and regulations and pay all fees and charge, which he may be liable.
5. The contractor shall take instructions from the Engineer-in-Charge for stacking of materials in any place. No excavated earth or building material shall be stacked on areas where other buildings, roads, services compound walls are to be constructed.
6. As a policy of the Institute, huts for labour are not permitted at the site of work by the contractors. The contractors are required to provide such accommodation outside the premises of the Institute and nothing extra shall be paid on this account.
7. The contractor shall procure all the materials in advance so that there is sufficient time for testing and approving the material and clearance of the same before use in work.
8. No payment shall be made for extra for scaffolding required for external works at all levels.
9. Contractor should clean thoroughly that there should not be any dust/dirt inside the HVAC systems.
10. Contractor should maintain all required spare parts, Tools & Equipment and other related items as required as per contract for smooth CAMC and O&M of HVAC systems.
11. Contractor should attend the problems immediately in case of breakdowns of HVAC systems and any other related electro-mechanical equipment malfunctions.
12. Contractor should ensure that there should not be any modifications in Power & Control supply in the existing system if required, this has to get approved Engineer-in Charge before executing the work & modifications has to be incorporated in the drawing.
13. Contractor should not bypass any safety procedures, accidents caused due to negligence of safety is the sole responsibility of the contractor.

14. Contractor should Display Caution Board while doing maintenance work on Live Parts.
15. The successful bidder will be responsible for the security/insurance of their staff working at site and IIT Hyderabad will not be responsible in any manner in case of any accident / miss-happenings.
16. Reports to be submitted by Contractor
As per contract, the contractor shall submit Fortnight/monthly/Quarterly/Half Yearly Operation & Maintenance reports in a computerized form.

1.6 Broad Scope of Work

GENERAL

The following is the broad scope of work and indicative only but not limited to the following;

A. HVAC System:

The Comprehensive Annual Maintenance (CAMC) and Day to Day Operation & Maintenance (O&M) of **12,052 TR capacity district cooling system with Chiller Plant Manager in multiple AC Plants.**

The following is the scope of work of the contract. The under mentioned major equipment's are covered in the scope of CAMC and O&M contract in compliance with **Annexure-A and Annexure-B.**

1. High Side System:

Centrifugal Chillers/Screw Chillers/Scroll Chillers with associated Cooling Towers, Primary Pumps, Secondary Pumps, Condenser pumps, Air Separator, POT strainer, etc. also including all pressure pumps and associated equipment installed in the AC Plant, AC Plant room ventilation system, LT Panels also which may not be specifically mentioned along with the Chilled water pipelines from plant till low side systems(all buildings and inside building) and condenser pipeline, etc. are covered in the scope of work of Comprehensive AMC.

High Side HVAC Equipment Phase-I

Table-01

S.No.	Plant Description	Chillers Capacity	UOM	Quantity	Rating (TR)
1	AC Plant-1	900 TR	Each	3	2700
2	AC Plant-2	275 TR	Each	5	1375
3	AC Plant-2	200 TR	Each	1	200
4	Chemical, Mechanical & Aerospace and Civil Engg. Building	18.5 TR	Each	12	222
Total Installed Capacity in TR					4497

1. AC Plant-1 (2700TR)

The Comprehensive Annual Maintenance (CAMC) and Day to Day Operation & Maintenance (O&M) of 3no's x 900 TR capacity centrifugal water chiller with Chiller Plant Manager. The following is the scope of work of the contract.

The under mentioned major equipment's are covered in the scope of CAMC and O&M contract in compliance with ANNEXURE - A

- 03 Nos. Centrifugal compressors 900 TR capacity with refrigerant R-134a, lubricant complete with motor, condenser, chiller with microprocessor controller, power & control cabling, pipe line and valve etc associated with the plant.
- 03 Nos. condenser pumps of 55 KW/ 75 HP and complete with pipe line & valves etc Within the plant room.
- 03 Nos. primary chilled water pumps 22KW/30HP and 03 nos. secondary chilled water pumps 37 KW / 50 HP with pipe & valve etc. within the plant room.
- 03 Nos. induced draft cooling towers of (3 x 34,00,000) K.Cal/Hr complete with 8no. of 5.5KW/7.5HP Fan motors, pipes, strainer and 22 X 2000 liters make up water tank etc.
- 02 Nos. Chilled water pressurization pumps 0.75kW/1HP and complete with pipe line & valves etc. within the plant room.
- 02 Nos. main electrical panels for incoming supply and outgoing feeders to all drives in the plant room etc. i/c all repairs on electrical items are included.
- 01 No. starter panel with 3 starters along with 3no's VFD for secondary motors.
- 01 No. pressurization Expansion tank
- 01 No. POT strainer of chilled water system
- 01 No. POT strainer of condenser system
- **01 No. Lot:** piping network of water circulation in various circuits along with their accessories insulation and such as in bends, tees, reducer flanges, valves, strainers outlets etc. complete the system.
- **01No. Lot:** Electric panel boards complete with Voltmeter, Ammeter indication light for selector switch incoming &out going switch, single phase prevent or, CT's contractor for above all equipment and remote control panel, Instruments panel etc. along with various equipment connected with power cables (different sizes) from main panel boards to sub panel boards and multi core PVC control cabling etc. to complete the systems.
- **01 No. Lot:** Air Handling ducting with different thickness of insulation, Volume Control dampers, grilles, diffusers, fusible link/ motorized fire dampers etc. to complete the whole HVAC systems.

2. AC Plant-2 (1x200TR & 5x275TR)

The Comprehensive Annual Maintenance (CAMC) and Day to Day Operation & Maintenance (O&M) of 1x200TR and 5x275TR capacity screw water chiller, the following is the scope of work of the contract.

The under mentioned major equipment's are covered in the scope of CAMC and O&M contract in compliance with ANNEXURE – A

- Chillers 01Nos. x 200 TR capacity with refrigerant R-134a, lubricant complete with motor, condenser, chiller with microprocessor controller, power & control cabling, pipe line and valve etc. associated with the plant. The Plant will require to run all the year around continuously for Dining Hall & 4 Months (March to June) for Radiant Cooling System.
- 02 Nos. condenser pumps of 11 KW/15 HP and complete with pipe line & valves etc within the plant room.
- 02 Nos. primary chilled water pumps 4 KW/5.4 HP and 02 nos. secondary chilled water pumps 11 KW/15 HP with pipe & valve etc. within the plant room.
- 02 Nos. Chilled water pressurization pumps 0.75kW/1HP and complete with pipe line & valves etc. within the plant room.
- 01 No. induced draft cooling towers of (1 x 9,00,000) K.Cal/Hr complete with fan, pipes, strainer, make up water tank etc. for Dining Hall Chiller.
- 02 Nos. main electrical panels for incoming supply and outgoing feeders to all drives in the plant room etc. i/c all repairs on electrical items are included.
- 01 No. starter panel with 2 Nos. starters & VFDs for secondary motors.
- 01 No. pressurization Expansion tank
- 01 No. strainer of chilled water system
- 01 No. strainer of condenser system
- 01 No. Lot: piping network of water circulation in various circuits along with their accessories insulation and such as in bends, tees, reducer flanges, valves, strainers outlets etc. complete the system.
- 01No. Lot: Electric panel boards complete with Voltmeter, Ammeter indication light for selector switches incoming &out going switch, single phase prevent or, CT's contractor for above all equipment and remote control panel, Instruments panel etc. along with various equipment connected with power cables (different sizes) from main panel boards to sub panel boards and multi core PVC control cabling etc. to complete the systems.
- 01 No. Lot: Air Handling ducting with different thickness of insulation, Volume Control dampers, grilles, diffusers, fusible link/ motorized fire dampers etc. to complete the whole HVAC systems.

3. AC Plant-2 (5x275TR) Radiant Cooling System for 4 Months (March to June)

For the annual operation and maintenance contract (AOMC) of (5 x 275) TR capacity SCREW water chiller, the following is the scope of work of the contract.

The under mentioned major equipment's are covered in the scope of operation and maintenance contract in compliance with ANNEXURE - A

- 05 No. Screw compressor Chillers each of 275 TR capacity with refrigerant R-134a, lubricant complete with motor, condenser, chiller with microprocessor controller, power & control cabling, pipe line and valve etc associated with the plant. The Plants will require to be run for the specified period continuously.
- 06 Nos. condenser pumps of 18.5 KW/25 HP and complete with pipe line & valves etc. within the plant room.
- 06 Nos. Chilled water pumps 30 KW/40 HP with pipe & valve etc. within the plant room.
- 02 Nos. Chilled water pressurization pumps 0.75kW/1HP and complete with pipe line & valves etc. within the plant room.
- 05 Nos. induced draft cooling towers of (5 x 13,37,500) K.Cal/Hr complete with fan, pipes, strainer, make up water tank etc. for Radiant Cooling System Chiller.
- 01 Nos. main electrical panels for incoming supply and outgoing feeders to all drives in the plant room etc. i/c all repairs on electrical items are included.
 - 01 No. pressurization Expansion tank
 - 01 No. strainer of chilled water system
 - 01 No. strainer of condenser system
- 01 No. Lot: piping network of water circulation in various circuits along with their accessories insulation and such as in bends, tees, reducer flanges, valves, strainers outlets etc. complete the system.
- 01No. Lot: Electric panel boards complete with Voltmeter, Ammeter indication light for selector switch incoming &out going switch, single phase prevent or, CT's contractor for above all equipment and remote control panel, Instruments panel etc. along with various equipment connected with power cables (different sizes) from main panel boards to sub panel boards and multi core PVC control cabling etc. to complete the systems.
- 01 No. Lot: Air Handling ducting with different thickness of insulation, Volume Control dampers, grilles, diffusers, fusible link/ motorized fire dampers etc. to complete the whole HVAC systems.

4. Night Cooling Chillers of Academic Block-A, B & C

12 Nos. 18.5 TR screw chiller for Night Cooling systems located on terraces of Academic Block-A, B & C as mentioned at ANNEXURE – A.

The BMS integration is in progress at the building level. The operating personnel shall manually close/ open the required valves of the district cooling system to run the Night Cooling Chillers for air-conditioning of the specified labs.

The Contractor shall provide adequate operating personnel for operation and minor maintenance work in the building level cooling system. The major equipment's 12 Nos. Scroll compressor 18.5 TR capacity with refrigerant R410A covered in the scope of work as mentioned below;

- i) 12 nos. Air-cooled Scroll chillers of 18.5 TR capacity each.
- ii) 12 nos. chilled water Inline pumps at terrace.
- iii) 06 nos. Vertical chilled water Inline pumps in GF of respective block.
- iv) Separate Thermal Storage Tank for each block located at terrace.
- v) Electrical panel.

The plants shall be handed over in healthy conditions installed "as is where is" basis. All the Twelve chilling machines are in working condition. The contractor shall be solely responsible for operation, maintenance and upkeep of the plant in good running condition. The contractor shall take charge of the total inventory of the plant equipment.

1. High Side System:

Centrifugal Chillers/Screw Chillers/Scroll Chillers with associated Cooling Towers, Primary Pumps, Secondary Pumps, Condenser pumps, Air Separator, POT strainer, etc. also including all pressure pumps and associated equipment installed in the AC Plant, AC Plant room ventilation system, LT Panels also which may not be specifically mentioned along with the Chilled water pipelines from plant till low side systems(all buildings and inside building) and condenser pipeline, etc. are covered in the scope of work of Comprehensive AMC.

Table-02

S.No.	Plant Description	Chillers Capacity	UOM	Quantity	(TR)
1	AC Plant-1	900 TR	Each	3	2700
2	AC Plant-2	280 TR	Each	1	280*
2	AC Plant-4	625 TR	Each	3	1875
3	AC Plant-4	200 TR	Each	3	600
4	AC Plant-5	525 TR	Each	4	2100
Total Installed Capacity in TR					7555

AC Plants connected to various buildings are tabulated below:

Table -03

S. No.	AC Plant no.	Secondary Circuit	Quad	Connected Building	Type of System Installed
1.	AC Plant-1	Ckt-1 (Phase-I)	AD-04	Chemical	Conventional Cooling System
2.				Mechanical and Aerospace	
3.				Civil	
4.		Ckt-2 (Phase-II)	AD-01	Chemistry	Conventional Cooling System
5.				BTBM	
6.				MSME	
7.			LH	Lecture Hall Complex	Hybrid: Conventional + Radiant Cooling System
8.			AD-02	Computer Science	Conventional Cooling System
9.				Electrical Engineering	
10.		Ckt-3 (Phase-II)	DoD	Department of Design	Conventional Cooling System
11.			AD-03	Mathematics	
12.				Physics	
13.				Liberal Arts	
14.		Ckt-4 (Phase-II)	ADMIN.	Admin Building	Conventional Cooling System
15.			KRC	Knowledge Resource Center	Hybrid: Conventional + Radiant Cooling System
16.			RCC	Research Center Complex	Conventional Cooling System
17.	AC Plant-4	Ckt-1 (Phase-II)	DH	Dining Hall-02	Hybrid: Conventional + Radiant Cooling System
18.			SnCC	Sports & Cultural Complex	Conventional Cooling System
19.		Ckt-2 (Phase-II)	UBH	Hostels (8 buildings)	Radiant Cooling System
20.	AC Plant-5	Ckt-1 (Phase-II)	IGH	International Guest House	Conventional Cooling System
21.			CC	Convention Center	Conventional Cooling System

22.			TIP	Technology Incubation Park	Conventional Cooling System
23.		Ckt-2	TRP	Technology Research Park	Conventional Cooling System
24.	AC Plant-02	Ckt-1 (Phase-I)	DH	Dining Hall-01	Hybrid: Conventional + Radiant Cooling System
25.		Ckt-2 (Phase-I)	Hostels	Hostels (10 buildings)	Radiant Cooling System
26.		Circuit-3 Phase-II	Precast buildings	Hostels (03 buildings)	Radiant Cooling System

The plants shall be handed over in healthy condition installed “as is where is” basis. All the equipment, power source LT Panel in the AC Plant and are in working condition. The contractor shall be solely responsible for operation, maintenance and upkeep of the plant in good running condition.

The contractor shall take charge of the total inventory of the plant equipment.

1.1 Operation & Maintenance of Central Air Conditioning System:

The contractor shall have to take up both preventive as well as break down maintenance jobs. The Contractor shall have to carry out the jobs in consultation with Engineer-in-charge and have to be complete in all respect to the entire satisfaction of Engineer-in-charge, such as “Scheduled checking/servicing/overhauling of the machines as per instructions of Engineer and maintenance schedules indicated in this tender document or recommended by manufacturers of the machine as the case may be & attending the faults in the machines wherever these go out of order or work inefficiently”.

In other words: The scope of work includes repair/overhauling of all the parts of the machines, which become defective, inefficient or get damaged during working. The decision of competent authority regarding repair/ replacement/ overhauling of any part of the machine will be final and binding on the contractor.

To follow the instructions given by Engineer-in charge regarding jobs to be carried out as and when requirement arises in the Institution.

1.1.1 Work to Be Done on Daily Basis.

- The reading of the suction and discharging pressure, oil pressure, oil and gas level, suction and discharging pressure of pumps, Voltmeter & Ammeters etc., shall be checked and recorded in the **LOGBOOK** (provided by the contractor) on timely basis. Necessary action is to be taken if the reading is not normal.
- To check all electrical motors and their bearing for abnormal noise/heating and to take necessary action if found abnormal.
- To check water level in the makeup water in overhead tanks and check functioning of float valve. See proper function of the circulation/pressure pumps.
- To drain out water and clean the AC plat room/cooling tower/AHU’s etc as and when required/scheduled.

- To keep machine rooms equipment's such as chilling plant area. AHU's exhausts neat and clean including their room floor, wall ceiling etc in an orderly manner
- Any other work required for the equipment's for proper functioning.

1.1.2 Material Component required for maintenance work in all the AC Plants.

The following material component is part and parcel of the contract for regular maintenance works in the AC Plant.

- Repairing of Compressors and motors if required
- Repairing of MCC panel, evaporator and condenser shells and circuits inside if required.
- Repairing of oil filters as and when required
- Replacement of driers, Compressor Lubricating oil as and when required
- Supply and topping up of Refrigerant Gas R-134a, as required during periodical and breakdown conditions of chillers if required.
- Replacement of bearings, if required
- Replacement of Expansion Valve if required
- Replacement of Temperature meters, thermostats, water gauges if required.
- Replacement/repairing of Expansion Valve, If required.
- Replacement / repairing of Valves of any Type up to 450 mm dia, if required.
- Replacement /repairing of primary, secondary and condenser pumps, if required.
- Replacement /repairing of pressurization pumps, if required.
- Replacement/repairing of VFDs of all chilled water pumps, primary, secondary & condenser, etc. as required.
- Replacement / repairing of motorized valves near in all chilled water lines, NRV valves in the Primary, Secondary, Condenser of chilled water pipeline.
- Replacement /repairing of cooling tower gear box, bearings, base frames, and motors if required.
- Replacement/repairing of refrigeration circuit, control wirings, if required,
- Replacement of /repairing of all types of Electrical switchgears/main electrical panel if required.
- Replacement /repairing of VFD/star delta starter panel if required.
- Replacement of contactors/ Relays if required.
- Replacement of Overload/under voltage relays if required.
- Replacement of Single-Phase Preventer / Phase Reversal Protector if required.
- Replacement of High Pressure/Low Pressure Switches if required.
- Replacement /repairing of pressurization units for chilled water and condenser circuits if required.
- Re-insulation, cement sand plastering, painting on pipes. Plants and cooling towers if required.

1.1.3 Material component required for (as and when required, not included in the contract but included labour) specific maintenance work mentioned in the BOQ.

- Replacement of compressor
- Replacement of compressor motor.
- Replacement of Main Butterfly/Gate valves above 450 mm dia.
- Replacement of chiller and condenser copper tubes.

1.1.4 Labour component required for ac plants.

Periodical, Maintenance of the AC plant-1, 2, 4 & 5 as per the following schedule shall be part and parcel of the contract all inclusive. No additional payment will be made in this regard.

1.2 Preventive / schedule Maintenance work:

1.2.1 Chillers:

- Monthly checking and rectification, if required for abnormal noise, vibration, leakage of oil, refrigerant, oil level etc.
- Topping of system with Refrigerant and oil, replace oil cartridge, dehydrators
- Replacement of faulty gaskets.
- Quarterly checking and tightening of all holding down bolts and, pipe line connections etc.
- Quarterly checking of operation of oil heater, purging unit.
- Quarterly checking of Microprocessor Control panel, talk and translator.
- Quarterly inspection of the VFD and input terminals and MCCB for any abnormalities and rectification of the same if found any by all means.
- Annual chemical de-scaling of Condensers as and when required.
- Quarterly checking of motor shaft alignment/coupling.
- Quarterly checking, rectification/replacement of all bearings for sound, heating and vibration.
- Quarterly Greasing of HT motor bearings.
- Develop action plan for rectifying abnormalities if any observed in performance of the system.
- To attend break down calls as and when required, investigation, locate defects, and replace the defective parts/verify defects and re-commissioning the system.

1.2.2 Pumps:

- Monthly checking for leakage and repair /replacement /adjustment of pump seals, glands, valve glands, gaskets etc.
- Quarterly checking and rectification/replacement of all bearings for abnormal sound, heating and vibration.
- Quarterly checking for surface corrosion.
- Inspection of terminal connections and meggering.
- Quarterly checking of motor alignment with all required tools/material and greasing.

1.2.3 Cooling Towers:

- Monthly cleaning of water distribution trays, nozzles, fan inlet screen.
- Monthly cleaning of strainers, CT basins and general cleaning of PVC formed Fill Sheets.
- Quarterly checking and rectification of CT fan blades and gear assembly.
- Checking of water level in sump, draining and flushing the sump.
- Quarterly checking, rectification / replacement of all bearings for sound, heating and vibration.
- Quarterly checking and retightening of all electrical terminals replacement of cooling tower PVC formed fill sheets as and when required.
- Quarterly lubrication of motor bearings.
- Half yearly checking of motor gearbox alignment.
- Regular inspection of working of level sensors.
- Annual dismantling and cleaning of cooling tower including chemical cleaning of cooling tower PVC formed Fill Sheets/honeycomb sheets as applicable.

1.2.4 Soft Water:

Makeup soft water management (treated water management with auto/periodic water blowout from the system by continuous monitoring of water parameters Eg: PPM,pH, TDS, etc.) to maintain the water parameters as recommended by Chillers Original Equipment Manufacturer(OEM) guidelines.

It is the contractor responsibility to protect water using systems by applying a proper water treatment program.

Soft water quality parameters specified by OEM M/s Daikin shown below:

Cooling water, chilled water quality standard (JIS B 8622:2002 JRAI/JSA)								
McQuay Basic Guideline I								
Items		Cooling Water			Chilled Water	Possible Harmfulness		
		Cycling		One time	cycling (below 20 °C)	Corrosion	Scaling	
		Cycling water	Make-up water	One time				
Basic items	pH @25°C		6.5~8.2	6.0~8.0	6.8~8.0	6.8~8.0	○	○
	Conductivity@25°C	mS/cm	<80	<30	<40	<40	○	○
	Cl ⁻	mg Cl/l	<200	<50	<50	<50	○	—
	SO ₄ ²⁻	mg Ca SO ₄ ²⁻ /l	<200	<50	<50	<50	○	—
	pH*	mg CaCO ₃ /l	<100	<50	<50	<50	—	○
	General hardness	mg CaCO ₃ /l	<200	<70	<70	<70	—	○
	Ca hardness	mg CaCO ₃ /l	<150	<50	<50	<50	—	○
Reference items	SiO ₂	mg SiO ₂ /l	<50	<30	<30	<30	—	○
	Fe	mg Fe/l	<0.3	<1.0	<1.0	<1.0	○	○
	Cu	mg Cu/l	<1.0	<1.0	<1.0	<1.0	○	—
	S ²⁻	mg S ²⁻ /l	NO	NO	NO	NO	○	—
	NH ₄ ⁺	mg NH ₄ ⁺ /l	<0.1	<1.0	<1.0	<1.0	○	—
	Cl	mg Cl/l	<0.3	<0.3	<0.3	<0.3	○	—
	CO ₂	mg CO ₂ /l	<4.0	<4.0	<4.0	<4.0	○	—
	Stability index	Stability index	—	—	—	—	○	○

1.2.5 Electrical System:

All PCC, MCC & Control panels:

- Weekly de-dusting of switch gears and operational checking of Breakers/switches.
- Periodic checking and rectification /replacement of all breaker contacts, CT polarity and ratio, PT ratio & IR values, relays, control circuits and breaker contact.
- Periodic checking of protection circuit of breakers and IR values by megger.
- Monthly checking of cable terminals, incoming and outgoing cable terminals for tightness and rectification if required.
- Periodic functional checking of all meters. Lamps and fuses etc., repair/replacement of the same if required.
- Quarterly checking of earth pits.
- Half yearly checking of Bus-bars.
- Annual meggering of all incoming and outgoing cables if required.

1.2.6 General Maintenance:

- Monthly inspection and checking of all the measuring instruments like temperature & pressure gauges, differential indicators etc.
 - Periodic checking of all supports and mountings for pipes ducts etc.
 - Periodic lubrication of all bearings, linkages.
 - Rectification and re-installation of all breakdown equipment.
 - Half yearly checking of motor alignment and meggering of motor & cables.
 - Periodic checking of all power and control terminals.
 - Maintenance of all equipment as per manufacturer recommendations.
 - Maintaining of required temperature, humidity and dust level in all sections.
 - All breakdown calls to be attended immediately or within 24 hours.
 - The contractor shall ensure running of complete plant in Auto/ semi auto / manual mode.
 - All special tools, tackles, jigs and fixtures to be supplied by the contractor.
 - Planning of schedule maintenance and spares.
 - The entire A/C plant including MCC rooms, cooling tower shall be kept clean and tidy all the time.
 - The contractor has to depute separate manpower for above mentioned HVAC plants as stated.
- 1.2 Descaling of condensers/chiller /C. T from time to time to maintain the efficiency of the plant, as per direction of the Engineer-in-Charge.
- 1.3 However minor repair works including welding, machining, grinding etc and replacement of minor pipelines/ valve inside the plant room as required shall be also included in the scope of the contract.
- 1.4 All spare parts required in routine maintenance of the AC Plants, which are specifically not mentioned, shall also include in the scope of contract.

- 1.5 The preventative maintenance schedule shall be prepared and submitted in advance and the necessary shutdowns may be taken with prior permission of the Institute.
- 1.6 A list of all components and consumable items replaced shall be maintained along with other records of plant maintenance and operation. Proper log sheets of running the plant and record for preventative maintenance of the plant shall be maintained. These records shall be put up to the Engineer-in-Charge on regular basis.
- 1.7 A suitable shutdown shall be given in winter for the annual preventative maintenance of the plant. All the equipment's should be thoroughly checked and maintained for proper functioning of all the systems. All the major equipment, pipeline, supports & cooling towers etc. in the plant room shall be painted once in a year with approved color. All relays installed in electrical panel shall be checked and tested once in a year. This shall be duly checked by Engineer-in-Charge
- 1.8 Descaling of condensers & chillers shall be done during winter shutdown once in a year and as & when required. The cost of all these are included in the scope of maintenance work and shall bear by the contractor.
- 1.9 Required chemical to be used for descaling of chillers and to maintain desired soft water parameters.
- 1.10 The bidder shall submit the authorization certificate from the Approved Original Equipment Manufacturer (OEM) within 30 days of awarding contract, contractor should submit Authorization Certificates shall be submitted with Original Equipment Manufacturer (OEM) for high side equipment (especially for Chillers, CPM & VFDs).

Low Side HVAC Equipment

1. The scope of services for Annual Operation & Maintenance of Low Side Equipment's comprising of AHU's, CSU's, FCU's, Lifts Pressurization & Exhaust Units installed in the Academic Blocks and AHUs, Fresh Air Units, HVLS Fans, Exhaust system, Scrubbers & Air Curtains in Dining Hall shall be included within the scope of work.

I) The Phase-I low side HVAC equipment, AHU's & CSU's having different capacities with power & control cabling, pipe line valve, etc. installed in and around academic areas as mentioned in the **Annexure – A**.

II) Phase-I FCUs complete with thermostats, power control wiring, pipeline, temperature meters, regulator etc. installed in and around academic areas as mentioned in the **Annexure-A**

III) Phase-I VAVs complete with thermostats installed in all Blocks.

IV) The Phase-I low side HVAC equipment, AHU's & CSU's having different capacities with power & control cabling, pipe line valve, etc. installed in and around academic areas as mentioned in the **Annexure – A**.

V) Phase-I FCUs complete with thermostats, power control wiring, pipeline, temperature meters, regulator etc. installed in and around academic areas as mentioned in the **Annexure-A**

VI) Phase-I VAVs complete with thermostats installed in all Blocks.

1.1 The A.H.U/F.C.U.s shall be handed over in healthy condition on “as is where is” basis. All the A.H.U/F.C.U.s is in working condition. The contractor shall be solely responsible for operation, maintenance and upkeep of the units in good running condition. The contractor shall take charge of the total inventory of equipment.

1.2 Material Component required for maintenance work for AHUs /CSUs/FCUs inside their machine room.

The supply of following material including labour at no extra charge shall be within the scope of the contract for regular maintenance works for AHUs/FCUs in IITH.

- ❖ Replacement/Repairing of AHU/FCU motors if required
- ❖ Repairing of blower/shaft/ body of AHU/FCU, if required
- ❖ Repairing of filters as and when required
- ❖ Replacement of bearings/V-Belts/Pulley/ taper lock pulley & bushes if required
- ❖ Replacement/Repairing of all types valves/lubrication oil if required
- ❖ Replacement of temperature meters, thermostats, water gauges if required.
- ❖ Replacement /repairing of, base frames/vibration isolator if required.
- ❖ Replacement/repairing of control wirings, if required,
- ❖ Replacement /repairing of BMS system of HVAC equipment, AHU/CSU/FCU room if required.
- ❖ Replacement /repairing of all types of electrical switchgears/main electrical panel if required.
- ❖ Replacement /repairing of starters in panel if required.
- ❖ Replacement of contactors/ relays if required.
- ❖ Replacement of overload/under voltage relays if required
- ❖ Replacement of Single-Phase Preventer / Phase Reversal Protector if required
- ❖ Repairing of grills/diffusers/volume control damper if required
- ❖ Minor re-insulation, cement sand plastering, painting works on pipes. In the AHU/CSU/FCU room if required.

2. **Periodical maintenance** of the low side air-conditioning work as per the following schedules shall be part of the contract. No additional payment will be made in this regard.

Floor mounted or ceiling suspended double and, single skin AHU/CSU/FCU's:

- ❖ Monthly inspection and cleaning of all filters and replacement of fine filters in a phased manner once to cover the entire AHU's/FCU's.
- ❖ Replacement of gaskets and sealants of AHU's once in a year or as and in a phased manner once to cover the entire AHU's/FCU's.
- ❖ Quarterly chemical/water cleaning of cooling coils
- ❖ Quarterly checking and rectification, if required of coil fin, leakage in Pipeline, valve connection and flexible connections
- ❖ Air bleeding of water coils as and when required

- ❖ Quarterly checking and rectification, if required of operation of fan, impeller & drive pulley, belt tension, bearing noise, abnormal sound, motor vibration and pulley alignment
- ❖ Monthly lubrication of fire damper linkage, bypass damper linkage, fresh air Damper linkage.
- ❖ Quarterly checking, cleaning and rectification, if required for corrosion & leakage in casing and also general leakage & corrosion.
- ❖ Monthly inspection and cleaning of drain trays and drain pipes
- ❖ Quarterly checking, inspection and rectification of AHU starters, fuses and all electrical connections including checking of amps/inspection of MCC feeders.
- ❖ Quarterly inspection and rectification of insulation, panels, doors & fastening for security
- ❖ Monthly checking for operation of Fire damper and blower fan
- ❖ Periodical checking and replacement of humidifier heater elements and Float valves
- ❖ Quarterly lubrication/greasing of motor and shaft bearings
- ❖ Monthly checking for serviceability and cleaning of all temperature & RH Sensors, air flow sensors and differential pressure indicators
- ❖ Monthly checking for serviceability and cleaning of UNITS
- ❖ Monthly checking of cable terminals, incoming and outgoing cable terminals for tightness and rectification if required.

Radiant Cooling System

- ❖ Check KPM controller /due point sensor/temperature sensor or thermostat settings to ensure the and cooling system turns on and off at the programmed temperatures in every building level each plant room (low side).
- ❖ Check the proper functioning and physical condition of the temperature sensor connected/installed to PEX line in each pod/leaf of the floor radiant cooling system in the shaft.
- ❖ Check system controls to ensure proper and safe operation. Check the starting cycle of the equipment to assure the system starts, operates, and shuts off properly.
- ❖ Check the strainers in the mainline of each building level plant room and cleaning them periodically as scheduled/as and when required.
- ❖ Seal water leaks and connections with mastic, metal tape, or an aerosol-based sealant as required.
- ❖ Use appropriate tools/instruments to evaluate effective cooling with RCS (Radiant
- ❖ Cooling System) after completion of any repairs.
- ❖ Check the controls, setpoints and mixing valves in building level RCS plant room to ensure the manifold temperature is always to be appropriate to above Dew Point Temperature to prevent condensation in rooms/floor.
- ❖ The radiant cooling system should be operated at least two times in a month during the non-operating season and check and rectify the issues found any during the operation.

- ❖ All the materials sensors, controllers, valves, Y strainers, sealants, brass manifolds, temperature gauge pressure gauge, etc. are included in the scope of work if any are mentioned in exemption items.
- ❖ All leakage detection and rectification work included along with required tools and required material excluding civil works (Civil works: Ceiling POP removal and refixing & floor tiles chipping removal and make good after compilation of leakage rectification work).
- ❖ Leakage rectification works, repairs and maintenance of building level RCS plant room pumps including all required material and tools are included in scope of work.
- ❖ Water balancing or the GPM adjustments in individual PEX line near manifold and in the main header line need to be checked and maintained as per the design or as required.

Hybrid Radiant Cooling System

The hybrid: air-conditioning system(conventional) coupled with radiant floor cooling system is installed in few buildings to maintain indoor thermal environment with comfort.

This system should be kept operational through the year not as like only Radiant Cooling system which will be kept operational only for specific period in a year.

Chiller Plant Manager:

The operation and maintenance along with the comprehensive AMC of the Chiller Plant manager associated equipment and all up to date software version are in the scope of contract.

Ventilation Fans:

- ❖ Monthly cleaning of pre and fine filters
- ❖ Monthly checking and necessary rectification of fan, belt, impeller and drive pulley operation including alignment of drive and shaft.
- ❖ Quarterly inspection and checking of bearings for sound, heating and vibration. Repair/replacement of the same.
- ❖ Weekly checking of all sensors.
- ❖ Quarterly lubrication of all bearings.

Ducts and Pipelines in the AHU/CSU/FCU Room:

- ❖ Periodic checking of insulation of ducts and pipelines.
- ❖ Periodic checking, cleaning and adjustment of diffusers
- ❖ Checking and arresting of leakage in pipe lines, joints, valve, glands and Connections.
- ❖ De-scaling / cleaning of pipelines and ducts to ensure proper working
- ❖ Replacement of duct insulation / pipe insulation damaged due to any repair/maintenance work.

General Maintenance:

- ❖ Monthly inspection and checking of all the measuring instruments like temperature & pressure gauges, thermostats, differential indicators etc.
- ❖ Periodic checking of all supports and mountings for pipes ducts etc.
- ❖ Periodic lubrication of all bearings, linkages
- ❖ Rectification and re-installation of all breakdown equipment
- ❖ Half yearly checking of motor alignment and meggering of motor & cables
- ❖ Periodic checking of all power and control terminals
- ❖ Maintenance of all equipment as per manufacturer recommendations
- ❖ Maintaining of required temperature, humidity and dust level in all sections
- ❖ All breakdown calls to be attended immediately or within 24 hours
- ❖ Shall ensure running of complete AHU/FCU Auto/ semi auto / manual mode
- ❖ All special tools, tackles, jigs and fixtures to be supplied by contractor.
- ❖ Planning of schedule maintenance and spares
- ❖ The entire AHU's, CSU's and FCU's shall be kept clean and tidy all the time.

3. Maintenance of log sheet

- ❖ A list of all components and consumable items replaced shall be maintained along with other records of plant maintenance and operation. Proper log sheets of running the plant and record for preventative maintenance of the plant shall be maintained. These records shall be put up to the Engineer-in-Charge or his nominated representative on regular basis.
- ❖ The contractor shall have to maintain proper logbooks for high side & low side HVAC work to shall make the record available for inspection by the IITH. The log book will be submitted by the bidder for approval from Engineer-in -charge. A list of all components and consumable items replaced in the low side HVAC works shall be maintained along with other records. These records shall be put up to the Engineer-in-Charge or his nominated representative on monthly basis through email or in hard copy form.

4. TOOLS & PLANTS

All the general & special tools for daily operation, tackles, chain pully blocks etc., required for proper maintenance and repairs/break down etc, shall be arranged by the contractor at his own cost and issued to the staff deployed by him for this work.

Following calibrated, well-maintained instruments should always be available at site;

- a. Clamp meter 1000 Amps range, (AC/DC V)- 8 No
- b. Anemometer - 6 No
- c. Tachometer – 6 No
- d. Psychrometer – 10 Nos
- e. Digital thermo meters & one RH meter - 4 No + 1 No
- f. Pressure Gauge – 8 no's

Following tools should always be available at site;

- a. Sets of all sizes double end open spanner. One set per AC Plant & One set per Quad, as per the directions of EIC.
- b. Two nos. adjustable wrenches each. One set per AC Plant & One set per Quad, as per the directions of EIC.
- c. Three set of Allen keys (2 set metric & 1 set inch). One set per AC Plant & One set per Quad, as per the directions of EIC.
- d. Screwdriver set (normal & star) - 3 set: One set per AC Plant & One set per Quad, as per the directions of EIC.
- e. Hack saw cutting sets with spare blades - 2 sets
- f. Suitable bearing puller - 4 No
- g. Vacuum & blow air cleaner - 2 No
- h. Water pump, 1 ph. 1HP: 1 No
- i. High Pressure Jet Washer -3 No's

5. Other Responsibility of the contractor

- 5.1 The contractor shall be responsible to maintain proper discipline of the operating staff in the low side works to discharge of their duties. However the institute shall have the right to ask any of the operating staff to leave the premises if in the opinion of the institute the conduct / behavior and activities of the individual concerned is subversive and not in the interest of the institute.
- 5.2 The contractor shall also ensure that there is no shortage of operating staff in any shift as indicated above for operation and maintenance of the low side works comprising of AHU, CSUs, FCUs, Fresh Air Handling Units & Exhaust Units, Etc.
- 5.3 Any other piece of work not specifically mentioned above but essential for the normal operation & maintenance of low side HVAC works are also covered in the scope of contract.
- 5.4 Subletting of work in any manner shall not be allowed and if found at a later stage, the contract shall be terminated.
- 5.5 However, minor repair works including welding, machining, grinding etc and replacement of minor pipelines/ valve inside the AHU, FCU & F AHU rooms as required shall be included in the scope of the contract.
- 5.6 The contractor will be submitting status& readings of temperature and other parameters along with their staff registers to the Engineer-in-charge on Daily basis.
- 5.7 The contractor should keep instruments like temperature meter, anemometer, and flow meter, db meter and other accessories in their office premises.

Exclusions:

- 1 Any kind of modifications including masonry work carpentry work/ rewiring/ ducting/ insulation/ rewiring of panel etc.

- 2 Replacement of any equipment (Compressor, condenser) as a whole after completion of useful life
- 3 Any major civil work like breaking/making of the walls, foundation etc.
- 4 Any modification of plant
- 5 Supply, repair/ replacement/ Maintenance of Air Circuit Breakers/ MCCBs above 200A.
- 6 Supply and Replacement of Cooling Coil
- 7 Replacement of water line valves above 450mm.

Note: If required as per site requirement, the contractor has to execute the above works as extra item on current market rates.

Annexure-A
Equipment List

High Side HVAC Equipment -Phase-I

AC Plant-1

Sl No	Name of the Equipment	Make	Capacity	Quantity	Serving / Connected to
	AC Plant-1				
1	Chiller (Centrifugal) Water Cooled	Daikin	900 TR	3	Academic Block-A,B & C
2	Cooling Tower (CT)	Bell	3400000 kcal/h	3	Academic Block-A,B & C
3	Primary Pumps	Xylum	22KW/30HP	3	Chillers of Academic Block-A,B & C
4	Secondary Pumps	Xylum	37KW/50HP	3	Chillers of Academic Block-A,B & C
5	Condenser Pumps	Xylum	55 KW/75HP	3	For CT of Chillers Academic Block-A,B & C
6	Pressurization pumps	Xylum	0.75KW/1HP	2	For Chilled water line
Night Cooling System of Academic Blocks-A, B & C					
7	Chiller (Scroll) Air Cooled	Daikin	18.5 TR	12	Academic Block-A,B & C
8	Inline pumps night cooling system Make: Xylum	Xylum	0.75 KW/1HP	12	Academic Block-A,B & C
9	Secondary Pumps Night Cooling System Make: Xylum	Xylum	2.2 KW/3 HP	6	Academic Block-A,B & C
Building level Low side System					
10	AHU	ZECO	2300	1	Chemical Engineering
11	AHU	ZECO	2300	1	Chemical Engineering
12	AHU	ZECO	2300	1	Chemical Engineering
13	AHU	ZECO	4800	1	Chemical Engineering

14	AHU	ZECO	4800	1	Chemical Engineering
15	AHU	ZECO	2100	1	Chemical Engineering
16	AHU	ZECO	2000	2	Chemical Engineering
17	AHU	ZECO	3300	1	Chemical Engineering
18	AHU	ZECO	2900	1	Chemical Engineering
19	AHU	ZECO	3300	1	Chemical Engineering
20	AHU	ZECO	4700	2	Chemical Engineering
21	AHU	ZECO	2550	1	Chemical Engineering
22	AHU	ZECO	2850	2	Chemical Engineering
23	AHU	ZECO	3100	2	Chemical Engineering

24	AHU	ZECO	3450	1	Chemical Engineering
25	AHU	ZECO	2000	1	Chemical Engineering
26	AHU	ZECO	2200	1	Chemical Engineering
27	AHU	ZECO	2000	1	Chemical Engineering
28	AHU	ZECO	2000	2	Chemical Engineering
29	AHU	ZECO	2900	1	Chemical Engineering
30	AHU	ZECO	3400	1	Chemical Engineering
31	AHU	ZECO	2400	3	Chemical Engineering
32	AHU	ZECO	2650	1	Chemical Engineering
33	AHU	ZECO	3000	1	Chemical Engineering
34	AHU	ZECO	2700	1	Chemical Engineering
35	AHU	ZECO	4600	1	Chemical Engineering
36	AHU	ZECO	2200	3	Chemical Engineering
37	AHU	ZECO	2300	1	Chemical Engineering
38	AHU	ZECO	2300	1	Chemical Engineering
39	AHU	ZECO	2400	1	Chemical Engineering
40	AHU	ZECO	2500	1	Chemical Engineering
41	AHU	ZECO	4500	1	Chemical Engineering
42	AHU	ZECO	1800	1	Chemical Engineering
43	AHU	ZECO	2200	3	Chemical Engineering
44	AHU	ZECO	2300	1	Chemical Engineering
45	AHU	ZECO	2400	1	Chemical Engineering
46	AHU	ZECO	2700	1	Chemical Engineering
47	AHU	ZECO	1550	4	Chemical Engineering
48	AHU	ZECO	1100	1	Chemical Engineering
49	AHU	ZECO	1300	1	Chemical Engineering
50	AHU	ZECO	1300	1	Chemical Engineering
51	CSU	ZECO	1650	1	Chemical Engineering
52	CSU	ZECO	2100	1	Chemical Engineering
53	CSU	ZECO	2900	1	Chemical Engineering
54	CSU	ZECO	3300	1	Chemical Engineering
55	CSU	ZECO	2350	1	Chemical Engineering
56	CSU	ZECO	2550	1	Chemical Engineering
57	CSU	ZECO	3600	1	Chemical Engineering

58	CSU	ZECO	2550	1	Chemical Engineering
59	CSU	ZECO	1500	1	Chemical Engineering
60	CSU	ZECO	2100	1	Chemical Engineering
61	CSU	ZECO	2350	1	Chemical Engineering
62	CSU	ZECO	3150	1	Chemical Engineering
63	CSU	ZECO	2900	1	Chemical Engineering
64	CSU	ZECO	2000	1	Chemical Engineering
65	CSU	ZECO	2200	1	Chemical Engineering
66	CSU	ZECO	2200	1	Chemical Engineering
67	CSU	ZECO	2900	1	Chemical Engineering

68	CSU	ZECO	2850	1	Chemical Engineering
69	CSU	ZECO	2500	1	Chemical Engineering
70	CSU	ZECO	2400	1	Chemical Engineering
71	CSU	ZECO	2700	1	Chemical Engineering
72	CSU	ZECO	2800	1	Chemical Engineering
73	CSU	ZECO	2400	1	Chemical Engineering
74	CSU	ZECO	2400	2	Chemical Engineering
75	CSU	ZECO	2200	1	Chemical Engineering
76	CSU	ZECO	2350	1	Chemical Engineering
77	CSU	ZECO	2800	1	Chemical Engineering
78	CSU	ZECO	2200	2	Chemical Engineering
79	CSU	ZECO	2600	1	Chemical Engineering
80	CSU	ZECO	2600	1	Chemical Engineering
81	CSU	ZECO	2400	1	Chemical Engineering
82	CSU	ZECO	2300	1	Chemical Engineering
83	CSU	ZECO	2000	1	Chemical Engineering
84	CSU	ZECO	3250	1	Chemical Engineering
85	CSU	ZECO	1550	2	Chemical Engineering
86	CSU	ZECO	1300	1	Chemical Engineering
87	CSU	ZECO	1100	1	Chemical Engineering
88	CSU	ZECO	2400	1	Chemical Engineering
89	CSU	ZECO	1300	1	Chemical Engineering
90	CSU	ZECO	3500	1	Chemical Engineering
91	FCU	ZECO	800	1	Chemical Engineering
92	Air washer	ZECO	6000	1	Chemical Engineering
93	Therma Fusers	Ruskin Titus		73	Chemical Engineering
94	Fume Hoods (Exhaust Units)	Kruger	600	16	Chemical Engineering
95	Fume Hoods (Exhaust Units)	Kruger	1200	25	Chemical Engineering
96	Co Axial Fan	Kruger	8000	6	Chemical Engineering

97	Co Axial Fan	Kruger	6150	1	Chemical Engineering
98	Co Axial Fan	Kruger	2700	1	Chemical Engineering
99	Inline Fan	Kruger	3000	1	Chemical Engineering
100	AHU	ZECO	4000	1	Civil Engineering
101	AHU	ZECO	4000	1	Civil Engineering
102	AHU	ZECO	3000	1	Civil Engineering
103	AHU	ZECO	3000	1	Civil Engineering
104	AHU	ZECO	4000	1	Civil Engineering
105	AHU	ZECO	4000	1	Civil Engineering
106	AHU	ZECO	4000	1	Civil Engineering
107	AHU	ZECO	6000	1	Civil Engineering

108	AHU	ZECO	2000	1	Civil Engineering
109	AHU	ZECO	4000	1	Civil Engineering
110	AHU	ZECO	4000	1	Civil Engineering
111	AHU	ZECO	4000	1	Civil Engineering
112	AHU	ZECO	6000	1	Civil Engineering
113	AHU	ZECO	3000	1	Civil Engineering
114	AHU	ZECO	4000	1	Civil Engineering
115	AHU	ZECO	5000	1	Civil Engineering
116	AHU	ZECO	5000	1	Civil Engineering
117	AHU	ZECO	4000	1	Civil Engineering
118	AHU	ZECO	5000	1	Civil Engineering
119	AHU	ZECO	4000	1	Civil Engineering
120	AHU	ZECO	4000	1	Civil Engineering
121	AHU	ZECO	3000	1	Civil Engineering
122	AHU	ZECO	3000	1	Civil Engineering
123	AHU	ZECO	5000	1	Civil Engineering
124	AHU	ZECO	5000	1	Civil Engineering
125	AHU	ZECO	5000	1	Civil Engineering
126	AHU	ZECO	8000	1	Civil Engineering
127	AHU	ZECO	4000	1	Civil Engineering
128	AHU	ZECO	4000	1	Civil Engineering
129	AHU	ZECO	8000	1	Civil Engineering
130	AHU	ZECO	4500	1	Civil Engineering
131	AHU	ZECO	4500	1	Civil Engineering
132	AHU	ZECO	4500	1	Civil Engineering
133	AHU	ZECO	7000	1	Civil Engineering
134	AHU	ZECO	8000	1	Civil Engineering
135	AHU	ZECO	7000	1	Civil Engineering
136	AHU	ZECO	3500	1	Civil Engineering
137	AHU	ZECO	7000	1	Civil Engineering
138	AHUs	ZECO	6000	1	Civil Engineering
139	Air Washer	ZECO	16000	1	Civil Engineering
140	Air Washer	ZECO	14500	1	Civil Engineering

141	Therma Fusers	Ruskin Titus		136	Civil Engineering
142	Fume Hoods (Exhaust Units)	Kruger	400	2	Civil Engineering
143	Fume Hoods (Exhaust Units)	Kruger	800	5	Civil Engineering
144	Fume Hoods (Exhaust Units)	Kruger	1200	1	Civil Engineering
145	Co Axial Fan	Kruger	8000	6	Civil Engineering
146	SISW Centrifugal Fan	Kruger	7200	1	Civil Engineering

147	SISW Centrifugal Fan	Kruger	7800	1	Civil Engineering
148	Inline Fan	Kruger	3000	1	Civil Engineering
149	Inline Fan	Kruger	450	1	Civil Engineering
150	Inline Fan	Kruger	2500	1	Civil Engineering
151	Inline Fan	Kruger	5500	1	Civil Engineering
152	AHU	ZECO	7000	1	MAE Dept.
153	AHU	ZECO	9300	1	MAE Dept.
154	AHU	ZECO	3300	1	MAE Dept.
155	AHU	ZECO	3400	1	MAE Dept.
156	AHU	ZECO	3700	1	MAE Dept.
157	AHU	ZECO	3500	1	MAE Dept.
158	AHU	ZECO	4250	1	MAE Dept.
159	AHU	ZECO	3290	1	MAE Dept.
160	AHU	ZECO	3200	1	MAE Dept.
161	AHU	ZECO	7350	1	MAE Dept.
162	AHU	ZECO	3500	1	MAE Dept.
163	AHU	ZECO	4250	1	MAE Dept.
164	AHU	ZECO	7350	1	MAE Dept.
165	AHU	ZECO	3200	1	MAE Dept.
166	AHU	ZECO	2800	1	MAE Dept.
167	AHU	ZECO	3200	1	MAE Dept.
168	AHU	ZECO	7600	1	MAE Dept.
169	AHU	ZECO	5850	1	MAE Dept.
170	AHU	ZECO	3500	1	MAE Dept.
171	AHU	ZECO	2410	1	MAE Dept.
172	AHU	ZECO	3150	1	MAE Dept.
173	AHU	ZECO	3250	1	MAE Dept.
174	AHU	ZECO	4300	1	MAE Dept.
175	AHU	ZECO	3000	1	MAE Dept.
176	AHU	ZECO	3654	1	MAE Dept.
177	AHU	ZECO	3650	1	MAE Dept.
178	AHU	ZECO	3400	1	MAE Dept.

179	AHU	ZECO	2950	1	MAE Dept.
180	AHU	ZECO	3250	1	MAE Dept.
181	AHU	ZECO	2600	1	MAE Dept.
182	AHU	ZECO	3900	1	MAE Dept.
183	AHU	ZECO	3750	1	MAE Dept.
184	AHU	ZECO	2700	1	MAE Dept.
185	AHU	ZECO	3050	1	MAE Dept.
186	AHU	ZECO	3300	1	MAE Dept.
187	AHU	ZECO	3150	1	MAE Dept.
188	AHU	ZECO	3350	1	MAE Dept.

189	AHU	ZECO	8600	1	MAE Dept.
190	AHU	ZECO	3600	1	MAE Dept.
191	AHU	ZECO	1750	1	MAE Dept.
192	AHU	ZECO	1750	1	MAE Dept.
193	AHU	ZECO	2150	1	MAE Dept.
194	AHU	ZECO	2350	1	MAE Dept.
195	AHU	ZECO	1950	1	MAE Dept.
196	AHU	ZECO	4450	1	MAE Dept.
197	AHU	ZECO	4200	1	MAE Dept.
198	AHU	ZECO	6600	1	MAE Dept.
199	AHU	ZECO	2350	1	MAE Dept.
200	AHU	ZECO	1950	1	MAE Dept.
201	AHU	ZECO	3800	1	MAE Dept.
202	CSU	ZECO	3550	1	MAE Dept.
203	CSU	ZECO	3550	1	MAE Dept.
204	CSU	ZECO	3350	1	MAE Dept.
205	CSU	ZECO	3350	1	MAE Dept.
206	CSU	ZECO	3350	1	MAE Dept.
207	CSU	ZECO	3350	1	MAE Dept.
208	CSU	ZECO	3050	1	MAE Dept.
209	CSU	ZECO	2550	1	MAE Dept.
210	FCU	ZECO	800	3	MAE Dept.
211	Therma Fusers	Ruskin Titus		207	MAE Dept.
212	Fume Hood (Exhaust Units)	Kruger	800	1	MAE Dept.
213	Fume Hood (Exhaust Units)	Kruger	1200	5	MAE Dept.
214	Co Axial Fan	Kruger	8000	5	MAE Dept.
215	SISW Centrifugal Fan	Kruger	7275	1	MAE Dept.
216	SISW Centrifugal Fan	Kruger	4200	1	MAE Dept.
21	SISW Centrifugal Fan	Kruger	2025	1	MAE Dept. Annexure

AC Plant-2

Sl No	Name of the Equipment	Make	Capacity	Quantity	Serving / Connected to
	AC Plant-2				
	Dining Hall Conventional AC				
1	Chiller (Screw) Water Cooled	Daikin	200 TR	1	Dining Hall
2	Cooling Tower Make: Bell	Bell	900000 kcal/h	1	Dining Hall chillers
3	Primary Pumps Make: Xylum	Xylum	4KW/5.4HP	2	Dining Hall chillers

4	Secondary Pumps Make: Xylum	Xylum	11KW/15HP	2	Dining Hall chillers
5	Condenser Pumps Make: Xylum	Xylum	11KW/15HP	2	For CT of Chiller Dining Hall
Associated Low Side System					
6	AHU	Dining Hall	16400 CFM	1	Dining Hall
7	AHU	Dining Hall	18200 CFM	1	Dining Hall
8	AHU	Dining Hall	15850 CFM	1	Dining Hall
9	AHU	Dining Hall	18000 CFM	1	Dining Hall
10	Fresh Air (Air Washer)	ZECO	24000 CFM	1	Dining Hall GF Kitchen
11	Fresh Air (Air Washer)	ZECO	24000 CFM	1	Dining Hall FF Kitchen
12	Exhaust Unit		30800 CFM	1	Dining Hall GF Kitchen
13	Exhaust Unit		30800 CFM	1	Dining Hall FF Kitchen
14	Scrubbers	RydAir	4400 CFM	7	Dining Hall GF Kitchen
15	Scrubbers	RydAir	4400 CFM	7	Dining Hall FF Kitchen
16	Inline Fan		1000 CFM	2	Dining Hall WR Exhaust
17	Inline Fan		750 CFM	2	Dining Hall WR Exhaust

	Radiant Cooling System				
18	Chiller (Screw) Water Cooled	Daikin	275 TR	5	Radiant Cooling System (RCS) to Hostel 10 buildings +Dining Hall
19	Chiller (Screw) Water Cooled (Precast Ph-II)	Daikin	280 TR	1	Radiant Cooling System (RCS) to Hostel 03 buildings
20	Cooling Tower (CT) Make: Bell	Bell	1337500 kcal/h	5	Connected to RCS Chillers
21	Cooling Tower (CT) Make: Nihan spindle Phase-II	(Nihan spindle –	1337500 kcal/h	1	Connected to RCS Chillers
22	Primary Pumps Make: Xylum	Xylum	30KW/40HP	6	Connected to RCS Chillers
23	Primary Pumps Make: Grundfos Phase-II	Grundfos	45KW/60HP	2	Connected to RCS Chillers
24	Condenser Pumps Make: Xylum	Xylum	13.5KW/25HP	6	Connected to RCS, CTs
25	Condenser Pumps Make: Grundfos Phase-II	Grundfos	22KW/30HP	2	Connected to RCS, CTs
	Building Level				
26	RCS building level Circulation Pumps Make: Kirlosker	Kirlosker	0.75KW / 1HP	164	Hostels A, B, C, D, E, F, G, H, I & J blocks and Dining Hall
27	RCS building level Circulation Pumps Make: Kirlosker Phase-II	Grundfos	3KW /4HP	12	Precast Hostels -1,2,&3

Residential Quad:

SI No	Name of the Equipment	Capacity	Quantity	Serving / Connected to
1	Tube Axila fan 19000 CFM	19000 CFM	4	Staff Housing
2	Tube Axila fan 24000 CFM	24000 CFM	12	Staff Housing
3	Tube Axila fan 7000 CFM	7000 CFM	1	Staff Housing
4	Tube Axila fan 6000 CFM	6000 CFM	1	Staff Housing
5	Tube Axial 18000 CFM	18000 CFM	6	Staff Housing
6	JET Fans		10	Staff Housing
7	Tube Axila fan 19000 CFM	19000 CFM	6	Faculty Housing
8	Tube Axila fan 11000 CFM	11000 CFM	1	Faculty Housing
9	Tube Axila fan 9000 CFM	9000 CFM	1	Faculty Housing
10	Tube Axial 29000 CFM	29000 CFM	9	Faculty Housing
11	Tube Axial 40000 CFM	40000 CFM	18	Faculty Housing
12	JET Fans		22	Faculty Housing

List of Equipment and makes installed at the AC Plants and Buildings (Phase-I):

S.No.	Equipment	
1	Chillers	Daikin McQuay
2	Cooling Towers	Bell
3	Primary/Secondary/Condenser Pumps	Xylem
4	VFDs	ABB
5	AHUs	Zeco
8	Thermostats of VAV	Johnson Controls
10	Radiant Cooling System	Giacomini
11	BMS System	Mitsubhishi (In progress)
12	Chiller Plant Manager	Daikin
13	Motorized Valves	Belimo
15	Exhaust Fans	Nicotra gebhardt

Annexure-B

High Side HVAC Equipment -Phase-II					
AC PLANT 1					
S. No.	Description	Capacity	UoM	Qty	Make
1	Centrifugal Chiller	900 TR	Nos	3	DAIKIN
2	Condenser Water Pumps	2700 GPM	Nos	5	GRUNDFOS
3	Primary Chilled water pumps	1800 GPM	Nos	5	GRUNDFOS
4	Secondary Chilled water pumps with VFD				
	A. Circuit-2,	1303 GPM	Nos	5	GRUNDFOS
	B . Circuit-3,	949 GPM	Nos	4	GRUNDFOS
	C. Circuit-4	834 GPM	Nos	3	GRUNDFOS
5	COOLING TOWERS	34,10,000 K.CAL/hr	Nos	3	NIHON SPINDLE
6	Expansion tank		Nos		
	A. 3000 lit	3000 Lit	Nos	1	Armstrong
	B. 2000 lit	2000 Lit	Nos	1	
	C. 1000 lit	1000 Lit	Nos	1	
11	Air Separators		Nos		Armstrong
	A. 500 dia	500 Dia	Nos	1	
	B. 350 dia	350 Dia		1	
	C. 200 dia	200 Dia	Nos	1	
12	Pressurization Unit		Nos	3	Armstrong

AC PLANT 4					
S No	Description	Capacity	UoM	Qty	Make
1	Centrifugal Chiller	625 TR	Nos	3	DAIKIN
2	Centrifugal Chiller	200 TR	Nos	3	DAIKIN
3	Condenser Water Pumps	1875 GPM	Nos	3	GRUNDFOS
4	Condenser Water Pumps	600 GPM	Nos	3	GRUNDFOS
5	Primary Chilled water pumps	2062 GPM	Nos	3	GRUNDFOS
6	Primary Chilled water pumps	400 GPM	Nos	3	GRUNDFOS
7	Secondary Chilled water pumps with VFD				
	A. Radiant Cooling	1432 GPM	Nos	3	GRUNDFOS
	B . Circuit-1C,	245 GPM	Nos	3	GRUNDFOS
	C. Circuit-2C	221 GPM	Nos	3	GRUNDFOS
8	COOLING TOWERS	23,68,000 K.CAL/hr	Nos	3	NIHON SPINDLE
9	COOLING TOWERS	7,58,000 K.CAL/hr	Nos	3	NIHON SPINDLE
10	Expansion tank		Nos		Armstrong
	1500 lit	1500 Lit	Nos	1	
	500 lit	500 Lit	Nos	2	
11	Air Separators		Nos		Armstrong

	A. 350 dia	350 Dia	Nos	1	
	B. 150 dia	150 Dia	Nos	2	
12	Pressurization Unit		Nos	2	Armstrong

AC PLANT 5					
S No	Description	Capacity	UoM	Qty	Make
1	Centrifugal Chiller	525 TR	Nos	4	DAIKIN
2	Condenser Water Pumps	1575 GPM	Nos	4	GRUNDFOS
3	Primary Chilled water pumps	1050 GPM	Nos	4	GRUNDFOS
4	Secondary Chilled water pumps with VFD	712 GPM	Nos	5	GRUNDFOS
5	COOLING TOWERS	19,90,000 K.CAL/hr	Nos	4	NIHON SPINDLE
6	Expansion tank				
	2000 lit	2000 Lit	Nos	1	Armstrong
	1000 lit	1000 Lit	Nos	1	
7	Air Separators		Nos		
	A. 350 dia	350 Dia	Nos	1	Armstrong
	B. 250 dia	250 Dia	Nos	1	
8	Pressurization Unit		Nos	2	Armstrong

AC PLANT 02					
S No	Description	Capacity	UoM	Qty	Make
1	Screw Chiller	280 TR	Nos	1	DAIKIN
2	Condenser water Pumps	22kW/30HP	Nos	2	GRUNDFOS
3	Primary Chilled water pumps	45kW/60 HP	Nos	2	GRUNDFOS
5	COOLING TOWER		Nos	1	NIHON SPINDLE
6	Expansion tank				
	2000 lit	2000 Lit	Nos	1	Armstrong
	1000 lit	1000 Lit	Nos	1	
7	Air Separators		Nos		
	A. 350 dia	350 Dia	Nos	1	Armstrong
	B. 250 dia	250 Dia	Nos	1	
8	Pressurization Unit		Nos	2	Armstrong

Low Side HVAC System

Building Name: Knowledge Resource Centre (KRC)						
S.No	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	TFA	ZECO	1530 CFM	1	Ground Floor	-
2	AHU	ZECO	7700 CFM & 22.5 TR	1	3rd Floor	GROUP ROOM STUDY
3	AHU	ZECO	3200 CFM & 8 TR	1	1st Floor	GROUP ROOM STUDY
4	CAHU	ZECO	1600 CFM & 4.5 TR	1		MEDIA LITERCY ROOM-2
5	CAHU	ZECO	1100 CFM & 2.6 TR	1		CORRIDOR
6	AHU	ZECO	4700 CFM & 13 TR	1	Ground Floor	LIBRARY (1 OF 3)
7	CAHU	ZECO	900 CFM & 1.9 TR	1	Ground Floor	CORRIDOR EAST
8	AHU	ZECO	3100 CFM & 7.5 TR	1	Ground Floor	AUDIO VISUAL ROOM -1
9	AHU	ZECO	3100 CFM & 7.8 TR	1	Ground Floor	AUDIO VISUAL ROOM -2
10	AHU	ZECO	1800 CFM & 10 TR	2	Ground Floor	ARCHIVE ROOM
11	CAHU	ZECO	900 CFM & 2.6 TR	1	3rd Floor	READING LOUNGE SOUTH
12	CAHU	ZECO	2500 CFM & 6.7 TR	1	3rd Floor	READING ROOM 302
13	CAHU	ZECO	4000 CFM & 9.4 TR	1	2nd Floor	READING ZONE
14	CAHU	ZECO	2100 CFM & 4.7 TR	1	2nd Floor	READING SPACE
15	AHU	ZECO	3200 CFM & 8.6 TR	1	2nd Floor	GROUP ROOM STUDY
16	CAHU	ZECO	900 CFM & 2.1 TR	1	1st Floor	CORRIDOR EAST
17	CAHU	ZECO	2000 CFM & 3.6 TR	1	Ground Floor	NORTH ENTRANCE HALL
18	TFA	ZECO	400 CFM & 3.2 TR	1	Ground Floor	-
19	AHU	ZECO	4700 CFM & 13.5 TR	1	Ground Floor	LIBRARY (2 OF 3)
20	AHU	ZECO	6400 CFM & 14.2 TR	1	Ground Floor	READING ZONE
21	CAHU	ZECO	900 CFM & 2.6 TR	1	3rd Floor	READING LOUNGE NORTH
22	CAHU	ZECO	1100 CFM & 3.2 TR	1	1st Floor	MEDIA LITERCY ROOM-1
23	CAHU	ZECO	1100 CFM & 3 TR	1	1st Floor	GROUP ROOM - 101 & 102 STUDY
24	AHU	ZECO	3100 CFM & 7.5 TR	1	Ground Floor	ADMINISTRATIVE OFFICE
25	AHU	ZECO	4700 CFM & 13.5 TR	1	Ground Floor	LIBRARY (3 OF 3)
26	AHU	ZECO	4400 CFM & 12.6 TR	1	Ground Floor	READING ROOM 101
27	AHU	ZECO	6400 CFM & 14.2 TR	1	Ground Floor	READING ZONE
28	TFA	ZECO		2	Ground Floor	ARCHIVE ROOM
29	De humidifiers	By Air		2		

BUILDING NAME: MSME						
S.No	Equipment	Make	Capacity	Qty	Floor	Location of Installation
1	FM TFA	ZECO	3250 CFM & 18.57 TR	1	Terrace	TERRACE FLOOR RISER -2
2	FM TFA	ZECO	6900 CFM & 39.43 TR	1	Terrace	TERRACE FLOOR RISER -3
3	VFM AHU	ZECO	3700 CFM & 7.14 TR	1	4th Floor	FCL ROOMS
4	VFM AHU	ZECO	2600 CFM & 5.18 TR	1	4th Floor	POLYMER LAB
5	VFM AHU	ZECO	3500 CFM & 7.06 TR	1	4th Floor	BIOMATERIAL LAB
6	VFM AHU	ZECO	1100 CFM & 2.72 TR	1	4th Floor	PHD OFFICE
7	VFM AHU	ZECO	3000 CFM & 6.04 TR	1	4th Floor	SENSOR MATERIAL LAB
8	VFM AHU	ZECO	1700 CFM & 4.79 R	1	4th Floor	MATERIAL SIMULATION LAB
9	VFM AHU	ZECO	3200 CFM & 6.44 TR	1	3rd Floor	FCL ROOMS
10	VFM AHU	ZECO	3600 CFM & 7.25 TR	1	3rd Floor	METALLORGRAPHY LAB
11	VFM AHU	ZECO	3000 CFM & 5.9 TR	1	3rd Floor	METALLURGY LAB
12	VFM AHU	ZECO	1400 CFM & 3.06 TR	1	3rd Floor	PHD OFFICE
13	VFM AHU	ZECO	2400 CFM & 4.86 TR	1	3rd Floor	COMBINAORIAL LAB
14	VFM AHU	ZECO	2100 CFM & 4.72 TR	1	3rd Floor	STRCTURE MATERIAL LAB
15	VFM AHU	ZECO	3100 CFM & 6.37 TR	1	2nd Floor	FCL ROOMS
16	VFM AHU	ZECO	4600 CFM & 9.26 TR	1	2nd Floor	MECHANICAL LAB
17	VFM AHU	ZECO	1100 CFM & 2.68 TR	1	2nd Floor	PHD OFFICE
18	VFM AHU	ZECO	5000 CFM & 15.3 TR	1	2nd Floor	CLASS ROOM
19	VFM AHU	ZECO	2000 CFM & 4.51 TR	1	2nd Floor	PHD OFFICE
20	VFM AHU	ZECO	3300 CFM & 6.71 TR	1	1st Floor	FCL ROOMS
21	VFM AHU	ZECO	1100 CFM & 2.72 TR	1	1st Floor	ADMIN OFFICE
22	VFM AHU	ZECO	1400 CFM & 3 TR	1	1st Floor	CONFERENCE
23	VFM AHU	ZECO	3700 CFM & 11.17 TR	1	1st Floor	CLASS ROOM
24	VFM AHU	ZECO	4400 CFM & 9.06 TR	1	1st Floor	SYNTHESIS & CHEMICAL LAB
25	VFM AHU	ZECO	2200 CFM & 4.52 TR	1	Ground Floor	HIGH PR. LAB
26	VFM AHU	ZECO	1800 CFM & 4.23 TR	1	Ground Floor	CLASS ROOM
27	VFM AHU	ZECO	2400 CFM & 4.59 TR	1	Ground Floor	EXHIBITION ROOM
28	VFM AHU	ZECO	1600 CFM & 3.96 TR	1	Ground Floor	EM LAB
29	VFM AHU	ZECO	1500 CFM & 3.73 TR	1	Ground Floor	E.M PREP.
30	VFM AHU	ZECO	2500 CFM & 6.42 TR	1	Ground Floor	HEAT TREATMENT LAB
31	VFM AHU	ZECO	3100 CFM & 6.26 TR	1	Ground Floor	HEAVY DUTY INSTRUMENT LAB
32	CSAHU	ZECO	5500 CFM & 8.41 TR	1	Ground Floor	UTILITY TOOM
33	CSAHU	ZECO	5500 CFM & 8.41 TR	1	Ground Floor	UTILITY TOOM
34	Scrubber s	Aircon		2	Terrace	

Building: Chemistry

S.No	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	TFA	ZECO	8000 CFM & 45.71 TR	1	Terrace	-
2	TFA	ZECO	8000 CFM & 45.71 TR	1	Terrace	-
3	TFA	ZECO	8000 CFM & 45.71 TR	1	Terrace	-
4	TFA	ZECO	6400 CFM & 36.57 TR	1	Terrace	-
5	TFA	ZECO	12800 CFM & 73.14 TR	1	Terrace	-
6	TFA	ZECO	12800 CFM & 73.14 TR	1	Terrace	-
7	TFA	ZECO	9600 CFM & 54.86 TR	1	Terrace	-
8	TFA	ZECO	6400 CFM & 36.57 TR	1	Terrace	-
9	TFA	ZECO	6400 CFM & 36.57 TR	1	Terrace	-
10	TFA	ZECO	7200 CFM & 41.14 TR	1	Terrace	-
11	TFA	ZECO	4800 CFM & 27.43 TR	1	Terrace	-
12	TFA	ZECO	12000 CFM & 68.57 TR	1	Terrace	-
13	VFM AHU	ZECO	1300 CFM & 3.3 TR	1	5th Floor	XRL-1 , INORGANIC-1
14	VFM AHU	ZECO	1300 CFM & 3.3 TR	1	5th Floor	XRL-1 , INORGANIC-2
15	VFM AHU	ZECO	1300 CFM & 3.2 TR	1	5th Floor	XRL-1 , INORGANIC-3
16	VFM AHU	ZECO	2500 CFM & 5.01 TR	1	5th Floor	XRL-2 PHYSICAL
17	VFM AHU	ZECO	2300 CFM & 5.49 TR	1	5th Floor	XRL-2 ORGANIC
18	VFM AHU	ZECO	4000 CFM & 8.05 TR	1	5th Floor	FACULTY
19	VFM AHU	ZECO	2600 CFM & 6.32 TR	1	5th Floor	XRL , INORGANIC
20	VFM AHU	ZECO	1100 CFM & 3.23 TR	1	5th Floor	CMPT RL TYP 1:1
21	VFM AHU	ZECO	1400 CFM & 3.49 TR	1	5th Floor	CMPT RL TYP 1:2
22	VFM AHU	ZECO	1200 CFM & 3.24 R	1	4th Floor	XRL-1,INORGANIC-1
23	VFM AHU	ZECO	1100 CFM & 3.22TR	1	4th Floor	XRL-1,INORGANIC-2
24	VFM AHU	ZECO	1200 CFM & 3.24 R	1	4th Floor	XRL-1,INORGANIC-3
25	VFM AHU	ZECO	2300 CFM & 4.75 TR	1	4th Floor	XRL-2,PHYSICAL
26	VFM AHU	ZECO	2100 & 5.26 TR	1	4th Floor	XRL-2,ORGANIC
27	VFM AHU	ZECO	3600 CFM & 7.6 TR	1	4th Floor	FACULTY
28	VFM AHU	ZECO	2400 CFM & 6.6 TR	1	4th Floor	XRL-2,INORGANIC
29	VFM AHU	ZECO	1200 CFM & 3.07 TR	1	4th Floor	XRL-1,ORGANIC-1
30	VFM AHU	ZECO	2400 CFM & 6.6 TR	1	4th Floor	XRL-1,ORGANIC-2
31	VFM AHU	ZECO	1200 CFM & 3.0 R	1	3rd Floor	XRL-1,INORGANIC-1
32	VFM AHU	ZECO	1200 CFM & 2.95 TR	1	3rd Floor	XRL-1,INORGANIC-2
33	VFM AHU	ZECO	1200 CFM & 2.98 TR	1	3rd Floor	XRL-1, PHYSICAL -3
34	VFM AHU	ZECO	2300 CFM & 4.75 TR	1	3rd Floor	XRL-2,PHYSICAL
35	VFM AHU	ZECO	2100 & 5.26 TR	1	3rd Floor	XRL-2,ORGANIC
36	VFM AHU	ZECO	3700 CFM & 7.73 TR	1	3rd Floor	FACULTY
37	VFM AHU	ZECO	2400 CFM & 6.6 TR	1	3rd Floor	XRL-2,INORGANIC
38	VFM AHU	ZECO	1200 CFM & 3.07 TR	1	3rd Floor	XRL-1,ORGANIC-1
39	VFM AHU	ZECO	2400 CFM & 6.6 TR	1	3rd Floor	XRL-1,ORGANIC-2
40	VFM AHU	ZECO	1300 CFM & 3.7 TR	1	2nd Floor	XRL-1,INORGANIC-1
41	VFM AHU	ZECO	1200 CFM & 2.95 TR	1	2nd Floor	XRL-1,INORGANIC-2
42	VFM AHU	ZECO	1200 CFM & 2.98 TR	1	2nd Floor	XRL-1, PHYSICAL -3
43	VFM AHU	ZECO	2300 CFM & 4.75 TR	1	2nd Floor	XRL-2,PHYSICAL
44	VFM AHU	ZECO	2100 CFM & 5.26 TR	1	2nd Floor	XRL-2,ORGANIC
45	VFM AHU	ZECO	3400 CFM & 7.29 TR	1	2nd Floor	FACULTY
46	VFM AHU	ZECO	2400 CFM & 6.6 TR	1	2nd Floor	XRL-2,INORGANIC

47	VFM AHU	ZECO	1200 CFM & 3.07 TR	1	2nd Floor	XRL-1,ORGANIC-1
48	VFM AHU	ZECO	2400 CFM & 6.6 TR	1	2nd Floor	XRL-1,ORGANIC-2
49	VFM AHU	ZECO	1600 CFM & 3.95 TR	1	1st Floor	HOD & DISC ROOM
50	VFM AHU	ZECO	1700 CFM & 4.19 TR	1	1st Floor	CONFERENCE
51	VFM AHU	ZECO	2400 CFM & 6.04 TR	1	1st Floor	TEACHING LAB-1
52	VFM AHU	ZECO	4600 CFM & 11.8 TR	1	1st Floor	TEACHING LAB
53	VFM AHU	ZECO	4700 CFM & 14.66 TR	1	1st Floor	CLASS -120 PAX
54	VFM AHU	ZECO	2000 CFM & 6.03 TR	1	1st Floor	CLASS - 42 PAX
55	VFM AHU	ZECO	1900 CFM & 5.52 TR	1	1st Floor	CLASS - 24 PAX
56	VFM AHU	ZECO	3000 CFM & 5.98 TR	1	1st Floor	FACULTY
57	VFM AHU	ZECO	1200 CFM & 3.01 TR	1	1st Floor	XRL TYPE-1
58	VFM AHU	ZECO	1300 CFM & 3.29 TR	1	1st Floor	XRL TYPE-1
59	VFM AHU	ZECO	1200 CFM & 2.67 T	1	Ground Floor	ADMIN
60	VFM AHU	ZECO	2800 CFM & 5.94 TR	1	Ground Floor	INSTRUMENTAL ROOM -1
61	VFM AHU	ZECO	2700 CFM & 5.86 TR	1	Ground Floor	INSTRUMENTAL ROOM -2
62	VFM AHU	ZECO	2900 CFM & 6.35 TR	1	Ground Floor	EXBHICTION ROOM
63	VFM AHU	ZECO	1400 CFM & 3.24 TR	1	Ground Floor	COMP.RL TYPE-1
64	VFM AHU	ZECO	1400 CFM & 3.32 TR	1	Ground Floor	COMP.RL TYPE-2
65	VFM AHU	ZECO	2500 CFM & 5.68 TR	1	Ground Floor	INSTRUMENTAL ROOM -3
66	VFM AHU	ZECO	2700 CFM & 5.77 TR	1	Ground Floor	INSTRUMENTAL ROOM -4
67	Scrubber s	Ravi Aircon		12	Terrace	

Building: BTBM						
S.No	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	TFA	ZECO	450 CFM & 2.57 TR	1	4th Floor	-
2	TFA	ZECO	1800 CFM & 10.29 TR	1	4th Floor	-
3	TFA	ZECO	1800 CFM & 10.29 TR	1	Terrace	-
4	TFA	ZECO	900 CFM & 5.14 TR	1	Terrace	-
5	TFA	ZECO	900 CFM & 5.14 TR	1	4th Floor	-
6	TFA	ZECO	3150 CFM & 18 TR	1	4th Floor	-
7	TFA	ZECO	2700 CFM & 15.43 TR	1	4th Floor	-
8	VFM AHU	ZECO	2300 CFM & 7 TR	1	3rd Floor	WET. TEACH LAB
9	VFM AHU	ZECO	3000 CFM & 7 TR	1	3rd Floor	ABP. WET.RL LAB
10	FM AHU	ZECO	1900 CFM & 6 TR	1	2nd Floor	COMP. TEACH LAB
11	VFM AHU	ZECO	3100 CFM & 8 TR	1	2nd Floor	RMS.WET.RL. LAB
12	FM AHU	ZECO	1700 CFM & 5 TR	1	1st Floor	PHD OFFICE
13	VFM AHU	ZECO	3000 CFM & 7 TR	1	1st Floor	NML.WET.RL LAB
14	VFM AHU	ZECO	1900 CFM & 6 TR	1	Ground Floor	DISC.CL. ROOM
15	VFM AHU	ZECO	3400 CFM & 8 TR	1	Ground Floor	MIT.WET.RL.LAB
16	VFM AHU	ZECO	1800 CFM & 5 TR	1	3rd Floor	COLD ROOM -3
17	VFM AHU	ZECO	2400 CFM & 5 TR	1	3rd Floor	CTL ROOM
18	VFM AHU	ZECO	2300 CFM & 7 TR	1	3rd Floor	BIL ROOM
19	VFM AHU	ZECO	1700 CFM & 5 TR	1	2nd Floor	COLD ROOM -2

20	VFM AHU	ZECO	2100 CFM & 6 TR	1	2nd Floor	PML RL
21	VFM AHU	ZECO	2100 CFM & 6 TR	1	2nd Floor	MML RL
22	FM AHU	ZECO	1200 CFM & 4 TR	1	1st Floor	CONFERENCE ROOM
23	VFM AHU	ZECO	4500 CFM & 12 TR	1	1st Floor	WET. TEACH LAB -2
24	VFM AHU	ZECO	3800 CFM & 12 TR	1	1st Floor	DISC RM
25	FM AHU	ZECO	1800 CFM & 5 TR	1	Ground Floor	ADMIN
26	VFM AHU	ZECO	1900 CFM & 6 TR	1	Ground Floor	EQ.ROOM
27	VFM AHU	ZECO	2100 CFM & 6 TR	1	Ground Floor	DISC RM
28	VFM AHU	ZECO	2000 CFM & 6 TR	1	Ground Floor	DISC RM
29	FM AHU	ZECO	3100 CFM & 8 TR	1	4th Floor	FCL BIO TECH
30	VFM AHU	ZECO	2400 CFM & 7 TR	1	4th Floor	SBG RL
31	VFM AHU	ZECO	2200 CFM & 6 TR	1	4th Floor	PBL RL
32	VFM AHU	ZECO	2200 CFM & 6 TR	1	4th Floor	MTL RL
33	VFM AHU	ZECO	3400 CFM & 8 TR	1	3rd Floor	FCL BIO TECH
34	VFM AHU	ZECO	2100 CFM & 6 TR	1	3rd Floor	MGL RL
35	VFM AHU	ZECO	2200 CFM & 6 TR	1	3rd Floor	SCB RL
36	VFM AHU	ZECO	2100 CFM & 6 TR	1	3rd Floor	BEL RL
37	VFM AHU	ZECO	3500 CFM & 8 TR	1	2nd Floor	FCL BIO TECH
38	VFM AHU	ZECO	2200 CFM & 5 TR	1	2nd Floor	SBG RL
39	VFM AHU	ZECO	2100 CFM & 6 TR	1	2nd Floor	MBL RL
40	VFM AHU	ZECO	2300 CFM & 5 TR	1	2nd Floor	ICL RL
41	VFM AHU	ZECO	3200 CFM & 7 TR	1	1st Floor	FCL BIO TECH
42	VFM AHU	ZECO	2300 CFM & 5 TR	1	1st Floor	ABT RL
43	VFM AHU	ZECO	4800 CFM & 12 TR	1	1st Floor	WET TEACH LAB -01
44	VFM AHU	ZECO	2700 CFM & 6 TR	1	Ground Floor	PTL RL
45	VFM AHU	ZECO	2100 CFM & 6 TR	1	Ground Floor	HIV RL
46	FM AHU	ZECO	3700 CFM & 12 TR	1	3rd Floor	FCL BIO MED
47	VFM AHU	ZECO	1900 CFM & 6 TR	1	3rd Floor	CBM RL CAMP
48	VFM AHU	ZECO	3000 CFM & 7 TR	1	3rd Floor	NES WET RL LAB
49	FM AHU	ZECO	3200 CFM & 7 TR	1	2nd Floor	FCL BIO MED
50	VFM AHU	ZECO	1800 CFM & 5 TR	1	2nd Floor	VMI RL COMP
51	VFM AHU	ZECO	2800 CFM & 7 TR	1	2nd Floor	BML WET RL LAB
52	FM AHU	ZECO	4000 CFM & 9 TR	1	1st Floor	FCL BIO MED
53	VFM AHU	ZECO	1800 CFM & 5 TR	1	1st Floor	TCN RL COMP
54	VFM AHU	ZECO	2100 CFM & 6 TR	1	1st Floor	TCN RL COMP
55	VFM AHU	ZECO	2100 CFM & 5 TR	1	Ground Floor	CBP RL COMP
56	VFM AHU	ZECO	3200 CFM & 7 TR	1	Ground Floor	BMO.WET.RL
57	Scrubber s	Ravi Aircon		4	Terrace	

Building: International Guest House (IGH)						
S.No	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	CAHU	ZECO	1100 CFM & 3.3 TR	1	Ground Floor	STAFF TOILETS
2	CAHU	ZECO	2000 CFM & 4.8 TR	1	Ground Floor	CAFETERIA
3	CAHU	ZECO	2900 CFM & 7.1 TR	1	Ground Floor	RECREATIONAL ROOM & GYM
4	TFA	ZECO	800 CFM	1	Ground Floor	FOR MEETING ROOMS

5	TFA	ZECO	500 CFM	1	Ground Floor	FOR MEETING ROOMS
6	TFA	ZECO	900 CFM & 7.1 TR	1	1st Floor	-
7	TFA	ZECO	600 CFM & 4.7 TR	1	1st Floor	-
8	TFA	ZECO	500 CFM & 4 TR	1	1st Floor	-
9	TFA	ZECO	700 CFM	1	1st Floor	-
10	CAHU	ZECO	1200 CFM & 2.4 TR	1	1st Floor	DOUBLE BED ROOM
11	CAHU	ZECO	1200 CFM & 2.3 TR	1	1st Floor	DOUBLE BED ROOM
12	AHU	ZECO	3100 CFM & 8.6 TR	1	1st Floor	GROUND FLOOR DINIG B
13	AHU	ZECO	9000 CFM & 23.3 TR	1	1st Floor	GROUND FLOOR DINIG A
14	AHU	ZECO	10000 CFM & 21.4 TR	1	1st Floor	GROUND FLOOR DINIG B
15	CAHU	ZECO	1300 CFM & 2.6 TR	1	2nd Floor	DOUBLE BED ROOM
16	CAHU	ZECO	1300 CFM & 2.5 TR	1	2nd Floor	DOUBLE BED ROOM
17	CAHU	ZECO	1300 CFM & 2.6 TR	1	2nd Floor	DOUBLE BED ROOM
18	CAHU	ZECO	1300 CFM & 2.5 TR	1	2nd Floor	DOUBLE BED ROOM
19	CAHU	ZECO	1300 CFM & 2.6 TR	1	2nd Floor	DOUBLE BED ROOM
20	CAHU	ZECO	1300 CFM & 2.5 TR	1	2nd Floor	DOUBLE BED ROOM
21	TFA	ZECO	600 CFM & 4.7 TR	1	2nd Floor	-
22	TFA	ZECO	500 CFM & 3.9 TR	1	2nd Floor	-
23	TFA	ZECO	500 CFM & 3.9 TR	1	2nd Floor	-
24	TFA	ZECO	500 CFM & 3.9 TR	1	2nd Floor	-
25	TFA	ZECO	700 CFM & 5.5 TR	1	2nd Floor	-
26	TFA	ZECO	900 CFM & 7.1 TR	1	3rd Floor	-
27	TFA	ZECO	900 CFM & 7.1 TR	1	3rd Floor	-
28	TFA	ZECO	300 CFM & 2.4 TR	1	3rd Floor	-
29	TFA	ZECO	600 CFM & 4.7 TR	1	3rd Floor	-
30	CAHU	ZECO	1300 CFM & 2.6 TR	1	3rd Floor	DOUBLE BED ROOM
31	CAHU	ZECO	1300 CFM & 2.5 TR	1	3rd Floor	DOUBLE BED ROOM
32	CAHU	ZECO	1300 CFM & 2.7 TR	1	4th Floor	SUPER SUITE ROOM
33	CAHU	ZECO	1200 CFM & 2.4 TR	1	4th Floor	SUPER SUITE ROOM
34	CAHU	ZECO	4000 CFM & 10.8 TR	1	4th Floor	4TH FLOOR DINING HALL
35	TFA	ZECO	900 CFM	1	4th Floor	-
36	TFA	ZECO	400 CFM	1	4th Floor	-
37	TFA	ZECO	400 CFM	1	4th Floor	-
38	TFA	ZECO	400 CFM	1	4th Floor	-
39	CAHU	ZECO	1300 CFM & 2.7 TR	1	5th Floor	SUITE ROOM
40	CAHU	ZECO	1200 CFM & 2.4 TR	1	5th Floor	SUITE ROOM
41	CAHU	ZECO	1300 CFM & 2.7 TR	1	5th Floor	SUITE ROOM
42	CAHU	ZECO	1200 CFM & 2.4 TR	1	5th Floor	SUITE ROOM
43	TFA	ZECO	900 CFM	1	5th Floor	-
44	TFA	ZECO	300 CFM	1	5th Floor	-
45	Scrubber s	Ravi Aircon		3	Terrace	

Building : Sports and Cultural Complex (SnCC)

S.No	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	CAHU	ZECO	1900 CFM & 4.6 TR	1	1st Floor	FEMALE CHANGING
2	CAHU	ZECO	1300 CFM & 3.4 TR	1	1st Floor	MALE CHANGING
3	CAHU	ZECO	2000 CFM & 4.3 TR	1	Ground Floor	BILLIARD ROOM
4	CAHU	ZECO	2100 CFM & 4.5 TR	1	Ground Floor	INDOOR LOUNGE
5	AHU	ZECO	4600 CFM & 18 TR	1	Ground Floor	DANCE STUDIO
6	AHU	ZECO	4600 CFM & 16.1 TR	1	Ground Floor	TABLE TENNIS HALL
7	TFA	ZECO	1300 CFM	1	Ground Floor	-
8	CAHU	ZECO	2700 CFM & 6 TR	1	Ground Floor	FEMALE LOCKER ROOM
9	CAHU	ZECO	3400 CFM & 7.7 TR	1	Ground Floor	MALE LOCKER ROOM
10	CAHU	ZECO	2100 CFM & 4.7 TR	1	Ground Floor	SSR & CASTING ROOM
11	CAHU	ZECO	1300 CFM & 3.3 TR	1	Ground Floor	MEETING ROOM
12	CAHU	ZECO	1300 CFM & 3.4 TR	1	Ground Floor	MEETING ROOM
13	AHU	ZECO	9000 CFM & 24 TR	1	Ground Floor	MAIN ARENA 3 OF 3
14	AHU	ZECO	9000 CFM & 24 TR	1	Ground Floor	MAIN ARENA 2 OF 3
15	AHU	ZECO	9000 CFM & 24 TR	1	Ground Floor	MAIN ARENA 1 OF 3
16	TFA	ZECO	1100 CFM	1	Ground Floor	-
17	TFA	ZECO	900 CFM	1	Ground Floor	-
18	CAHU	ZECO	4400 CFM & 12.1 TR	1	Ground Floor	CAFÉ
19	CAHU	ZECO	2700 CFM & 7.1 TR	1	1st Floor	ACTIVITY ROOM -C
20	CAHU	ZECO	1900 CFM & 4.7 TR	1	1st Floor	ACTIVITY ROOM -D
21	CAHU	ZECO	3400 CFM & 7.76 TR	1	1st Floor	ACTIVITY ROOM -E
22	CAHU	ZECO	2700 CFM & 6.6 TR	1	Ground Floor	FUNCTIONAL ROOM
23	CAHU	ZECO	2700 CFM & 5.8 TR	1	Ground Floor	MUSIC ROOM
24	CAHU	ZECO	1600 CFM & 3.4 TR	1	Ground Floor	MUSIC ROOM
25	CAHU	ZECO	2100 CFM & 3.6 TR	1	Ground Floor	CULTURAL OFFICE
26	CAHU	ZECO	1600 CFM & 4 TR	1	Ground Floor	EXHIBITION HALL
27	CAHU	ZECO	1600 CFM & 4 TR	1	Ground Floor	EXHIBITION HALL
28	CAHU	ZECO	2300 CFM & 6 TR	1	1st Floor	ACTIVITY ROOM -A.3
29	CAHU	ZECO	1600 CFM & 4.9 TR	1	1st Floor	ACTIVITY ROOM -A.2
30	CAHU	ZECO	1900 CFM & 5.4 TR	1	1st Floor	ACTIVITY ROOM -A.1
31	CAHU	ZECO	2300 CFM & 5.7 TR	1	1st Floor	ACTIVITY ROOM -B
32	CAHU	ZECO	1200 CFM & 2.7 TR	1	Ground Floor	MEETING ROOM -2
33	TFA	ZECO	3200 CFM	1	Ground Floor	-
34	CAHU	ZECO	3400 CFM & 7.8 TR	1	Ground Floor	MEETING ROOM -1
35	CAHU	ZECO	1200 CFM & 2.1 TR	1	Ground Floor	ELV ROOM
36	CAHU	ZECO	2700 CFM & 5.6 TR	1	Ground Floor	VIP LOUNGE
37	Scrubber s	Ravi Aircon		3		

Building : Research Centre Complex (RCC)						
S.No	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	TFA	ZECO	1177 CFM	1	3rd Floor	-
2	CAHU	ZECO	2600 CFM & 6.2 TR	1	3rd Floor	LAB WET-308

3	TFA	ZECO	1177 CFM	1	3rd Floor	-
4	CAHU	ZECO	2000 CFM & 4.7 TR	1	3rd Floor	LAB WET-309
5	TFA	ZECO	1177 CFM	1	3rd Floor	-
6	CAHU	ZECO	2000 CFM & 5 TR	1	3rd Floor	LAB WET-310
7	TFA	ZECO	1177 CFM	1	2nd Floor	-
8	CAHU	ZECO	2300 CFM & 6 TR	1	2nd Floor	LAB WET-204
9	TFA	ZECO	1177 CFM	1	2nd Floor	-
10	CAHU	ZECO	2000 CFM & 4.7 TR	1	2nd Floor	LAB WET-205
11	TFA	ZECO	1177 CFM	1	2nd Floor	-
12	CAHU	ZECO	2000 CFM & 5 TR	1	2nd Floor	LAB WET-206
13	TFA	ZECO	1177 CFM	1	4th Floor	-
14	CAHU	ZECO	2300 CFM & 5.6 TR	1	4th Floor	LAB WET-405
15	TFA	ZECO	1177 CFM	1	4th Floor	-
16	CAHU	ZECO	2300 CFM & 5.5 TR	1	4th Floor	LAB WET-406
17	TFA	ZECO	1177 CFM	1	4th Floor	-
18	CAHU	ZECO	2300 CFM & 5.5 TR	1	4th Floor	LAB WET-407
19	TFA	ZECO	1177 CFM	1	3rd Floor	-
20	CAHU	ZECO	2300 CFM & 5.7 TR	1	3rd Floor	LAB WET-305
21	TFA	ZECO	1177 CFM	1	3rd Floor	-
22	CAHU	ZECO	2300 CFM & 5.6 TR	1	3rd Floor	LAB WET-306
23	TFA	ZECO	1177 CFM	1	3rd Floor	-
24	CAHU	ZECO	2300 CFM & 5.6 TR	1	3rd Floor	LAB WET-307
25	TFA	ZECO	1177 CFM	1	2nd Floor	-
26	CAHU	ZECO	2300 CFM & 5.7 TR	2	2nd Floor	LAB WET-201
27	TFA	ZECO	1177 CFM	1	2nd Floor	-
28	CAHU	ZECO	2300 CFM & 5.7 TR	2	2nd Floor	LAB WET-202
29	TFA	ZECO	1177 CFM	1	2nd Floor	-
30	CAHU	ZECO	2300 CFM & 5.6 TR	2	2nd Floor	LAB WET-203
31	AHU	ZECO	1400 CFM & 4.4 TR	1	Terrace	CONFERENCE ROOM 401
32	AHU	ZECO	1800 CFM & 5.6 TR	1	Terrace	CONFERENCE ROOM 402
33	TFA	ZECO	1177 CFM	1	4th Floor	-
34	CAHU	ZECO	2300 CFM & 5.8 TR	1	4th Floor	LAB WET - 403
35	TFA	ZECO	1177 CFM	1	4th Floor	-
36	CAHU	ZECO	2300 CFM & 5.7 TR	1	4th Floor	LAB WET - 404
37	CAHU	ZECO	1300 CFM & 3.5 TR	1	4th Floor	LAB WET - 307
38	CAHU	ZECO	1600 CFM & 4.1 TR	1	3rd Floor	LAB WET - 308
39	TFA	ZECO	1177 CFM	1	3rd Floor	LAB WET - 303
40	CAHU	ZECO	2300 CFM & 3.7 TR	1	3rd Floor	LAB WET - 303
41	TFA	ZECO	1177 CFM	1	3rd Floor	LAB WET - 304
42	CAHU	ZECO	2300 CFM & 5.8 TR	1	3rd Floor	LAB WET - 304
43	CAHU	ZECO	1300 CFM & 3.5 TR	1	2nd Floor	LAB DRY - 207
44	CAHU	ZECO	1600 CFM & 4.1 TR	1	2nd Floor	LAB DRY - 208
45	CAHU	ZECO	2000 CFM & 5.1 TR	1	2nd Floor	LAB DRY - 211
46	CAHU	ZECO	2000 CFM & 4.8 TR	1	2nd Floor	LAB DRY - 212
47	AHU	ZECO	1800 CFM & 5.7 TR	1	Terrace	SEMINAR ROOM 401
48	AHU	ZECO	1800 CFM & 6.3 TR	1	Terrace	SEMINAR ROOM 402

49	CAHU	ZECO	900 CFM & 2.2 TR	1	4th Floor	ADMINISTRATION OFFICE
50	CAHU	ZECO	1300 CFM & 3.4 TR	1	3rd Floor	LAB DRY -302
51	CAHU	ZECO	1300 CFM & 3.7 TR	1	3rd Floor	LAB DRY -303
52	CAHU	ZECO	1300 CFM & 3.6 TR	1	3rd Floor	LAB DRY -304
53	CAHU	ZECO	1300 CFM & 3.5 TR	1	3rd Floor	LAB DRY -305
54	CAHU	ZECO	1300 CFM & 3.5 TR	1	3rd Floor	LAB DRY -306
55	CAHU	ZECO	1300 CFM & 3.4 TR	1	2nd Floor	LAB DRY -202
56	CAHU	ZECO	1300 CFM & 3.7 TR	1	2nd Floor	LAB DRY -203
57	CAHU	ZECO	1300 CFM & 3.6 TR	1	2nd Floor	LAB DRY -204
58	CAHU	ZECO	1300 CFM & 2.5 TR	1	2nd Floor	LAB DRY -205
59	CAHU	ZECO	1300 CFM & 3.5 TR	1	2nd Floor	LAB DRY -206
60	TFA	ZECO	1177 CFM	1	4th Floor	LAB WET -401
61	CAHU	ZECO	2000 CFM & 4.9 TR	1	4th Floor	LAB WET -401
62	TFA	ZECO	1177 CFM	1	4th Floor	LAB WET -402
63	CAHU	ZECO	1600 CFM & 4.3 TR	1	4th Floor	LAB WET -402
64	TFA	ZECO	1177 CFM	1	3rd Floor	LAB WET - 301
65	CAHU	ZECO	1920 CFM & 5 TR	1	3rd Floor	LAB WET - 301
66	TFA	ZECO	1177 CFM	1	3rd Floor	LAB WET - 302
67	CAHU	ZECO	2000 CFM & 4.3 TR	1	3rd Floor	LAB WET - 302
68	CAHU	ZECO	1300 CFM & 3.7 TR	1	3rd Floor	LAB WET - 301
69	CAHU	ZECO	1600 CFM & 3.9 TR	1	2nd Floor	LAB DRY -210
70	CAHU	ZECO	1600 CFM & 4.3 TR	1	2nd Floor	LAB DRY -209
71	CAHU	ZECO	1300 CFM & 3.7 TR	1	2nd Floor	LAB DRY -201
72	CAHU	ZECO	2600 CFM & 5.6 TR	1	3rd Floor	CORRIDOR
73	CAHU	ZECO	1300 CFM & 2.9 TR	1	2nd Floor	CORRIDOR
74	CAHU	ZECO	1300 CFM & 3.7 TR	1	2nd Floor	MEETING ROOM 201
75	CAHU	ZECO	1300 CFM & 3.5 TR	1	2nd Floor	MEETING ROOM 202
76	CAHU	ZECO	1300 CFM & 3.4 TR	1	2nd Floor	MEETING ROOM 203
77	CAHU	ZECO	1300 CFM & 3.3 TR	1	2nd Floor	MEETING ROOM 204
78	CAHU	ZECO	900 CFM & 2.6 TR	1	1st Floor	MEETING ROOM 101
79	CAHU	ZECO	1200 CFM & 2.6 TR	1	1st Floor	CORRIDOR
80	CAHU	ZECO	900 CFM & 2.6 TR	1	Ground Floor	MEETING ROOM 101
81	CAHU	ZECO	900 CFM & 1.9 TR	1	Ground Floor	CORRIDOR
82	TFA	ZECO	1177 CFM	1	4th Floor	-
83	TFA	ZECO	1177 CFM	1	4th Floor	-
84	TFA	ZECO	1177 CFM	1	4th Floor	-
85	CSU	ZECO	2300 CFM & 5.9 TR	1	4th Floor	LAB WET - 408
86	CSU	ZECO	2000 CFM & 4.7 TR	1	4th Floor	LAB WET - 409
87	CSU	ZECO	2000 CFM & 5 TR	1	4th Floor	LAB WET - 410
88	CSU	ZECO	3000 CFM & 6.3 TR	1	4th Floor	CORRIDOR
89	CAHU	ZECO	1500 CFM & 3.7 TR	1	1st Floor	EV HALL
90	CAHU	ZECO	800 CFM & 2 TR	1	Ground Floor	ENTRANCE HALL
91	CAHU	ZECO	600 CFM & 1.4 TR	1	Ground Floor	MEGA LAB GALLERY

Building : Cultural Complex (CC)						
S.No	Equipment	Make	Capacity	Quantity	Floor	Location of Installation

1	AHU	ZECO	8100 CFM & 32 TR	1	2nd Floor	SEATING AREA -1
2	AHU	ZECO	9000 CFM & 15 TR	1	2nd Floor	BLOCK - C LARGE HALL STAGE
3	AHU	ZECO	9000 CFM & 23.4 TR	1	2nd Floor	BLOCK - G LARGE HALL STAGE
4	AHU	ZECO	3500 CFM & 15 TR	1	2nd Floor	CORRIDOR -1 & SEATING
5	AHU	ZECO	11000 CFM & 23.4 TR	1	2nd Floor	CORRIDOR -2
6	CAHU	ZECO	1900 CFM & 3.9 TR	1	1st Floor	CONTROL ROOM -1
7	AHU	ZECO	1900 CFM & 4.1 TR	1	Ground Floor	CORRIDOR -1 LARGE HALL
8	AHU	ZECO	6800 CFM & 15.4 TR	1	Ground Floor	CORRIDOR -2 LARGE HALL
9	CAHU	ZECO	2300 CFM & 6.4 TR	1	3rd Floor	CONFERENCE ROOM -5
10	CAHU	ZECO	2300 CFM & 6 TR	1	3rd Floor	CONFERENCE ROOM -4
11	CAHU	ZECO	2000 CFM & 6.3 TR	1	2nd Floor	SEMINAR ROOM 10
12	CAHU	ZECO	2000 CFM & 6.4 TR	1	2nd Floor	SEMINAR ROOM 11
13	CAHU	ZECO	2000 CFM & 5.4 TR	1	2nd Floor	CONFERENCE ROOM -3
14	CAHU	ZECO	2500 CFM & 6.9 TR	1	2nd Floor	CONFERENCE ROOM -2
15	CAHU	ZECO	2000 CFM & 6.3 TR	1	1st Floor	SEMINAR ROOM 7
16	CAHU	ZECO	2000 CFM & 6.1 TR	1	1st Floor	SEMINAR ROOM 6
17	CAHU	ZECO	2000 CFM & 6.2 TR	1	1st Floor	SEMINAR ROOM 8
18	CAHU	ZECO	2000 CFM & 6.5 TR	1	1st Floor	SEMINAR ROOM 9
19	CAHU	ZECO	2300 CFM & 6.8 TR	1	1st Floor	CONFERENCE ROOM -1
20	CAHU	ZECO	2000 CFM & 6.2 TR	1	Ground Floor	SEMINAR ROOM 4
21	CAHU	ZECO	2000 CFM & 5.5 TR	1	Ground Floor	SEMINAR ROOM 5
22	CAHU	ZECO	2000 CFM & 6.5 TR	1	Ground Floor	SEMINAR ROOM 3
23	CAHU	ZECO	2000 CFM & 6.5 TR	1	Ground Floor	SEMINAR ROOM 2
24	CAHU	ZECO	4000 CFM & 10.8 TR	1	Ground Floor	KITCHEN & CAFÉ
25	CAHU	ZECO	2500 CFM & 8.2 TR	1	Ground Floor	SEMINAR ROOM 1
26	CAHU	ZECO	1000 CFM & 2.3 TR	1	1st Floor	CONTROL ROOM -3
27	AHU	ZECO	3100 CFM & 6.8 TR	1	1st Floor	SMALL HALL
28	AHU	ZECO	6000 CFM & 21.7 TR	1	1st Floor	SMALL HALL CORRIDOR
29	AHU	ZECO	8000 CFM & 16.8 TR	1	1st Floor	SMALL HALL STAGE
30	CAHU	ZECO	3400 CFM & 8.1 TR	1	Ground Floor	ADMIN OFFICE

Building: Technology Incubation Park (TIP)						
S.No	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	CAHU	ZECO	2600 CFM & 7.5 TR	1	Ground Floor	SEMINAR ROOM -M
2	CAHU	ZECO	1900 CFM & 5.4 TR	1	4th Floor	LOUNGE
3	CAHU	ZECO	1300 CFM & 3.3 TR	1	4th Floor	CONF.ROOM-1
4	CAHU	ZECO	1900 CFM & 5.4 TR	1	3rd Floor	LOUNGE
5	CAHU	ZECO	1300 CFM & 3.3 TR	1	3rd Floor	CONF.ROOM-1
6	CAHU	ZECO	1900 CFM & 5.4 TR	1	2nd Floor	LOUNGE

7	CAHU	ZECO	1200 CFM & 3 TR	1	2nd Floor	CONF.ROOM-1
8	CAHU	ZECO	1900 CFM & 5.5 TR	1	1st Floor	LOUNGE
9	CAHU	ZECO	1200 CFM & 3 TR	1	1st Floor	CONF.ROOM-1
10	CAHU	ZECO	2500 CFM & 6.7 TR	1	Ground Floor	LOUNGE
11	CAHU	ZECO	1300 CFM & 3.1 TR	1	Ground Floor	CONF.ROOM-1
12	CAHU	ZECO	3700 CFM & 8.3 TR	1	Ground Floor	ENTRANCE HALL
13	CAHU	ZECO	3700 CFM & 7.6 TR	1	Ground Floor	GALLERY
14	CAHU	ZECO	3800 CFM & 9.9 TR	1	1st Floor	CAFETERIA/GREEN ROOM
15	CAHU	ZECO	2900 CFM & 8.8 TR	1	5th Floor	SEMINAR ROOM HALL
16	CAHU	ZECO	1000 CFM & 2.5 TR	1	Ground Floor	BOARD ROOM -2
17	CAHU	ZECO	1500 CFM & 3.7 TR	1	Ground Floor	BOARD ROOM -1
18	TFA	ZECO	150 CFM	1	Ground Floor	-
19	CAHU	ZECO		64		

Building Wise FCU Quantities -Package 3A – Phase-II										
S.No.	BUILDING	1.0 TR		1.5 TR		2.0 TR		2.5 TR		TOTAL
		LHS	RHS	LHS	RHS	LHS	RHS	LHS	RHS	
1	MSME									0
2	BTBM									0
3	CHEMISTRY	11	13	8	4				1	37
4	RCC				5		6			11
5	KRC	4	4		1	2	2	1	2	16
6	TIP	7	0	1	0	6	0	1	1	16
7	CC	0	0	0	1	1	2	5	1	10
8	IGH	0	2	23	19	60	83	29	28	244
9	SnCC	1	2	6	4	6	0	4	0	23
10	AD-03 Buildings									
11	AD-02 Buildings									
	TOTAL	23	21	38	34	75	93	40	33	357

S.No.	DESCRIPTION	UNIT	Qty SUM of All Buildings	MSME	BTBM	CHY	RC	TIP	KC	CC	IGH	SNC
	CABINET TYPE CENTRIFUGAL BLOWERS											
1	Air Qty = 9800 CFM Total static pressure = 50 mm Wg	Each	1					1				
2	Air Qty = 8000 cfm Total static pressure = 50 mm Wg	Each	1				1					
3	Air Qty = 5500 cfm Total static pressure = 50 mm Wg	Each	1									1

4	Air Qty = 5200 CFM Total static pressure = 30 mm Wg	Each	1									1
5	Air Qty = 5000 cfm Total static pressure = 50 mm Wg	Each	1									1
6	Air Qty = 4300 cfm Total static pressure = 50 mm Wg	Each	2						1			1
7	Air Qty = 3600 Total static pressure = 30 mm Wg	Each	1									1
8	Air Qty = 3500 cfm Total static pressure = 50 mm Wg	Each	3				1		1			1
9	Air Qty = 3200 CFM Total static pressure = 30 mm Wg	Each	4									4
10	Air Qty. = 3100 CFM Total static pressure = 30 mm Wg	Each	1								1	
11	Air Qty = 2800 CFM, Total static pressure = 30 mm Wg	Each	1						1			
12	Air Qty = 2600 CFM Total static pressure = 50 mm Wg	Each	3						1	2		
13	Air Qty = 2200 Total static pressure = 20 mm Wg (motor-1 phase)	Each	1						1			
14	Air Qty = 2100 CFM Total static pressure = 30 mm Wg (motor -1 phase)	Each	2									2
15	Air Qty = 1600 CFM Total static pressure = 30 mm Wg (motor -1 phase)	Each	3						1			2
16	Air Qty = 1350 CFM Total static pressure = 40 mm Wg (motor -1 phase)	Each	3							3		
17	Air Qty = 1300 CFM Total static pressure = 20 mm Wg (motor -1 phase)	Each	7									7
18	Air Qty = 1200 CFM Total static pressure = 40 mm Wg (motor -1 phase)	Each	1							1		
19	Air Qty = 1200 CFM Total static pressure = 30 mm Wg (motor -1 phase)	Each	2								2	
20	Air Qty = 1100 CFM Total static pressure = 30 mm Wg (motor -1 phase)	Each	2							1		1
21	Air Qty = 1000 CFM Total static pressure = 30 mm Wg (motor -1 phase)	Each	7						1	1	1	4
22	Air Qty = 1000 CFM Total static pressure = 20 mm Wg (motor -1 phase)	Each	2									2

23	Air Qty = 900 CFM Total static pressure = 30 mm Wg (motor -1 phase)	Each	6									6
24	Air Qty. = 800 CFM Total static pressure = 40 mm Wg	Each	1						1			
25	Air Qty = 800 CFM Total static pressure = 50 mm Wg (motor -1 phase)	Each	3				1			1		1
26	Air Qty = 800 CFM Total static pressure = 20 mm Wg (motor -1 phase)	Each	4									4
27	Air Qty = 650 CFM Total static pressure = 20 mm Wg (motor -1 phase)	Each	3							2		1
28	Air Qty. = 500 CFM Total static pressure = 20 mm Wg (motor - 1 phase)	Each	2							2		
29	Air Qty = 400 CFM Total static pressure = 50 mm Wg (motor -1 phase)	Each	2				1			1		
30	7800 CFM (30mm Total Static Pressure) for Toilet Exhaust,	Each	1			1						
31	6000 CFM (30mm Total Static Pressure) for Toilet Exhaust,	Each	1	1								
32	3600 CFM (30mm Total Static Pressure) for Toilet Exhaust,	Each	1		1							
33	2700 CFM (30mm Total Static Pressure) for Toilet Exhaust,	Each	1		1							
34	2000 CFM (30mm Total Static Pressure) for Toilet Exhaust,	Each	1	1								
35	1800 CFM (30mm Total Static Pressure) for Toilet Exhaust,	Each	1		1							
36	1200 CFM (30mm Total Static Pressure) for Toilet Exhaust,	Each	1		1							
37	1150 CFM (30mm Total Static Pressure) for Toilet Exhaust,	Each	4			4						
38	800 CFM (30mm Total Static Pressure) for Toilet Exhaust,	Each	45			4	41					
39	1177 cfm		0									
			127	2	4	9	45	1	8	14	4	40
S.No.	DESCRIPTION	UNIT	Qty SUM of All Buildi ngs	MSM E	BTB M	CH Y	RC C	TI P	K C	C C	IG H	SNC C
	Tube Axial Fans											
1	Air Qty. = 27500 CFM Total static pressure = 30 mm Wg	Each	8								8	

2	Air Qty. = 15600 CFM Total static pressure = 30 mm Wg	Each	3				1	1			1	
3	Air Qty. = 14500 CFM (IE-3 motor) Total static pressure = 20 mm Wg (Filter room)	Each	1									1
4	Air Qty = 12600 CFM Total static pressure = 25mm Wg (MEGA lab F.A. intake	Each	1				1					
5	Air Qty. = 12100 CFM Total static pressure = 30 mm Wg (Lift well pressurisation)	Each	1						1			
6	Air Qty. = 11300 CFM (IE-3 motor) Total static pressure = 40 mm Wg (Plant Room Ventilation)		2				2					
7	Air Qty. = 11200 CFM (IE-3 motor) Total static pressure = 20 mm Wg (CHW ROOM)	Each	2						2			
8	Air Qty. = 8000 CFM Total static pressure = 50 mm Wg	Each	1									1
9	Air Qty = 5900 CFM (IE-3 motor) Total static pressure = 40mm Wg (MEGA LAB MECH ROOM)	Each	0				0					
10	Air Qty. = 5900 CFM (IE-3 motor) Total static pressure = 20 mm Wg (MR room)	Each	2						2			
11	Air Qty = 4550 CFM Total static pressure = 20mm Wg (MR exhaust)	Each	2					1			1	
12	Air Qty = 3400 CFM (IE-3 motor) Total static pressure = 25 mm Wg (Electrical room exhaust)	Each	2				2					
13	Air Qty. = 2200 CFM (IE-3 motor) Total static pressure = 20 mm Wg (Pump room)	Each	2							2		
14	Air Qty. = 1500 CFM (IE-3 motor) Total static pressure = 20 mm Wg (Pump room)	Each	1						1			
15	Air Qty = 1400 CFM (IE-3 motor) Total static pressure = 15mm Wg (Electrical room exhaust)	Each	2					2				
16	Air Qty = 1350 CFM (IE-3 motor) Total static pressure = 25 mm Wg (Store room ventilation)	Each	2				2					
	TOTAL		32	0	0	0	8	4	6	2	10	2

S.No.	DESCRIPTION	UNIT	Qty SUM of All Buildi ngs	MSM E	BTB M	CH Y	RC C	TI P	K C	C C	IG H	SNC C
	Smoke Exhaust Fans for Auditorium & Conference hall											
1	Air Qty. = 17400 CFM Total static pressure = 20 mm Wg	Each	3							3		
2	Air Qty. = 12500 CFM Total static pressure = 20 mm Wg (Auditorium & Conference hall exhaust)	Each	1							1		
3	Air Qty. = 11400 CFM Total static pressure = 20 mm Wg (Library)	Each	8						8			
4	Air Qty. = 6850 CFM Ttotal static pressure = 20 mm Wg Entrance hall Smoke Exhaust Fans.	Each	2						2			
5	Air Qty. = 14200 CFM Total static pressure = 20 mm Wg (Main Arena)	Each	14									14
6	Air Qty. = 10000 CFM Total static pressure = 20mm Wg (Sub Arena)	Each	12									12
7	Air Qty. = 2000 CFM Total static pressure = 50mm Wg (Labs)	Each	18				18					
8	Air Qty. = 7000 CFM Total static pressure = 20 mm Wg (Pit Ventilation)	Each	4								4	
9	Air Qty. = 6000 CFM, Total static pressure = 20mm Wg For (PIT Ventilation.)	Each	2								2	
10	Air Qty. = 4000 CFM, Total static pressure = 15mm Wg For PIT Ventilation.	Each	1					1				
11	Air Qty. = 2000 CFM, Total static pressure 15mm Wg For PIT Ventilation.	Each	2					2				
12	Air Qty. = 11500 CFM Total static pressure = 20mm Wg (Liftwell Pressurization)	Each	2	1	1							
13	Air Qty. = 9500 CFM Total static pressure = 20mm Wg (Liftwell Pressurization)	Each	1			1						
14	Air Qty. = 7000 CFM Total static pressure = 20mm Wg (Liftwell Pressurization)	Each	2			2						
15	Air Qty. = 6500 CFM Total static pressure =20mm Wg	Each	4	2	2							

16	Air Qty. = 30000 CFM Total static pressure = 25mm Wg (Plant room exhaust)	Each	0									
17	Air Qty. = 25000 CFM Total static pressure = 25mm Wg Plant room exhaust	Each	0									
18	Air Qty. = 12000 CFM Total static pressure = 25mm Wg LT panel room exhaust	Each	0									
19	Air Qty. = 9500 CFM Total static pressure = 25mm Wg LT panel room	Each	0									
20	Air Qty. = 2200 CFM Total static pressure = 15mm Wg HT panel room exhaust	Each	0									
TOTAL			76	3	3	3	18	3	10	4	6	26

S.No.	DESCRIPTION	UNIT	Qty SUM of All Buildings	MSM E	BTB M	CH Y	RC C	TI P	K C	C C	IG H	SNC C
INLINE Fans												
1	Inline centrifugal fan - 1400 cfm, 50 mm Total static pressure	Each	1					1				
2	Inline centrifugal fan - 700 cfm, 50 mm Total static pressure	Each	1					1				
3	Inline centrifugal fan - 600 cfm, 25 mm Total static pressure	Each	1						1			
4	Inline centrifugal fan - 600 cfm, 30 mm Total static pressure	Each	7				1				6	
5	Inline centrifugal fan - 500 CFM, 50 mm Total static pressure	Each	1					1				
6	Inline centrifugal fan - 500 cfm, 25 mm Total static pressure	Each	6				4	2				
7	Inline centrifugal fan - 400 cfm, 30 mm Total static pressure	Each	9								9	
8	Inline centrifugal fan - 400 cfm, 20 mm Total static pressure	Each	2				1			1		
9	Inline centrifugal fan - 350 cfm, 30 mm Total static pressure	Each	1						1			
10	Inline centrifugal fan - 300 cfm, 30 mm Total static pressure	Each	16					5	3	2	6	

11	Inline centrifugal fan - 200 cfm, 30 mm Total static pressure	Each	14							1	11	2
12	Inline centrifugal fan - 200 cfm, 20 mm Total static pressure	Each	2						2			
13	Inline centrifugal fan - 250 cfm, 20 mm Total static pressure	Each	17				17					
14	Inline centrifugal fan - 150 cfm, 20 mm Total static pressure	Each	5				4				1	
15	Inline centrifugal fan - 100 CFM, 20 mm Total static pressure	Each	19				2	6			11	
16	Inline centrifugal fan - 100 CFM, 30 mm Total static pressure	Each	21		1						20	
17	Inline centrifugal fan - 50 CFM, 20 mm Total static pressure	Each	2							2		
18	Inline centrifugal fan - 25 cfm, 20 mm Total static pressure	Each	17								17	
19	Inline centrifugal fan - 200 cfm, 10 mm Total static pressure	Each	4	2	2							
20	Inline centrifugal fan - 50 cfm, 12 mm Total static pressure	Each	2	2								
	TOTAL		148	4	3	0	29	16	7	6	81	2

S.No.	DESCRIPTION	UNIT	Qty SUM of All Buildings	MSM E	BTB M	CH Y	RC C	TI P	K C	C C	IG H	SNC C
	Propeller Fans											
1	Propeller Fan - 3000 cfm	Each	4								4	
2	Propeller Fan - 2200 cfm	Each	2									2
3	Propeller Fan - 1200 CFM	Each	6									6
4	Propeller Fan - 900 cfm	Each	2			2						
5	Propeller Fan - 800 CFM	Each	5	1	2	1						1
6	Propeller Fan - 600 CFM	Each	4		1							3
7	Propeller Fan - 400 CFM	Each	5	5								
8	Propeller Fan - 350 CFM	Each	1									1
9	Propeller Fan - 300 CFM	Each	11			7			3			1
10	Propeller Fan - 250 cfm	Each	9		9							
11	Propeller Fan - 150 cfm	Each	6	1		5						
12	Propeller Fan - 120 CFM	Each	17	4	8	5						
	TOTAL		72	11	20	20	0	0	3	0	4	14

S.No.	DESCRIPTION	UNIT	Qty SUM of All Buildings	MSM E	BTB M	CH Y	RC C	TI P	K C	C C	IG H	SNC C
	Scrubbers Fans											
1	13400 CFM	Each				2						
2	12600 CFM	Each				1						
3	9600 CFM	Each				1						
4	8000 CFM	Each				3						
5	7200 CFM	Each				1						
6	6900 CFM	Each		1								
7	6400 CFM	Each				3						
8	5400 CFM	Each				1						
9	4050 CFM	Each			1							
10	3600 CFM	Each			1							
11	3250 CFM	Each		1								
12	2700 CFM	Each			1							
13	2250 CFM	Each			1							
14	6900 CFM	Each									1	
15	5300 cfm	Each									1	
	DEHUMIDIFIER											
1	Dehumidifier Capacity : 1200cfm	Each							2			
	Air Washers											
1	12750 CFM with 40mm wg.	Each										2
2	11300 CFM with 40mm wg.	Each									1	
3	9400 CFM with 40mm wg.	Each										1
	Total			2	4	12	0	0	2	0	3	3
	Total A+B+C			22	34	44	100	24	36	26	108	87

Building : Admin Building						
S.No.	Equipment	Make	Capacity	Qty	Floor	Location of Installation
1	FCU	ZECO	1000 CFM & 2.5 TR	1	Lower GF	UPS & BATTERY ROOM
2	FCU	ZECO	1000 CFM & 2.5 TR	1	Lower GF	UPS & BATTERY ROOM
3	FCU	ZECO	1000 CFM & 2.5 TR	1	Lower GF	UPS & BATTERY ROOM
4	FCU	ZECO	800 CFM & 2 TR	1	Lower GF	ELV ROOM
5	FCU	ZECO	800 CFM & 2 TR	1	Lower GF	ELV ROOM
6	FM AHU	ZECO	6000CFM &	1	Lower	LGFL AUDITORIUM

			18TR		GF	
7	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	EXECUTIVE ASSISTANTS
8	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	EXECUTIVE ASSISTANTS
9	FCU	ZECO	600 CFM & 1.5 TR	1	Ground Floor	SECTION OFFICER
10	FCU	ZECO	600 CFM & 1.5 TR	1	Ground Floor	SECTION OFFICER
11	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	ASSISTANT REGISTRAR
12	FCU	ZECO	600 CFM & 1.5 TR	1	Ground Floor	DEPUTY REGISTRAR
13	FCU	ZECO	600 CFM & 1.5 TR	1	Ground Floor	ATM
14	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	GREEN OFFICE
15	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	OMBUDSMAN OFFICE
16	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	RAJBHASHA CELL
17	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	SC/ST CELL
18	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	WOMAN CELL
19	FCU	ZECO	600 CFM & 1.5 TR	1	Ground Floor	EXHIBITION SPACE
20	FCU	ZECO	600 CFM & 1.5 TR	1	Ground Floor	EXHIBITION SPACE
21	FCU	ZECO	600 CFM & 1.5 TR	1	Ground Floor	EXHIBITION SPACE
22	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	ESTATE OFFICE
23	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	ESTATE OFFICE
24	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	ESTATE OFFICE
25	FCU	ZECO	600 CFM & 1.5 TR	1	Ground Floor	OTHER OFFICES
26	FCU	ZECO	600 CFM & 1.5 TR	1	Ground Floor	OTHER OFFICES
27	FCU	ZECO	600 CFM & 1.5 TR	1	Ground Floor	OTHER OFFICES
28	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	SECURITY OFFICE
29	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	SECURITY OFFICE
30	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	SECURITY OFFICE
31	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	WEST SIDE OFFICE
32	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	WEST SIDE OFFICE
33	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	WEST SIDE OFFICE

34	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	WEST SIDE OFFICE
35	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	WEST SIDE OFFICE
36	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	SOUTH WEST SIDE OFFICE
37	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	SOUTH WEST SIDE OFFICE
38	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	SOUTH WEST SIDE OFFICE
39	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	SOUTH WEST SIDE OFFICE
40	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	SOUTH WEST SIDE OFFICE
41	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	EAST SIDE OFFICE
42	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	EAST SIDE OFFICE
43	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	EAST SIDE OFFICE
44	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	EAST SIDE OFFICE
45	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	EAST SIDE OFFICE
46	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	NORTH EAST SIDE OFFICE
47	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	NORTH EAST SIDE OFFICE
48	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	NORTH EAST SIDE OFFICE
49	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	NORTH EAST SIDE OFFICE
50	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	NORTH EAST SIDE OFFICE
51	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	SOUTH EAST SIDE OFFICE
52	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	SOUTH EAST SIDE OFFICE
53	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	SOUTH EAST SIDE OFFICE
54	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	SOUTH EAST SIDE OFFICE
55	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	SOUTH EAST SIDE OFFICE
56	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	SOUTH SIDE OFFICE
57	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	SOUTH SIDE OFFICE
58	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	SOUTH SIDE OFFICE
59	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	NORTH WEST SIDE OFFICE
60	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	NORTH WEST SIDE OFFICE
61	FCU	ZECO	800 CFM & 2 TR	1	2nd	NORTH WEST SIDE OFFICE

			TR		Floor	
62	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	NORTH WEST SIDE OFFICE
63	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	NORTH WEST SIDE OFFICE
64	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	NORTH SIDE OFFICE
65	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	NORTH SIDE OFFICE
66	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	NORTH SIDE OFFICE
67	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	NORTH SIDE OFFICE
68	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	SOUTH EAST SIDE OFFICE
69	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	SOUTH EAST SIDE OFFICE
70	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	SOUTH EAST SIDE OFFICE
71	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	SOUTH EAST SIDE OFFICE
72	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	SOUTH EAST SIDE OFFICE
73	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	SOUTH SIDE OFFICE
74	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	SOUTH SIDE OFFICE
75	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	SOUTH SIDE OFFICE
76	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	SOUTH SIDE OFFICE
77	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	NORTH WEST SIDE OFFICE
78	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	NORTH WEST SIDE OFFICE
79	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	NORTH WEST SIDE OFFICE
80	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	NORTH WEST SIDE OFFICE
81	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	NORTH SIDE OFFICE
82	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	NORTH SIDE OFFICE
83	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	NORTH SIDE OFFICE
84	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	NORTH SIDE OFFICE
85	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	NORTH SIDE OFFICE
86	FCU	ZECO	800 CFM & 2 TR	1	4th Floor	ASS. DEAN OFFICE
87	FCU	ZECO	800 CFM & 2 TR	1	4th Floor	ASS. DEAN OFFICE
88	FCU	ZECO	800 CFM & 2 TR	1	4th Floor	ASS. DEAN OFFICE

89	FCU	ZECO	800 CFM & 2 TR	1	4th Floor	ASS. DEAN OFFICE
90	FCU	ZECO	800 CFM & 2 TR	1	4th Floor	ASS. DEAN OFFICE
91	FCU	ZECO	800 CFM & 2 TR	1	4th Floor	ASS. DEAN OFFICE
92	FCU	ZECO	800 CFM & 2 TR	1	4th Floor	ASS. DEAN OFFICE
93	FCU	ZECO	800 CFM & 2 TR	1	4th Floor	ASS. DEAN OFFICE
94	FCU	ZECO	1000 CFM & 2.5 TR	1	4th Floor	DEAN'S OFFICE
95	FCU	ZECO	1000 CFM & 2.5 TR	1	4th Floor	DEAN'S OFFICE
96	FCU	ZECO	1000 CFM & 2.5 TR	1	4th Floor	DEAN'S OFFICE
97	FCU	ZECO	1000 CFM & 2.5 TR	1	4th Floor	DEAN'S OFFICE
98	FCU	ZECO	1000 CFM & 2.5 TR	1	4th Floor	VISITOR LOUNGE
99	FCU	ZECO	1000 CFM & 2.5 TR	1	4th Floor	CONFERENCE
100	FCU	ZECO	1000 CFM & 2.5 TR	1	4th Floor	CONFERENCE
101	FCU	ZECO	800 CFM & 2 TR	1	5th Floor	DEAN'S OFFICE
102	FCU	ZECO	800 CFM & 2 TR	1	5th Floor	DEAN'S OFFICE
103	FCU	ZECO	800 CFM & 2 TR	1	5th Floor	VISITOR'S LOUNGE
104	FCU	ZECO	1000 CFM & 2.5 TR	1	5th Floor	DIRECTOR'S CONFERENCE
105	FCU	ZECO	800 CFM & 2 TR	1	5th Floor	DEAN'S OFFICE
106	FCU	ZECO	800 CFM & 2 TR	1	5th Floor	DEAN'S OFFICE
107	FCU	ZECO	1000 CFM & 2.5 TR	1	5th Floor	DIRECTORS ROOM
108	FCU	ZECO	1000 CFM & 2.5 TR	1	5th Floor	DIRECTORS ROOM
109	FCU	ZECO	800 CFM & 2 TR	1	5th Floor	DIRECTORS STAFF OFFICE
110	FCU	ZECO	800 CFM & 2 TR	1	5th Floor	DIRECTOR'S CONFERENCE
111	FCU	ZECO	800 CFM & 2 TR	1	5th Floor	DIRECTOR'S CONFERENCE
112	FCU	ZECO	1000 CFM & 2.5 TR	1	5th Floor	BOARD ROOM
113	FCU	ZECO	1000 CFM & 2.5 TR	1	5th Floor	BOARD ROOM
114	FCU	ZECO	1000 CFM & 2.5 TR	1	5th Floor	BOARD ROOM
115	FCU	ZECO	1000 CFM & 2.5 TR	1	5th Floor	BOARD ROOM

116	Thermostat	Siemens		114		
117	BTU meters	SheniTech		1		
118	Fire Dampers	Tristar/DLN		28		
119	Actuators	Honeywel/Belimo		28		
120	Fans	kruger/Nicotra		24		

Building: Lecture Hall Complex						
S.No.	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	VERTICAL AHU	ZECO	28TR & 7000CFM	1	LGF	GALILEO
2	VERTICAL AHU	ZECO	28TR & 7000CFM	1	LGF	GALILEO
3	VERTICAL AHU	ZECO	14TR & 3200CFM	1	LGF	EINSTEIN-A
4	VERTICAL AHU	ZECO	14TR & 3200CFM	1	LGF	EINSTEIN-A
5	CSU	ZECO	7TR & 3100CFM	1	LGF	ADMINISTRATION
6	CSU	ZECO	6TR & 2100CFM	1	GF	DARWIN-A
7	CSU	ZECO	6TR & 2100CFM	1	GF	DARWIN-A
8	AHU	ZECO	15TR & 3900CFM	1	UGF	EINSTEIN-B
9	AHU	ZECO	15TR & 3900CFM	1	UGF	EINSTEIN-B
10	CSU	ZECO	6TR & 2100CFM	1	UGF	DARWIN-B
11	CSU	ZECO	6TR & 2100CFM	1	UGF	DARWIN-B
12	AHU	ZECO	8TR & 3400CFM	1	Terrace	NEWTON-A
13	AHU	ZECO	8TR & 3400CFM	1	Terrace	NEWTON-B
14	AHU	ZECO	14TR & 4600CFM	1	Terrace	EDISON-A
15	AHU	ZECO	16TR & 5000CFM	1	Terrace	EDISON-B
16	AHU	ZECO	8TR & 3400CFM	1	Terrace	JONAS SALK-A
17	AHU	ZECO	8TR & 3400CFM	1	Terrace	JONAS SALK-B
18	AHU	ZECO	14TR & 4600CFM	1	Terrace	PASTFUR-A
19	AHU	ZECO	14TR & 4600CFM	1	Terrace	PASTFUR-B
20	Centrifugal pumps	Armstrong	35USGPM at 10m head	2	LGF	LOWER FLOOR GALILEO
21	Mixing tank	Giacomini	500 Liters	2	LGF	LOWER FLOOR GALILEO

22	Manifold Box with accessories	Giacomini	10 Loops	7	LGF	LOWER FLOOR GALILEO
23	Manifold Box with accessories	Giacomini	08 Loops	1	LGF	LOWER FLOOR GALILEO
24	Centrifugal pumps	Armstrong	21 USGPM at 10m head	1	Terrace	LOWER FLOOR NEWTON 'A'
25	Mixing tank	Giacomini	500 Liters	1	Terrace	LOWER FLOOR NEWTON 'A'
26	Manifold Box with accessories	Giacomini	10 Loops	1	LGF	LOWER FLOOR NEWTON 'A'
27	Manifold Box with accessories	Giacomini	08 Loops	1	LGF	LOWER FLOOR NEWTON 'A'
28	Centrifugal pumps	Armstrong	21 USGPM at 10m head	1	Terrace	LOWER FLOOR JONAS SALK 'A'
29	Mixing tank	Giacomini	500 Liters	1	Terrace	LOWER FLOOR JONAS SALK 'A'
30	Manifold Box with accessories	Giacomini	10 Loops	1	LGF	LOWER FLOOR JONAS SALK 'A'
31	Manifold Box with accessories	Giacomini	08 Loops	1	LGF	LOWER FLOOR JONAS SALK 'A'
32	Centrifugal pumps	Armstrong	27.5USGPM at 10m head	1	Terrace	LOWER FLOOR PASTEUR 'A'
33	Mixing tank	Giacomini	500 Liters	1	Terrace	LOWER FLOOR PASTEUR 'A'
34	Manifold Box with accessories	Giacomini	10 Loops	1	LGF	LOWER FLOOR PASTEUR 'A'
35	Manifold Box with accessories	Giacomini	08 Loops	2	LGF	LOWER FLOOR PASTEUR 'A'
36	Centrifugal pumps	Armstrong	27.5USGPM at 10m head	1	Terrace	LOWER FLOOR EDISON 'A'
37	Mixing tank	Giacomini	500 Liters	1	Terrace	LOWER FLOOR EDISON 'A'
38	Manifold Box with accessories	Giacomini	10 Loops	1	LGF	LOWER FLOOR EDISON 'A'
39	Manifold Box with accessories	Giacomini	08 Loops	2	LGF	LOWER FLOOR EDISON 'A'
40	Centrifugal pumps	Armstrong	11.5USGPM at 10m head.	1	LGF	LOWER FLOOR CURIE 'A'
41	Mixing tank	Giacomini	500 Liters	1	LGF	LOWER FLOOR CURIE 'A'

42	Manifold Box with accessories	Giacomini	10 Loops	1	LGF	LOWER FLOOR CURIE 'A'
43	Manifold Box with accessories	Giacomini	08 Loops	0	LGF	LOWER FLOOR CURIE 'A'
44	Centrifugal pumps	Armstrong	11.5USGPM at 10m head.	1	LGF	LOWER FLOOR DARWIN 'A'
45	Mixing tank	Giacomini	500 Liters	1	LGF	LOWER FLOOR DARWIN 'A'
46	Manifold Box with accessories	Giacomini	10 Loops	1	LGF	LOWER FLOOR DARWIN 'A'
47	Manifold Box with accessories	Giacomini	08 Loops	0	LGF	LOWER FLOOR DARWIN 'A'
48	Centrifugal pumps	Armstrong	35USGPM at 10m head	1	LGF	LOWER FLOOR EINSTEIN 'A'
49	Mixing tank	Giacomini	500 Liters	1	LGF	LOWER FLOOR EINSTEIN 'A'
50	Manifold Box with accessories	Giacomini	10 Loops	2	LGF	LOWER FLOOR EINSTEIN 'A'
51	Manifold Box with accessories	Giacomini	08 Loops	1	LGF	LOWER FLOOR EINSTEIN 'A'
52	Centrifugal pumps	Armstrong	21 USGPM at 10m head	1	Terrace	LOWER FLOOR NEWTON 'B'
53	Mixing tank	Giacomini	500 Liters	1	Terrace	LOWER FLOOR NEWTON 'B'
54	Manifold Box with accessories	Giacomini	10 Loops	1	UGF	LOWER FLOOR NEWTON 'B'
55	Manifold Box with accessories	Giacomini	08 Loops	1	UGF	LOWER FLOOR NEWTON 'B'
56	Centrifugal pumps	Armstrong	21 USGPM at 10m head	1	Terrace	LOWER FLOOR JONAS SALK 'B'
57	Mixing tank	Giacomini	500 Liters	1	Terrace	LOWER FLOOR JONAS SALK 'B'
58	Manifold Box with accessories	Giacomini	10 Loops	1	UGF	LOWER FLOOR JONAS SALK 'B'
59	Manifold Box with accessories	Giacomini	08 Loops	1	UGF	LOWER FLOOR JONAS SALK 'B'
60	Centrifugal pumps	Armstrong	27.5USGPM at 10m head	1	Terrace	LOWER FLOOR PASTEUR 'B'
61	Mixing tank	Giacomini	500 Liters	1	Terrace	LOWER FLOOR PASTEUR 'B'

62	Manifold Box with accessories	Giacomini	10 Loops	1	UGF	LOWER FLOOR PASTEUR 'B'
63	Manifold Box with accessories	Giacomini	08 Loops	2	UGF	LOWER FLOOR PASTEUR 'B'
64	Centrifugal pumps	Armstrong	27.5USGPM at 10m head	1	Terrace	LOWER FLOOR EDISON 'B'
65	Mixing tank	Giacomini	500 Liters	1	Terrace	LOWER FLOOR EDISON 'B'
66	Manifold Box with accessories	Giacomini	10 Loops	1	UGF	LOWER FLOOR EDISON 'B'
67	Manifold Box with accessories	Giacomini	08 Loops	2	UGF	LOWER FLOOR EDISON 'B'
68	Centrifugal pumps	Armstrong	11.5USGPM at 10m head.	1	UGF	LOWER FLOOR CURIE 'B'
69	Mixing tank	Giacomini	500 Liters	1	UGF	LOWER FLOOR CURIE 'B'
70	Manifold Box with accessories	Giacomini	10 Loops	1	UGF	LOWER FLOOR CURIE 'B'
71	Manifold Box with accessories	Giacomini	08 Loops	0	UGF	LOWER FLOOR CURIE 'B'
72	Centrifugal pumps	Armstrong	11.5USGPM at 10m head.	1	UGF	LOWER FLOOR DARWIN 'B'
73	Mixing tank	Giacomini	500 Liters	1	UGF	LOWER FLOOR DARWIN 'B'
74	Manifold Box with accessories	Giacomini	10 Loops	1	UGF	LOWER FLOOR DARWIN 'B'
75	Manifold Box with accessories	Giacomini	08 Loops	0	UGF	LOWER FLOOR DARWIN 'B'
76	Centrifugal pumps	Armstrong	35USGPM at 10m head	1	UGF	LOWER FLOOR EINSTEIN 'B'
77	Mixing tank	Giacomini	500 Liters	1	UGF	LOWER FLOOR EINSTEIN 'B'
78	Manifold Box with accessories	Giacomini	10 Loops	2	UGF	LOWER FLOOR EINSTEIN 'B'
79	Manifold Box with accessories	Giacomini	08 Loops	1	UGF	LOWER FLOOR EINSTEIN 'B'
80	BTU meters	SheniTech		1		
81	Fire Dampers	Tristar/DLN		53		
82	Actuators	Honeywell/ Belimo		53		
83	Fans	kruger/Nicotra		11		

Building: Dining Hall-2						
S.No.	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	AIR CURTAIN		1.5 meter wide	4	GF	GROUND FLOOR
2	F.M. AHU	ZECO	15500 CFM	1	GMF	GROUND FLOOR MEZZANINE
3	F.M. AHU	ZECO	15500 CFM	1	GMF	GROUND FLOOR MEZZANINE
4	F.M. AHU	ZECO	16500 CFM	1	FMF	FIRST MEZZANINE FLOOR
5	F.M. AHU	ZECO	16500 CFM	1	FMF	FIRST MEZZANINE FLOOR
6	Air Washer	ZECO		1	GMF	GROUND FLOOR MEZZANINE
7	Scrubber	ZECO		1	GMF	GROUND FLOOR MEZZANINE
8	Scrubber	ZECO		1	FMF	FIRST MEZZANINE FLOOR
9	Air Washer	ZECO		1	FMF	FIRST MEZZANINE FLOOR
10	Heat Recovery Unit	ZECO	CFM-5700	1	FMF	FIRST MEZZANINE FLOOR
11	Heat Recovery Unit	ZECO	CFM-5700	1	FMF	FIRST MEZZANINE FLOOR
12	Centrifugal pumps	Armstrong	35USGPM at 10m head	2	GMF	GROUND FLOOR MEZZANINE
13	Centrifugal pumps	Armstrong	35USGPM at 10m head	2	FMF	FIRST MEZZANINE FLOOR
14	Manifold Box with accessories	Giacomini	10 Loops	8	GF	GROUND FLOOR
15	Manifold Box with accessories	Giacomini	10 Loops	8	FF	FIRST FLOOR
16	Mixing tank	Giacomini	500 Liters	2	GMF	GROUND FLOOR MEZZANINE
17	Mixing tank	Giacomini	500 Liters	2	FMF	FIRST MEZZANINE FLOOR
18	BTU meters	SheniTech		1		
19	Fire Dampers	Tristar/DLN		34		
20	Actuators	Honeywel/Belimo		34		

Building: Department of Design(DoD)						
S.No.	Equipment	Make	Capacity	Quantity		
1	FM AHU	ZECO	4200 CFM & 11.67 TR	1	GF	FOUNDATION
2	FM AHU	ZECO	2500 CFM & 7.04 TR	1	GF	FILM STUDIO
3	FM AHU	ZECO	7200 CFM & 16.73 TR	1	GF	LIBRARY

4	FM AHU	ZECO	4700 CFM & 10.61 TR	1	GF	COMPTER LAB FIRST FLOOR
5	FM AHU	ZECO	2400 CFM 5.77 TR	1	GF	DIC
6	FM AHU	ZECO	3500 CFM & 9.56 TR	1	GF	AUDITORIUM
7	FM AHU	ZECO	3500 CFM & 9.56 TR	1	GF	AUDITORIUM
8	FM AHU	ZECO	2500 CFM & 6.49 TR	1	2nd Floor	BOD-1 FIRST FLOOR
9	FM AHU	ZECO	2600 CFM & 6.71 TR	1	2nd Floor	BOD-2 FIRST FLOOR
10	FM AHU	ZECO	1700 CFM & 5.33 TR	1	3rd Floor	BOD-1 GROUND FLOOR
11	FM AHU	ZECO	1900 CFM & 5.64 TR	1	3rd Floor	BOD-3 FIRST FLOOR
12	TFA	ZECO	230 CFM & 1.03 TR	1	3rd Floor	SECOND FLOOR FACULTY
13	FM AHU	ZECO	1900 CFM & 5.65 TR	1	3rd Floor	BOD-2 GROUND FLOOR
14	FM AHU	ZECO	1900 CFM & 5.65 TR	1	3rd Floor	BOD-4 FIRST FLOOR
15	FM AHU	ZECO	1800 CFM & 4.07 TR	1	3rd Floor	MOD FIRST FLOOR
16	FM AHU	ZECO	1900 CFM & 4.25 TR	1	3rd Floor	MOD GROUND FLOOR
17	TFA	ZECO	270 CFM & 1.21 TR	1	3rd Floor	SECOND FLOOR FACULTY
18	FM AHU	ZECO	2000 CFM & 4.31TR	1	4th Floor	MOD.2 SECOND FLOOR
19	FM AHU	ZECO	2500 CFM & 6.51TR	1	4th Floor	BOD SECOND FLOOR
20	FM AHU	ZECO	2300 CFM & 6.11TR	1	4th Floor	BOD THIRD FLOOR
21	FM AHU	ZECO	1800 CFM & 4.02 TR	1	4th Floor	MOD-02 THIRD FLOOR
22	FM AHU	ZECO	1900 CFM & 4.13 TR	1	4th Floor	MOD-1 SECOND FLOOR
23	FM AHU	ZECO	1700 CFM & 3.84 TR	1	4th Floor	MOD-1 THIRD FLOOR
24	FM AHU	ZECO	800 CFM & 1.78TR	1	4th Floor	COLLAB FIRST FLOOR
25	FM AHU	ZECO	1800 CFM & 5.18TR	1	4th Floor	SECOND FLOOR CLASS ROOM-02
26	TFA	ZECO	180 CFM & 0.80 TR	1	4th Floor	SECOND FLOOR FACULTY
27	FM AHU	ZECO	1400 CFM & 4.46TR	1	4th Floor	CLASS ROOM- FIRST FLOOR

28	FM AHU	ZECO	1600 CFM & 4.82TR	1	4th Floor	CLASS ROOM-01 SECOND FLOOR
29	FM AHU	ZECO	1600 CFM & 4.35 TR	1	4th Floor	SEMINAR SECOND FLOOR
30	FM AHU	ZECO	1500 CFM & 4.27 TR	1	4th Floor	SEMINAR FIRST FLOOR
31	TFA	ZECO	240 CFM & 1.07 TR	1	4th Floor	THIRD FLOOR FACULTY
32	FM AHU	ZECO	1600 CFM & 2.65TR	1	4th Floor	PHD SECOND FLOOR
33	FM AHU	ZECO	800 CFM & 1.53TR	1	4th Floor	ADMIN FIRST FLOOR
34	FANS	kruger/Nicotra		6		
35	Air Washer	ZECO		2		
36	BTU meters	SheniTech		1		
37	Fire Dampers	Tristar/DLN		78		
38	Actuators	Honeywel/Belimo		78		

Building: Core Labs						
S.No.	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	FM AHU	ZECO	2200 CFM / 440 KG	1	Terrace	PHYSICS LAB-1 & DARK ROOM
2	FM AHU	ZECO	1900 CFM / 360 KG	1	Terrace	PHYSICS LAB- 2
3	FM AHU	ZECO	2400 CFM / 320 KG	1	Terrace	CHEMISTRY LAB-1
4	FM AHU	ZECO	1900 CFM / 360 KG	1	Terrace	PHYSICS LAB- 3
5	FM AHU	ZECO	3100 CFM / 490 KG	1	Terrace	CHEMISTRY LAB-2
6	FM AHU	ZECO	1900 CFM / 360 KG	1	Terrace	PHYSICS LAB- 4
7	FM AHU	ZECO	3000 CFM / 490 KG	1	Terrace	CHEMISTRY LAB-3
8	FM AHU	ZECO	2100 CFM / 440 KG	1	Terrace	PHYSICS LAB- 5
9	FM TFA	ZECO	2400 CFM / 320 KG	1	Terrace	CHEMISTRY LAB-3
10	FM TFA	ZECO	2400 CFM / 320 KG	1	Terrace	CHEMISTRY LAB-2
11	FM TFA	ZECO	2400 CFM / 320 KG	1	Terrace	CHEMISTRY LAB-1
12	FANS	kruger/Nicotra		21		
13	Scrubber	ZECO		3		
14	VAV Boxes	Jonson Controls		2		
15	Fire Dampers	Tristar/DLN		39		
16	Actuators	Honeywel/Belimo		39		

Building: New Hostels- 8 Blocks						
S.No.	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
J Block						
1	Centrifugal pumps	Armstrong	118USGPM at 12m head	8	Ground Floor	Ground floor RCS pump rooms
2	Mixing tank	Giacomini	1000 Liters	4	Ground Floor	Ground floor RCS pump rooms
3	Manifold Box with accessories	Giacomini	10 Loops	10	GF to 10th Floor	1st floor to 10th floor
4	Manifold Box with accessories	Giacomini	08 Loops	73	GF to 10th Floor	1st floor to 10th floor
K Block						
5	Centrifugal pumps	Armstrong	118USGPM at 12m head	8	Ground Floor	Ground floor RCS pump rooms
6	Mixing tank	Giacomini	1000 Liters	4	Ground Floor	Ground floor RCS pump rooms
7	Manifold Box with accessories	Giacomini	10 Loops	10	GF to 10th Floor	1st floor to 10th floor
8	Manifold Box with accessories	Giacomini	08 Loops	73	GF to 10th Floor	1st floor to 10th floor
N Block						
9	Centrifugal pumps	Armstrong	118USGPM at 12m head	8	Ground Floor	Ground floor RCS pump rooms
10	Mixing tank	Giacomini	1000 Liters	4	Ground Floor	Ground floor RCS pump rooms
11	Manifold Box with accessories	Giacomini	10 Loops	10	GF to 10th Floor	1st floor to 10th floor
12	Manifold Box with accessories	Giacomini	08 Loops	73	GF to 10th Floor	1st floor to 10th floor
M Block						
13	Centrifugal pumps	Armstrong	118USGPM at 12m head	8	Ground Floor	Ground floor RCS pump rooms
14	Mixing tank	Giacomini	1000 Liters	4	Ground Floor	Ground floor RCS pump rooms
15	Manifold Box with accessories	Giacomini	10 Loops	10	GF to 10th Floor	1st floor to 10th floor
16	Manifold Box with accessories	Giacomini	08 Loops	73	GF to 10th Floor	1st floor to 10th floor
Q Block						

17	Centrifugal pumps	Armstrong	118USGPM at 12m head	8	Ground Floor	Ground floor RCS pump rooms
18	Mixing tank	Giacomini	1000 Liters	4	Ground Floor	Ground floor RCS pump rooms
19	Manifold Box with accessories	Giacomini	10 Loops	10	GF to 10th Floor	1st floor to 10th floor
20	Manifold Box with accessories	Giacomini	08 Loops	73	GF to 10th Floor	1st floor to 10th floor
P Block						
21	Centrifugal pumps	Armstrong	118USGPM at 12m head	8	Ground Floor	Ground floor RCS pump rooms
22	Mixing tank	Giacomini	1000 Liters	4	Ground Floor	Ground floor RCS pump rooms
23	Manifold Box with accessories	Giacomini	10 Loops	10	GF to 10th Floor	1st floor to 10th floor
24	Manifold Box with accessories	Giacomini	08 Loops	73	GF to 10th Floor	1st floor to 10th floor
L Block						
25	Centrifugal pumps	Armstrong	118USGPM at 12m head	8	Ground Floor	Ground floor RCS pump rooms
26	Mixing tank	Giacomini	1000 Liters	4	Ground Floor	Ground floor RCS pump rooms
27	Manifold Box with accessories	Giacomini	10 Loops	10	GF to 10th Floor	1st floor to 10th floor
28	Manifold Box with accessories	Giacomini	08 Loops	73	GF to 10th Floor	1st floor to 10th floor
P1 Block						
29	Centrifugal pumps	Armstrong	118USGPM at 12m head	8	Ground Floor	Ground floor RCS pump rooms
30	Mixing tank	Giacomini	1000 Liters	4	Ground Floor	Ground floor RCS pump rooms
31	Manifold Box with accessories	Giacomini	10 Loops	10	GF to 10th Floor	1st floor to 10th floor
32	Manifold Box with accessories	Giacomini	08 Loops	73	GF to 10th Floor	1st floor to 10th floor
Pavilion						
33	Manifold Box with accessories	Giacomini	08 Loops	8	GF	Pavilion
34	BTU meters	SheniTech		1		

35	Pressure Pump Set	Grundfos		1	GF	K block
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Academic Quad: AD2: CS & EE						
S.No.	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	HIWALL UNIT		800 CFM & 2 TR	2	Ground Floor	HUB ROOM
2	CSU	ZECO	4000 CFM & 10 TR	2	Ground Floor	Class Room 120
3	CSU	ZECO	2400 CFM & 6 TR	4	Ground Floor	Seminar Hall
4	CSU	ZECO	4000 CFM & 10 TR	1	Ground Floor	Device Fabrication Lab
5	CSU	ZECO	3200 CFM & 8 TR	2	Ground Floor	Mechanics Lab
6	HIWALL UNIT		800 CFM & 2 TR	2	Ground Floor	CONTROL ROOM
7	CSU	ZECO	3200 CFM & 8 TR	3	Ground Floor	Class Room 40
8	INLINE FAN		250 CFM	2	Ground Floor	ELECTRICAL ROOM
9	CSU	ZECO	3200 CFM & 8 TR	3	Ground Floor	Class Room 50
10	INLINE FAN		250 CFM	1	1st Floor	ELECTRICAL ROOM
11	FCU	ZECO	400 CFM & 1 TR	2	1st Floor	PG core lab
12	CSU	ZECO	2400 CFM & 6 TR	2	1st Floor	PG core lab
13	CSU	ZECO	2000 CFM & 5 TR	2	1st Floor	PG core lab
14	CSU	ZECO	3200 CFM & 8 TR	1	1st Floor	OS & Distribution lab
15	CSU	ZECO	3200 CFM & 8 TR	1	1st Floor	IR & MACHINE LAB
16	CSU	ZECO	3200 CFM & 8 TR	2	1st Floor	DSP COMMUNICATION
17	CSU	ZECO	2000 CFM & 5 TR	1	1st Floor	Image media lab
18	FCU	ZECO	400 CFM & 1 TR	1	1st Floor	Holovizio display
19	CSU	ZECO	3200 CFM & 8 TR	1	1st Floor	Dynamic control
20	CSU	ZECO	2400 CFM & 6 TR	2	1st Floor	IC TESTING & CARACTERIZATION
21	CSU	ZECO	1600 CFM & 4 TR	1	1st Floor	MEETING ROOM
22	CSU	ZECO	1200 CFM & 3 TR	1	1st Floor	HOD
23	FCU	ZECO	400 CFM & 1 TR	1	1st Floor	LOBBY
24	INLINE FAN		250 CFM	1	1st Floor	STORE
25	CSU	ZECO	1600 CFM & 4	1	1st Floor	ADMIN

			TR			
26	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	FACULTY ROOM
27	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	DR
28	CSU	ZECO	1000 CFM & 2.5 TR	1	1st Floor	MEETING ROOM
29	CSU	ZECO	1200 CFM & 3 TR	1	1st Floor	ADMIN
30	INLINE FAN		200 CFM	1	1st Floor	TOILET
31	CSU	ZECO	1200 CFM & 3 TR	1	1st Floor	HOD
32	CSU	ZECO	1600 CFM & 4 TR	1	1st Floor	CONFERENCE ROOM
33	INLINE FAN		300 CFM	1	1st Floor	STORE
34	CSU	ZECO	1200 CFM & 3 TR	1	1st Floor	DEPT. COMPUTING FACULTY
35	HIWALL UNIT		800 CFM & 2 TR	2	2nd Floor	IT HUB ROOM
36	CSU	ZECO	2400 CFM & 6 TR	2	2nd Floor	PG core teaching lab
37	CSU	ZECO	2000 CFM & 5 TR	2	2nd Floor	PG core teaching lab
38	CSU	ZECO	4000 CFM & 10 TR	1	2nd Floor	Future lab 2
39	CSU	ZECO	2400 CFM & 6 TR	1	2nd Floor	sponsored and research bay
40	FCU	ZECO	400 CFM & 1 TR	1	2nd Floor	Lab Asst
41	FCU	ZECO	400 CFM & 1 TR	1	2nd Floor	Lab Assistant
42	CSU	ZECO	2800 CFM & 7 TR	1	2nd Floor	classroom
43	CSU	ZECO	2800 CFM & 7 TR	1	2nd Floor	RF & MICROWAVE
44	CSU	ZECO	2800 CFM & 7 TR	1	2nd Floor	POWER SYSTEM & COMPUTATION
45	CSU	ZECO	2800 CFM & 7 TR	2	2nd Floor	VLSI DESIGN & CAD
46	CSU	ZECO	3200 CFM & 8 TR	1	2nd Floor	WIRELESS NETWORK & NETWORKS
47	HIWALL UNIT		800 CFM & 2 TR	2	2nd Floor	IT HUB ROOM
48	CSU	ZECO	2800 CFM & 7 TR	1	2nd Floor	RESEARCH SCHOLAR
49	CSU	ZECO	2000 CFM & 5 TR	1	2nd Floor	RESEARCH SCHOLAR
50	CSU	ZECO	2000 CFM & 5 TR	1	2nd Floor	DEPT. COMMONS
51	CSU	ZECO	1200 CFM & 3 TR	1	2nd Floor	VISITORS CIRCLES
52	FCU	ZECO	600 CFM & 1.5	1	2nd	FACULTY ROOM

			TR		Floor	
53	FCU	ZECO	800 CFM & 2 TR	1	2nd Floor	D R
54	HIWALL UNIT		800 CFM & 2 TR	2	2nd Floor	UTILITY ROOM
55	CSU	ZECO	800 CFM & 2 TR	1	2nd Floor	D R
56	FCU	ZECO	800 CFM & 2 TR	2	2nd Floor	FACULTY ROOM
57	FCU	ZECO	600 CFM & 1.5 TR	4	2nd Floor	FACULTY ROOM
58	CSU	ZECO	2000 CFM & 5 TR	1	2nd Floor	MTECH LAB
59	CSU	ZECO	2400 CFM & 6 TR	1	2nd Floor	MTECH LAB
60	HIWALL UNIT		800 CFM & 2 TR	2	3rd Floor	IT HUB ROOM
61	CSU	ZECO	2800 CFM & 7 TR	1	3rd Floor	LARGE MANAGEMENT & ANALYTICAL LAB SCALE
62	CSU	ZECO	2800 CFM & 7 TR	1	3rd Floor	HIGH SPEED NETWORKING
63	FCU	ZECO	400 CFM & 1 TR	1	3rd Floor	Lab Asst
64	FCU	ZECO	400 CFM & 1 TR	1	3rd Floor	Lab Asst
65	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	Lab Asst
66	CSU	ZECO	3200 CFM & 8 TR	1	3rd Floor	GRAPHICS & VR LAB
67	CSU	ZECO	3200 CFM & 8 TR	1	3rd Floor	COMPUTATIONAL BIOLOGY
68	CSU	ZECO	3200 CFM & 8 TR	1	3rd Floor	RENEWABLE ENERGY
69	CSU	ZECO	3200 CFM & 8 TR	1	3rd Floor	MICRO GRID
70	CSU	ZECO	3200 CFM & 8 TR	1	3rd Floor	POWER QUALITY
71	CSU	ZECO	2400 CFM & 6 TR	2	3rd Floor	BIOMEDICAL
72	CSU	ZECO	3200 CFM & 8 TR	2	3rd Floor	DEVICE CAREACTERIZATION
73	FCU	ZECO	800 CFM & 2 TR	7	3rd Floor	FACULTY ROOM
74	FCU	ZECO	800 CFM & 2 TR	1	3rd Floor	DR
75	FCU	ZECO	600 CFM & 1.5 TR	8	3rd Floor	FACULTY ROOM
76	CSU	ZECO	1000 CFM & 2.5 TR	1	3rd Floor	MEETING ROOM
77	INLINE FAN		250 CFM	1	3rd Floor	CONTROL ROOM
78	FCU	ZECO	800 CFM & 2 TR	6	3rd Floor	FACULTY ROOM
79	FCU	ZECO	600 CFM & 1.5 TR	5	3rd Floor	FACULTY ROOM

			TR			
80	CSU	ZECO	1200 CFM & 3 TR	1	3rd Floor	FACULTY LOUNGE
81	INLINE FAN		250 CFM	1	4th Floor	ELCTRICAL ROOM
82	CSU	ZECO	3600 CFM & 9 TR	1	4th Floor	EMEBEDED SYSTEM LAB
83	CSU	ZECO	2800 CFM & 7 TR	1	4th Floor	FUTURE lab
84	CSU	ZECO	3600 CFM & 9 TR	2	4th Floor	COGNITIVE RADIO LAB
85	CSU	ZECO	2400 CFM & 6 TR	1	4th Floor	SPEECH PROCESSING LAB
86	CSU	ZECO	2400 CFM & 6 TR	2	4th Floor	ELECTRIC DRIVE
87	CSU	ZECO	2400 CFM & 6 TR	2	4th Floor	SMART GRID
88	CSU	ZECO	2800 CFM & 7 TR	1	4th Floor	POWER ELECTRONIC LAB
89	CSU	ZECO	4000 CFM & 10 TR	3	4th Floor	CPS
90	HIWALL UNIT		800 CFM & 2 TR	2	4th Floor	BATTERY BANK
91	CSU	ZECO	2800 CFM & 7 TR	1	4th Floor	RESEARCH SCHOOLAR
92	CSU	ZECO	1600 CFM & 4 TR	1	4th Floor	RESEARCH SCHOOLAR
93	FCU	ZECO	800 CFM & 2 TR	3	4th Floor	FACULTY ROOM
94	FCU	ZECO	800 CFM & 2 TR	1	4th Floor	D R
95	FCU	ZECO	600 CFM & 1.5 TR	4	4th Floor	FACULTY ROOM
96	HIWALL UNIT		800 CFM & 2 TR	2	4th Floor	HUB ROOM
97	CSU	ZECO	800 CFM & 2 TR	1	4th Floor	DR
98	FCU	ZECO	800 CFM & 2 TR	2	4th Floor	FACULTY ROOM
99	FCU	ZECO	600 CFM & 1.5 TR	4	4th Floor	FACULTY ROOM
100	CSU	ZECO	2800 CFM & 7 TR	1	4th Floor	RESEARCH SCHOOLAR
101	CSU	ZECO	1600 CFM & 4 TR	1	4th Floor	RESEARCH SCHOOLAR
102	FCU	ZECO	800 CFM & 2 TR	8	5th Floor	FACULTY ROOM
103	FCU	ZECO	800 CFM & 2 TR	1	5th Floor	DR
104	FCU	ZECO	600 CFM & 1.5 TR	8	5th Floor	FACULTY ROOM
105	INLINE FAN		250 CFM	1	5th Floor	CONTROL ROOM
106	CSU	ZECO	1000 CFM & 2.5 TR	1	5th Floor	MEETING ROOM

107	FCU	ZECO	800 CFM & 2 TR	7	5th Floor	FACULTY ROOM
108	FCU	ZECO	600 CFM & 1.5 TR	8	5th Floor	FACULTY ROOM
109	CSU	ZECO	1200 CFM & 3 TR	1	6th Floor	FACULTY LOUNGE
110	INLINE FAN		200 CFM	1	6th Floor	PANTRY
111	CSU	ZECO	2000 CFM & 5 TR	1	6th Floor	CONFERNCE
112	FCU	ZECO	800 CFM & 2 TR	1	6th Floor	FACULTY ROOM
113	FCU	ZECO	600 CFM & 1.5 TR	1	6th Floor	FACULTY ROOM
114	CSU	ZECO	2000 CFM & 5 TR	1	6th Floor	CONFERNCE
115	FCU	ZECO	600 CFM & 1.5 TR	4	6th Floor	FACULTY ROOM
116	FCU	ZECO	800 CFM & 2 TR	1	6th Floor	FACULTY ROOM
117	FCU	ZECO	800 CFM & 2 TR	1	6th Floor	DR
118	INLINE FAN		250 CFM	1	6th Floor	ELECTRICAL ROOM
119	CSU	ZECO	1000 CFM & 2.5 TR	1	6th Floor	DR
120	FCU	ZECO	600 CFM & 1.5 TR	8	6th Floor	FACULTY ROOM
121	FCU	ZECO	800 CFM & 2 TR	7	6th Floor	FACULTY ROOM
122	FCU	ZECO	800 CFM & 2 TR	6	6th Floor	FACULTY ROOM
123	Thermostat	Siemens		121		
124	BTU meters	SheniTech		1		
125	Fire Dampers	Tristar/DLN		58		
126	Actuators	Honeywell/Belimo		58		

Academic Quad: AD3:- MATHS,PHY & LA						
S.No.	Equipment	Make	Capacity	Quantity	Floor	Location of Installation
1	FMAHU	ZECO	8000 CFM & 20 TR	1	Ground Floor	Seminar Hall
2	CSU	ZECO	2000 CFM & 5 TR	1	Ground Floor	Classroom-2
3	CSU	ZECO	2400 CFM & 6 TR	1	Ground Floor	Classroom-2
4	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	Changing room-1
5	FCU	ZECO	800 CFM & 2 TR	1	Ground Floor	Changing room-2
6	CSU	ZECO	2000 CFM & 5 TR	1	Ground Floor	Classroom-1

7	CSU	ZECO	3200 CFM & 8 TR	2	Ground Floor	Classroom-1
8	CSU	ZECO	3200 CFM & 8 TR	2	Ground Floor	Classroom-2
9	CSU	ZECO	2800 CFM & 7 TR	2	Ground Floor	Classroom-Experimental Space
10	CSU	ZECO	4000 CFM & 10 TR	1	Ground Floor	Physics Classroom-1
11	CSU	ZECO	1600 CFM & 4 TR	1	Ground Floor	Research Lab 2
12	CSU	ZECO	2000 CFM & 5 TR	1	Ground Floor	Research Lab 1
13	CSU	ZECO	1200 CFM & 3 TR	2	Ground Floor	Control Room
14	CSU	ZECO	2400 CFM & 6 TR	1	Ground Floor	UPS Room
15	DXCSU	ZECO	2200 CFM & 5.5 TR	2	Ground Floor	UPS Room
16	CSU	ZECO	2000 CFM & 5 TR	1	Ground Floor	UPS Room
17	CSU	ZECO	2800 CFM & 7 TR	1	Ground Floor	Experiment Lab-1
18	CSU	ZECO	2000 CFM & 5 TR	1	Ground Floor	Experiment Lab-2
19	CSU	ZECO	2400 CFM & 6 TR	1	Ground Floor	Experiment Lab-3
20	CSU	ZECO	2400 CFM & 6 TR	1	Ground Floor	Experiment Lab-4
21	CSU	ZECO	2400 CFM & 6 TR	1	Ground Floor	Experiment Lab-5
22	CSU	ZECO	2400 CFM & 6 TR	1	Ground Floor	Seminar Hall
23	CSU	ZECO	2000 CFM & 5 TR	2	Ground Floor	Seminar Hall
24	CSU	ZECO	2400 CFM & 6 TR	1	Ground Floor	Seminar Hall
25	CSU	ZECO	2000 CFM & 5 TR	1	1st Floor	Applied Econometrics
26	CSU	ZECO	2400 CFM & 6 TR	1	1st Floor	Digital Language
27	CSU	ZECO	2000 CFM & 5 TR	1	1st Floor	Sculpting
28	CSU	ZECO	2000 CFM & 5 TR	1	1st Floor	Painting
29	CSU	ZECO	2000 CFM & 5 TR	1	1st Floor	Print Making
30	FCU	ZECO	1200 CFM & 3 TR	1	1st Floor	Theatre Arts
31	Hiwall		600 CFM & 1.5 TR	1	1st Floor	UPS Room
32	DxHiwall		600 CFM & 1.5 TR	1	1st Floor	UPS Room
33	FmAhu	ZECO	11200 CFM & 28 TR	1	1st Floor	Experiment Theatre

34	CSU	ZECO	1600 CFM & 4 TR	1	1st Floor	Committee Room
35	FCU	ZECO	1200 CFM & 3 TR	1	1st Floor	Maths Hod Room
36	CSU	ZECO	2400 CFM & 6 TR	1	1st Floor	Office
37	FCU	ZECO	600 CFM & 1.5 TR	5	1st Floor	Visiting Faculty
38	CSU	ZECO	2400 CFM & 6 TR	1	1st Floor	Office
39	FCU	ZECO	1200 CFM & 3 TR	1	1st Floor	Phy Hod Room
40	FCU	ZECO	1200 CFM & 3 TR	1	1st Floor	Committee Room
41	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	Visiting Faculty
42	FCU	ZECO	800 CFM & 2 TR	1	1st Floor	Visiting Faculty
43	CSU	ZECO	2000 CFM & 5 TR	1	1st Floor	Department Meeting Room
44	CSU	ZECO	2400 CFM & 6 TR	2	1st Floor	Classroom-1, Classroom-2, Classroom-3
45	Hiwall		800 CFM & 2 TR	1	1st Floor	Hub Room
46	DxHiwall		800 CFM & 2 TR	1	1st Floor	Hub Room
47	CSU	ZECO	2400 CFM & 6 TR	1	1st Floor	Reading/Modelling/Exhibition
48	CSU	ZECO	4000 CFM & 10 TR	1	1st Floor	Classroom
49	CSU	ZECO	2800 CFM & 7 TR	1	1st Floor	Classroom Collaborative
50	CSU	ZECO	3200 CFM & 8 TR	1	1st Floor	Common Experimental Lab
51	FCU	ZECO	1200 CFM & 3 TR	1	1st Floor	Research Lab
52	CSU	ZECO	1600 CFM & 4 TR	2	2nd Floor	Psychology Lab-1
53	CSU	ZECO	1000 CFM & 2.5 TR	1	2nd Floor	Psychology Lab-2
54	FCU	ZECO	600 CFM & 1.5 TR	1	2nd Floor	Faculty room
55	FCU	ZECO	1200 CFM & 3 TR	1	2nd Floor	Conference
56	Hiwall		800 CFM & 2 TR	2	2nd Floor	IT Hub Room
57	FCU	ZECO	1000 CFM & 2.5 TR	1	2nd Floor	HOD Office
58	CSU	ZECO	1600 CFM & 4 TR	1	2nd Floor	HOD Conference
59	CSU	ZECO	2000 CFM & 5 TR	1	2nd Floor	Administrative Staff
60	FCU	ZECO	600 CFM & 1.5 TR	25	2nd Floor	Faculty room
61	FCU	ZECO	600 CFM & 2	12	2nd	Faculty room

			TR		Floor	
62	CSU	ZECO	1600 CFM & 4 TR	1	2nd Floor	Research Lab-1
63	CSU	ZECO	1600 CFM & 4 TR	1	2nd Floor	Research Lab-2
64	CSU	ZECO	2000 CFM & 5 TR	1	2nd Floor	Lab-1
65	CSU	ZECO	1600 CFM & 4 TR	1	2nd Floor	Lab-2
66	CSU	ZECO	3200 CFM & 8 TR	1	2nd Floor	Lab-3
67	CSU	ZECO	1600 CFM & 4 TR	1	2nd Floor	Common Experimental Lab-1
68	CSU	ZECO	1600 CFM & 4 TR	1	2nd Floor	Common Experimental Lab-2
69	CSU	ZECO	3200 CFM & 8 TR	1	2nd Floor	Computation Teaching Lab
70	CSU	ZECO	3200 CFM & 8 TR	1	2nd Floor	Common Experiment Lab
71	FCU	ZECO	1200 CFM & 3 TR	1	2nd Floor	Research Lab-1
72	FCU	ZECO	1200 CFM & 3 TR	1	2nd Floor	Research Lab-2
73	FCU	ZECO	800 CFM & 2 TR	23	3rd Floor	Faculty room
74	FCU	ZECO	600 CFM & 1.5 TR	17	3rd Floor	Faculty room
75	Hiwall		800 CFM & 2 TR	2	3rd Floor	Ups Room
76	FCU	ZECO	1000 CFM & 2.5 TR	1	3rd Floor	Reading
77	FCU	ZECO	800 CFM & 2 TR	2	3rd Floor	Faculty meeting
78	FCU	ZECO	600 CFM & 1.5 TR	4	3rd Floor	Project Staff
79	FCU	ZECO	1200 CFM & 3 TR	1	3rd Floor	Faculty Room
80	CSU	ZECO	1600 CFM & 4 TR	1	3rd Floor	Research Classroom
81	FCU	ZECO	1200 CFM & 3 TR	1	3rd Floor	Research space
82	CSU	ZECO	1600 CFM & 4 TR	2	3rd Floor	Research Lab
83	FCU	ZECO	1200 CFM & 3 TR	1	3rd Floor	Research space
84	FCU	ZECO	1200 CFM & 3 TR	4	3rd Floor	Research space
85	FCU	ZECO	1200 CFM & 3 TR	2	3rd Floor	Research Lab
86	CSU	ZECO	4000 CFM & 10 TR	1	3rd Floor	MS/Mtech/EP Lab
87	CSU	ZECO	3200 CFM & 8 TR	1	3rd Floor	Common Experimental Lab
88	FCU	ZECO	1200 CFM & 3 TR	2	3rd Floor	Research Lab

89	CSU	ZECO	2400 CFM & 6 TR	1	4th Floor	Project Staff Open Office
90	FCU	ZECO	600 CFM & 1.5 TR	9	4th Floor	Research Staff
91	FCU	ZECO	800 CFM & 2 TR	13	4th Floor	Research Staff
92	Hiwall		800 CFM & 2 TR	2	4th Floor	IT Hub Room
93	FCU	ZECO	600 CFM & 1.5 TR	1	4th Floor	Project Staff
94	FCU	ZECO	800 CFM & 2 TR	1	4th Floor	Project Staff
95	FCU	ZECO	1200 CFM & 3 TR	2	4th Floor	Research Space
96	CSU	ZECO	1600 CFM & 4 TR	1	4th Floor	Research Space
97	FCU	ZECO	800 CFM & 2 TR	4	4th Floor	Faculty Room
98	FCU	ZECO	600 CFM & 1.5 TR	11	4th Floor	Faculty Room
99	FCU	ZECO	800 CFM & 2 TR	6	4th Floor	Faculty Room
100	CSU	ZECO	2000 CFM & 5 TR	1	4th Floor	Research Lab
101	CSU	ZECO	1600 CFM & 4 TR	1	4th Floor	Research Lab
102	CSU	ZECO	3200 CFM & 8 TR	1	4th Floor	Classroom-1
103	CSU	ZECO	2800 CFM & 7 TR	1	4th Floor	Classroom-2
104	Hiwall		800 CFM & 2 TR	2	4th Floor	IT Hub Room
105	FCU	ZECO	1200 CFM & 3 TR	2	4th Floor	Research Lab
106	CSU	ZECO	4000 CFM & 10 TR	1	4th Floor	MS/Mtech/EP Lab
107	CSU	ZECO	4000 CFM & 10 TR	1	4th Floor	Common Experimental Lab
108	FCU	ZECO	1200 CFM & 3 TR	2	4th Floor	Research Lab
109	Thermostat	Siemens		165		
110	BTU meters	SheniTech		1		
111	Fire Dampers	Tristar/DLN		52		
112	Actuators	Honeywel/Belimo		52		

S.No.	DESCRIPTION	UNIT	QTY SUM OF ALL BLDGS	ADM	DO D	L H	D H	BSH	CR L	HC F	C S	AD2	AD3
	CABINET TYPE CENTRIFUGAL BLOWERS												
1	TOILET EXHAUST AIR FAN CAP: 2100CFM	Each	2	2									

2	TOILET CABINET FAN 1200 CFM	Each	1		1								
3	TOILET EXHAUST FAN 3600 CFM	Each	1		1								
4	TOILET EXHAUST AIR UNITS CAP:5700CFM	Each	2			2							
5	TOILET EXHAUST AIR UNIT CAP:1050CFM	Each	1			1							
6	TOILET EXHAUST AIR UNITS CAP: 2000CFM	Each	2			2							
7	TOILET EXHAUST AIR UNITS CAP:1400CFM	Each	1			1							
8	TOILET EXHAUST, 2550 CFM	Each	1						1				
9	TOILET EXHAUST, 2100 CFM	Each	3				2				1		
10	TOILET EXHAUST, 1600 CFM	Each	3				2				1		
11	TOILET EXHAUST, 1200 CFM	Each	4				3				1		
12	TOILET EXHAUST, 650 CFM	Each	7							7			
13	TOILET EXHAUST, 500 CFM	Each	1							1			
14	TOILET EXHAUST AIR FAN CAP: 6500CFM / 2KW	Each	1									1	
15	TOILET EXHAUST AIR FAN CAP: 6000CFM / 1.81KW	Each	2									1	1
16	TOILET EXHAUST AIR FAN CAP: 2800CFM / 1.16KW	Each	2									2	
17	TOILET EXHAUST AIR FAN CAP: 2900CFM / 1.16KW	Each	2									2	
18	TOILET EXHAUST AIR FAN CAP: 6650CFM / 2KW	Each	1										1
19	TOILET EXHAUST AIR FAN CAP: 5100CFM / 1.59KW	Each	1										1
20	TOILET EXHAUST AIR FAN CAP: 5500CFM / 1.68KW	Each	1										1
	TOTAL		39	2	2	6	7	0	1	8	3	6	4

S.No.	DESCRIPTION	UNIT	QTY SUM OF ALL BUILDINGS	ADM	DO D	L H	D H	BSH	CR L	HC F	C S	AD2	AD3
	Tube Axial Fans												
1	STAIRCASE PRESSURIZATION AXIAL FLOW FAN / 14500CFM	Each	2	2									

2	AXIAL FLOW FAN FOR LIFT WELL PRESSURIZATION 6500 CFM	Each	2		2								
3	LIFT WELL PRESSURIZATION TUBE AXIAL FAN CAP: 5000CFM	Each	4			4							
4	PUMP ROOM EXHAUST TUBE AXIAL FAN CAP: 1800CFM	Each	1			1							
5	AXIAL FAN 1500 CFM	Each	1						1				
6	AXIAL FAN 1500 CFM	Each	1						1				
7	STAIRCASE PRESSURIZATION AXIAL FLOW FAN Air Qty = 16000 CFM	Each	8					8					
8	AXIAL FAN 3400 CFM	Each	1							1			
9	LIFT WELL PRESSURISATION CAP: 11000CFM / 5.5KW	Each	2									2	
10	LIFT WELL PRESSURISATION CAP: 8500CFM / 2.2KW	Each	1									1	
11	LIFT WELL PRESSURISATION CAP: 12000CFM / 5.5KW	Each	1									1	
12	LIFT WELL PRESSURISATION CAP: 16000CFM / 5.5KW	Each	3										3
13	LIFT WELL PRESSURISATION CAP: 8000CFM / 2.2KW	Each	1										1
	TOTAL		28	2	2	5	-	8	2	1	-	4	4

S.No.	DESCRIPTION	UNIT	QTY SUM OF ALL BUILDINGS	ADM	DO D	L H	D H	BSH	CR L	HC F	C S	AD2	AD3
	Smoke Exhaust Fans												
1	250cfm PROPELLER EXHAUST FAN ELE Room & Basement	Each	18	18									
2	800cfm PROPELLER EXHAUST FAN ELE Room	Each	2	2									
	TOTAL		20	20	-	-	-	-	-	-	-	-	-

S.No.	DESCRIPTION	UNIT	QTY SUM OF	ADM	DO D	L H	D H	BSH	CR L	HC F	C S	AD2	AD3
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			ALL BUILDINGS										
	INLINE Fans												
1	INLINE FAN FOR PANTRY CFM-250	Each	12		1							9	2
2	INLINE FAN FOR CAFE KITCHEN EX/A CFM-400	Each	1		1								
3	INLINE FAN 600 CFM	Each	3						3				
4	INLINE FAN 300 CFM	Each	1									1	
5	INLINE FAN 200 CFM	Each	1									1	
6	INLINE FAN 500 CFM	Each	2										2
	TOTAL		20	-	2	-	-	-	3	-	-	11	4

S.No.	DESCRIPTION	UNIT	QTY SUM OF ALL BUILDINGS	ADM	DO D	L H	D H	BSH	CR L	HC F	C S	AD2	AD3
	Propeller Fans												
1	PROPELLER FAN 350 CFM EX.A.	Each						160	12				
2	PROPELLER FAN 150 CFM EX.A.	Each						983					7
3	PROPELLER FAN 255 CFM EX.A.	Each									2		
4	PROPELLER FAN 185 CFM EX.A.	Each									1		
5	PROPELLER FAN 100 CFM EX.A.	Each									1		
6	PROPELLER FAN 250 CFM EX.A.	Each											7
	TOTAL		-	-	-	-	-	1,143	12	-	4	-	14

S.No.	DESCRIPTION	UNIT	QTY SUM OF ALL BUILDINGS	ADM	DO D	L H	D H	BSH	CR L	HC F	C S	AD2	AD3
	Scrubbers Fans												
1	Scrubbers For Kitchen Exhaust 31300 cfm-85mm Total static pressure	Each					2						
2	EXHAUST AIR WITH DRY SCRUBBER 2400 CFM	Each							3				
3	HVLS FANS	Each					4						
4	Air Washers	Each											
5	AIR WASHER WITH SINGLE BLOWER 7600 CFM	Each			1								
6	AIR WASHER WITH SINGLE BLOWER 5700	Each			1								

	CFM												
7	AIR WASHER UNIT 31300 CFM	Each					2						
	TOTAL			-	2	-	8	-	3	-	-	-	-
	TOTAL			24	8	11	15	1151	21	9	7	21	26

S N o	Equip ment	D O D	L H	D H	B H	C R L	H C F	C S	M S H	M S M E	B T B M	C H Y	R C C	K N C	T I P	T R P	C C	I G H	S N C C	P R/ S S	A D- 4
1	Split AC	34	2	1	2 4	6	19	8	3	3	6	4	2	2	4	4	7	4	5	6	6

List of Equipment and makes installed at the AC Plants and Buildings (Phase-II):

S.No.	Equipment	
1	Chillers	Daikin McQuay
2	Cooling Towers	Nihon Spindle
3	Primary/Secondary/Condenser Pumps	Grundfos
4	VFDs	Danfoss
5	AHUs	Zeco
6	Wet Scrubbers	Aircon
7	Dry Scrubbers	Rydair
8	Thermostats of VAV	Johnson Controls
9	Thermostats of FCU	Siemens
10	Radiant Cooling System	Giacomini
11	BMS System	Schneider
12	Chiller Plant Manager	Daikin
13	Motorized Valves	Belimo
14	PICV	Danfoss
15	Exhaust Fans	Nicotda gebhardt
16	Split AC	Voltas, Bluestar,Toshiba,Hitachi

1.7 PAYMENT TERMS AND PAYMENT SCHEDULE

PAYMENT TERMS

- (i) The Contractor bills pertain to Comprehensive Annual Maintenance (CAMC) shall be paid on Quarterly basis and bills pertain to Operation & Maintenance (O&M) shall be paid on Monthly basis by Institute.

1.8 BROAD CHECKLIST OF DOCUMENTS TO BE SUBMITTED ALONG WITH EOI:

Sl. No.	Doc Ref	Description of the Document	Enclosed Yes/No	Remarks
1	Registration of Firm (ROF)	Copy of valid Registration of Firm (ROF)		
2	PAN details	Copy of PAN card		
3	GST registration details	Copy of GST Registration certificate & GSTIN should accompany the Technical Bid		
4	Details of similar works executed (Detailed Completion certificate & statements to be enclosed)	Three similar completed works each of rated capacity not less than 40% of 12052Tr capacity District Cooling/Centralized Cooling HVAC Plant or		
		Two similar completed works each of rated capacity not less than 60% of 12052Tr capacity District Cooling/Centralized Cooling HVAC Plant or		
		One similar completed works each of rated capacity not less than 80% of 12052Tr capacity District Cooling/Centralized Cooling HVAC Plant or		
5	As per Para No. 1.4 of EOI	Cost of EMD (Rs.5,00,000/- only)		
6	As per Sl. No.2 of EOI	The Average annual financial turnover of the bidder should be at least Rs.3,00,00,000/- only during the immediate last three (03) consecutive financial years ending 31st March 2025 or ending 31st March 2026.		
7	As per Sl. No. 3 of EOI	Banker's Certificate or Net worth Certificate (as per the prescribed format given in EOI): The bidder shall submit the Banker's certificate or Net-worth certificate as per the below: Banker's Certificate of the amount equal to Rs. 4,00,00,000/-only issued by any scheduled bank, Or Net worth certificate of minimum amount Rs.1,00,00,000/-only, issued by certified Chartered Accountant with UDIN.		
9	As per Sl. No. 4 of EOI	The bidder should have bidding capacity equal to or more than Rs.10,00,00,000/- only.		
10	As per Sl. No. 5 of EOI	The tenderer shall have to furnish an affidavit as per Form 'J' of the EOI		
11	As per Sl. No. 6 of EOI	The bidder shall have Employees Provident Fund (EPF) enlistment and proof of the same shall be attached along with the Technical Bid clearly		

		showing the Provident Fund Code number		
12	As per Sl. No. 7 of EOI	The bidder shall have the Employee State Insurance Corporation (ESIC) enlistment and proof of the same shall be attached with the Technical bid.		
13	As per Sl. No. 8 of EOI	The bidder shall submit the Indemnity bond as per format provided in Annexure-II.		
14	As per Sl. No.9 of EOI	The bidder shall submit the authorization certificate from the Approved Original Equipment Manufacturer (OEM) of critical HVAC components i.e., Chillers, HVAC Primary, Secondary, Condenser pumps, Chiller Plant Manager (CPM), VFDs, Cooling Towers as per the format enclosed as Annexure- IV.		
15	As per S.No.10 of EOI	The bidder shall submit a valid and applicable Electrical contractor license of LT voltage levels along with it's bid.		

Note: The above check-list is broad and indicative only. Apart from the above, the bidder shall ensure to submit all the documents along with his EOI bid, which are specified in this Notice inviting EOI document and also which are otherwise appropriately required in support of its bid.

1.9 EOI EVALUATION CRITERIA:

The details submitted by the bidders shall be evaluated in the following manner:

- (i) The basic eligibility criteria as prescribed in Section 1.0 of this EOI in respect of experience of similar works completed, bidding capacity and financial turnover etc., shall first be scrutinized and the bidders basic eligibility for this work be determined.
- (ii) The bidders qualifying the basic eligibility criteria as set out in Section 1.0 of this EOI shall be evaluated for following criteria by scoring method on the basis of details furnished by them.
- (iii) The scoring for evaluation shall be done as per Table 1. The IITH reserves the right to restrict the list of such qualified bidders to any number deemed suitable by it.
- (iv) IIT Hyderabad may independently verify the credentials submitted by the bidder and may obtain the client feedback directly. In case of adverse feedback of the clients, those bids will be disqualified. The bidders shall give complete contact information of clients of eligible projects while submitting their credentials. Bids with incomplete submissions in this context shall be rejected.

Table 1: EVALUATION BREAK-UP

The bidders qualifying the initial criteria for eligibility as set out in above paras, will be evaluated by the scoring method detailed below on the basis of details furnished by them:

(a) Financial strength (Form A, B & C)	Maximum 15 marks
1. Annual Turnover	10 marks
2. Bankers Certificate	5 marks
(b) Experience in eligible similar nature of work during last Seven years (Form “D”)	Maximum 20 marks
<i>A site visit to the project(s) specified in EOI bid may be undertaken by the IITH nominee/committee to assess the quality of the work.</i>	
(c) Fulfilment of basic eligibility criteria related to Work as mentioned	
1. Detail Technical Presentation	Maximum 25 marks 25 marks
(d) Performance on work (Form “F”)- Time over run	Maximum 20 Marks
(e) Performance on work (Form “F”)- Quality	Maximum 20 Marks
	Total 100 Marks

Notes:

- 1. Criteria for evaluation of performance of the contractor is given in Form “K”.*
- 2. To become eligible for qualification in technical bid evaluation, the bidder must secure at least fifty percent marks in each attribute (Section a, b, c, d & e) and sixty percent marks in aggregate.*
- 3. The department, however, reserves the right to restrict the list of bidders in EOI bid evaluation to any number, as deemed suitable by it.*
- 4. The average value of performance of works for time overrun and quality shall be taken on the basis of performance report of the eligible similar works.*

1.10 DISQUALIFICATION

Even though any bidder may satisfy the above requirements, he would be liable to disqualification if he has:

- made misleading or false representation or deliberately suppressed the information in the forms, statements and enclosures required in the eligibility criteria document.
- record of poor performance such as abandoning work, not properly completing the contract, or financial failures / weaknesses etc.,

1.11 FINANCIAL INFORMATION

Bidder should furnish the following financial information: Annual financial statement for the last five years in (Form A) & Bankers Certificate (Form B)/ Net worth certificate in (Form C).

1.12 EXPERIENCE IN SIMILAR WORKS

Bidder shall furnish the following attested credentials in the eligibility document:

- List of all works of similar works successfully completed during the last seven years in (Form D).
- List of the projects under execution or awarded in (Form E).
- Particulars of completed works and performance of the bidder duly authenticated/certified by an Officer not below the rank of Executive Engineer or equivalent should be furnished separately for each work completed or in progress in (Form F).
- In case of projects pertaining to private sector, the bidder shall submit certificates issued by the Project Manager of the Client organization.
- Information in (Form D) should be complete and no work should be left out.

1.13 ORGANIZATION INFORMATION

Bidder shall furnish the following self-attested documents:

- Structure and organization in Form- G.
- Details of Technical and administrative personnel to be employed for the work in Form-H.

1.14 CONSTRUCTION PLANT AND MACHINERY

Bidder shall furnish the following attested documents in the eligibility document:

- List of P& M owned

1.15 CRITERIA FOR EVALUATION OF THE PERFORMANCE OF BIDDERS FOR TECHNICAL ELIGIBILITY

Sl. No	Attributes	Marks	Evaluation
(a)	Financial Strength (Maximum 15 Marks)		(i) 60% marks for minimum eligibility Criteria
	(i) Average annual Turnover	10 Marks	(ii) 100% marks for twice the minimum eligibility criteria or more.
	(ii) Bankers Certificate	05 Marks	(iii) In between (i) & (ii)- on pro-rata Basis
(b)	Experience in similar class of work (Maximum 20 Marks)	20 marks	(i) 60% marks for minimum eligibility criteria (ii) 100% marks for twice the minimum eligibility criteria or more. (iii) In between (i) & (ii) – on pro-rata basis
(c)	(i) Detailed Technical Presentation	25 marks	# Marks will be given based on the quality of documentation provided by the bidder and as per the assessment of Bid evaluation committee.
(d)	Performance on works [Time Over Run (TOR)]: Maximum 20 marks		
	Parameter	Calculation for points	Score Maximum Marks
	If TOR =		1.00 2.00 3.00 >3.50
	(i) Without levy of compensation		20 15 10 10
	(ii) With levy of compensation		20 5 0 -5
	(iii) Levy of compensation not decided		20 10 0 0
	TOR = AT/ST, where AT = Actual Time; ST = Stipulated Time. Time in the Agreement plus (+) justified period of extension of time. Note: Marks for value in between the stages indicated above is to be determined by straight line variation basis.		
(e)	Performance of works (Quality): Maximum 20 Marks		
	(i) Outstanding	20	
	(ii) Very Good	15	
	(iii) Good	10	
	(iv) Poor	0	

Note:

Performance of work (Quality) certified as “satisfactory” will be treated as good.

1. *Criteria for evaluation of performance of the contractor is given in Form “K”.*
2. *To become eligible for qualification in technical bid evaluation, the bidder must secure at least fifty percent marks in each attribute (Sections a, b, c, d & e) and sixty percent marks in aggregate.*
3. *The department, however, reserves the right to restrict the list of bidders in EOI bid evaluation to any number, as deemed suitable by it.*
4. *The average value of performance of works for time overrun and quality shall be taken on the basis of performance report of the eligible similar works.*

1.16 ANNEXURES

ANNEXURE-I

On non-judicial stamp paper of minimum Rs. 100

Guarantee offered by Bank to IITH in connection with the execution of contracts) Form of Bank Guarantee for Earnest Money Deposit /Performance Guarantee/Security Deposit/Mobilization Advance/ Refund of milestone with held amount

1. Whereas the Executive Engineer (name of division), IITH on behalf of the President of India (hereinafter called “The Government”) has invited bids under (EOI number)..... dated for (name of work)..... The Government has further agreed to accept irrevocable Bank Guarantee for Rs. (Rupees only) valid up to (date)*...as Earnest Money Deposit from (Name and address of contractor) (hereinafter called “the contractor”) for compliance of his obligations in accordance with the terms and conditions of the said EOI.

OR**

Whereas the Executive Engineer (name of division)....., IITH on behalf of the President of India (hereinafter called “The Government”) has entered into an agreement bearing number..... with(name and address of the contractor)..... (hereinafter called “the Contractor”) for execution of work (name of work) The Government has further agreed to accept an irrevocable Bank Guarantee for Rs. (Rupees only) valid upto (date)..... as Performance Guarantee/Security Deposit/Mobilization Advance/Refund of mile stone withheld amount from the said Contractor for compliance of his obligations in accordance with the terms and conditions of the agreement.

2. We, (indicate the name of the bank) (herein after referred to as “the Bank”), hereby undertake to pay to the Government an amount not exceeding Rs. (Rupees.....only) on demand by the Government within 10 days of the demand.
3. We,(indicate the name of the Bank), do here by undertake to pay the amount due and payable under this guarantee without any demur, 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. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.(Rupees only).
4. We, (indicate the name of the Bank), further undertake to pay the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending On non-judicial stamp paper of minimum Rs. 100 before any Court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be a valid discharge of our liability for payment there under and the Contractor shall have no claim against us for making such payment.
5. We, (indicate the name of the Bank)....., further agree that the Government shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor 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 and to forbear 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 or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said Contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. We, (indicate the name of the Bank)....., further agree that the Government at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Government may have in relation to the Contractor's liabilities.
7. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.
8. We, (indicate the name of the Bank)....., undertake not to revoke this guarantee except with the consent of the Government in writing.
9. This Bank Guarantee shall be valid up to unless extended on demand by the Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees only) and unless a claim in writing is lodged with us within the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date

Witnesses:

1. Signature.....

Authorized signatory

Name and address

Name

Designation Staff code no.

2. Signature

Bank seal

Name and address

* Date to be worked out on the basis of validity period of 90 days where only financial bids are invited and 180 days for two/three bid system from the date of submission of tender.

**In paragraph 1, strike out the portion not applicable. Bank Guarantee will be made either for earnest money or for performance guarantee/security deposit/mobilization advance/Refund of mile stone withheld amount, as the case may be.

ANNEXURE-II

INDEMNITY BOND (VIOLATION OF LAWS, NORMS, ACCIDENTS, DAMAGES ETC) (On Non-Judicial Stamp Paper of Rs.100/-only)

Name of work: Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC system including 4497 TR Capacity (Phase-I) & 7555 TR Capacity (Phase-II) including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad campus, Kandi, Sangareddy.

KNOW all men by these presents that I/We _____ (Name of Contractor with address) do hereby execute Indemnity Bond in favour of Indian Institute of Technology (IIT) Hyderabad having their office at Kandi, Sangareddy-502284, Telangana, India and for the project IIT Hyderabad under consideration.

On this day of2026

THIS DEED WITNESSETH AS FOLLOWS:

I/We, (Name of Contractor) hereby do indemnify and save harmless IITH having their office at Kandi-502284, Sangareddy, Telangana, India from the following: -

1. Any third party claims, civil or criminal complaints/liabilities/material/life loss during site mishaps and other accidents such as snake bites etc or disputes and/or damages occurring or arising out of any mishaps at the site due to faulty work, negligence, faulty construction and/or for violating any law, rules and regulations in force, for the time being while executing/executed civil works by me/us.
2. Any damages, loss or expenses due to or resulting from any negligence or breach of duty on the part of me/us or any sub-Contractor/s if any, servants or agents.
3. Any claims by an employee of mine/ours or of sub-Contractors if any, under the workman compensation act and employers' Liability act, 1939 or any other law rules and regulations in force for the time being and any acts replacing and/or amending the same or any of the same as may be in force at the time and under any law in respect of injuries to persons or property arising out of and in the course of execution of the Contract work and/or arising out of and in the course of employment of any workman/employee.
4. Any act or omission of mine/ours or sub-Contractor/s if any, our/their servants or agent which may involve any loss, damage, liability, civil or criminal action.

IN WITNESS WHEREOF THE HAS SET HIS/THEIR HANDS ON THIS DAY OF SIGNED AND DELIVERED BY THE AFORESAID IN THE PRESENCE OF WITNESSES:

- 1.
- 2.

ANNEXURE-III

ACCEPTANCE OF EOI TERMS & CONDITIONS

(To be given on Company Letter Head)

Date:

To
The Executive Engineer-Electrical,
Indian Institute of Technology Hyderabad,
Kandi – 502 284,
Telangana, India.

Sub: Acceptance of Terms & Conditions of EOI.

Tender Reference No: _____

Name of EOI: -

Dear Sir,

1. I / We have downloaded / obtained the EOI/ tender document(s) for the above mentioned 'EOI' from the web site(s) namely _____ as per your advertisement, given in the above-mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your IITH too have also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above-mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then IIT Hyderabad shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

ANNEXURE-IV

Proforma for Authorization certificate from Approved OEM

REF.No. _____

Dated _____

To,
The Executive Engineer-Electrical,
Indian Institute of Technology (IIT) Hyderabad
Kandi-502284, Sangareddy, Telangana, India

Dear Sir,

We _____ who are established and reputable manufacturers/Technology Providers of _____ having factory/ factories at _____ (*address of factory*) do hereby authorize M/s _____ (*Name and address of bidder*) to submit a bid, negotiate and receive the order from you against your Tender enquiry no. IITH/CMD/ELE/EOI/2026-27/ XX for the work of

Name of Work:

We ensure that we shall support/ facilitate the M/s _____ on regular basis with technology/product updates for up-gradation / maintenance/repairing/servicing of the Batteries at IIT Hyderabad (if awarded) as per the terms and conditions mentioned in this tender document on direct payment basis from the successful bidder.

We hereby extend our full guarantee for the services offered by the above firm.

Yours faithfully,

(Name of authorised signatory with
signature)

(Name of manufacturer with stamp)

Note: This letter of authority should be on the letter-head of the OEM and should be signed by an authorized person. It should be enclosed by the Bidder with the tender documents.

1.17 FORMS

“FORM-A”

FINANCIAL INFORMATION

Name of Bidder:

- I. Financial Analysis Details to be furnished duly supported by figures in balance sheet/profit loss account for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

Fig in Lakhs Rs.

Sl. No.	Particulars	Financial Years				
		2020-21	2021-22	2022-23	2023-24	2024-25
i)	Turnover of construction Works					
ii)	Profit /Loss					

- II. Financial arrangements for carrying out the proposed work.

- III. Net worth Certificate from Bankers of the bidder in the prescribed Form B.

Signature of Chartered Accountant with Seal

Signature of Bidder(s)

FORM – “B”

FORM OF BANKERS' CERTIFICATE FROM A SCHEDULED BANK

To

The Executive Engineer -Electrical
Construction and Maintenance Division,
IIT Hyderabad.

This is to certify that to the best of our knowledge and information that Ms./Shri.....
..... having marginally noted address, a customer of our bank are/is respectable and can be treated as good for
any engagement up to a limit of Rs.....(Rupees.....).

This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature with seal of Branch Manager)

For the Bank NOTE: (1) In case of partnership firm, certificate should include names of all partners as recorded with the Bank.

2. The bankers certificate should be on letter head of the bank

FORM – “C”

FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

It is to certify that as per the audited balance sheet and profit & loss account during the **financial year 2024-25**, the Net Worth of M/s _____ (Name & Registered Address of contractor/ Individual/firm/company), as on _____(the relevant date) is Rs. _____after considering all liabilities. It is further certified that the Networth of the company has not eroded by more than 30% in the last three years ending on **31st March 2025 Or 31st March 2026**.

Signature of Chartered Accountant

Name of Chartered Accountant

Membership No. of ICAI

Date and Seal

Form –“D”

DETAILS OF ELIGIBLE SIMILAR NATURE OF WORKS COMPLETED DURING THE LAST SEVEN YEARS ENDING PREVIOUS DAY OF LAST DATE OF SUBMISSION OF TENDER

Sr.No.	Name of work/ project and Location	IITH or sponsoring Organization	Cost of work (in Crores)	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation /arbitration pending / in progress with details*	Name and address (Postal & email)/ contact no of officer	Whether the work was done on back to back basis. Yes/No

***Indicate gross Amount Claimed and Amount Awarded by the Arbitrator.**

SIGNATURE (S) OF BIDDER (S) (WITH STAMP)

FORM “E”

LIST OF THE PROJECTS UNDER EXECUTION OR AWARDED

Sr. No.	Name of work / project and Location	IITH sponsoring Organization	Cost of work (in Crores)	Date of commencement as per contract	Stipulated date of completion	Present Progress (Financial & Physical)	Litigation/ arbitration pending / in progress with details*	Name and address (Postal & email) / contact no of officer	Whether the work being done on back- to-back basis. Yes/No

***Indicate gross Amount Claimed and Amount Awarded by the Arbitrator.**

SIGNATURE (S) OF BIDDER (S) (WITH STAMP)

FORM 'F'

PERFORMANCE REPORT OF WORKS REFERRED IN FORM –B& C:

(Bidder may suggested to submit the Performance Report with the details covering in this Form-F)

1.	Name of work / Project & Location	
2.	Agreement No.	
3.	Estimated Cost	
4.	Tendered Cost	
5.	Actual Value of work done.	
6.	Date of Start	
7.	Date of completion	
	i) Stipulated Date of Completion (as mentioned in work order)	
8.	ii) Actual Date of Completion	
	i) Whether case of levy of compensation for delay has been decided or not	Yes/ No.
9.	ii) If decided, amount of compensation levied for delayed completion, if any.	
	1) Quality of Work	Outstanding / Very Good/ Good/ Poor
	2) Financial Soundness	Outstanding / Very Good /Good/Poor
	3) Technical Proficiency	Outstanding / Very Good/ Good/Poor
	4) Resourcefulness	Outstanding / Very Good/ Good/Poor
	5) General Behaviour	Outstanding / Very Good/ Good/Poor
Dated:		Executive Engineer or Equivalent with office stamp

FORM "G"

STRUCTURE ORGANISATION

1. Name address of the bidder:
2. Telephone no./Telex no./Fax no.:
3. Legal status of the bidder (attach copies of original document defining the legal status):
 - (a) An Individual
 - (b) A proprietary firm
 - (c) A firm in partnership
 - (d) A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy):

Organization/Place of registration

Registration No.

- i.
- ii.
- iii.

5. Names and titles of Directors Officers with designation to be concerned with this work:
6. Designation of individuals authorized to act for the organization:
7. Was the bidder ever required to suspend construction for a period of more than six months continuously after he commenced the construction? If so, give the name of the project and reasons of suspension of work:
8. Has the bidder, or any constituent partner in case of partnership firm, ever abandoned the awarded work before its completion? If so, give name of the project and reasons for abandonment:
9. Has the bidder, or any constituent partner in case of partnership firm, ever been debarred/black listed for tendering in any organization at any time? If so, give details:
10. Has the bidder, or any constituent partner in case of partnership firm, ever been convicted by the court of law? If so, give details:
11. In which field of Civil Engineering construction the bidder has specialization and interest?:
12. Any other information considered necessary but not included above.:

Signature of Bidder(s)

FORM “H”

**DETAILS OF TECHNICAL & ADMINISTRATIVE PERSONNEL TO BE
EMPLOYED FOR THE WORK**

S.No.	Designation	Total Number	Number available for this work	Name	Qualifications	Professional experience and details of work carried out	How these would be involved in this work	Remarks

Signature of Bidder(s)

FORM – “I”

**DETAILS OF CONSTRUCTION PLANT AND EQUIPMENT LIKELY TO BE USED
IN CARRYING OUT THE WORK**

Sl. No.	Name of equipment	No.	Capacity or Type	Age	Condition				Current location	Remarks
						Presently owned	Leased	To be Purchased		

Signature of Bidder(s)

FORM 'J'

AFFIDAVIT

I/we undertake and confirm that our firm/partnership firm has not been blacklisted by any state/Central Departments/PSUs/Autonomous bodies during the last 7 years of its operations. Further that, if such information comes to the notice of the department then I/we shall be debarred for bidding in IIT Hyderabad in future forever. Also, if such information comes to the notice of IIT Hyderabad on any day before date of start of work, the Engineer-in-charge shall be free to cancel the agreement and to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee (Scanned copy of this notarized affidavit to be uploaded at the time of submission of bid)

NOTE: Affidavit to be furnished on a 'Non-Judicial' stamp paper worth Rs.100/-

Signature of Bidder(s) or an authorized Officer of the firm with stamp

Signature of Notary with seal

1.18 RESPONSE REQUIREMENTS:

Potential bidders may furnish their Expression of Interest (EOI) by submitting the following documents in English language as per the indicated formats.

- a) Covering Letter as per the format provided in **Appendix I**.
- b) Supporting documents as per formats provided in **Appendix II** against each of the above-mentioned qualifying criteria as proof of having the capabilities to support the requirements of IIT Hyderabad.
- c) Litigation Impact Statement as per format in **Appendix III**.

1.19 Appendixes

Appendix I

Cover Letter from the Bidder (On Company letter head)

Date :

**To
The Executive Engineer-Electrical,
Construction and Maintenance Division,
IIT Hyderabad, Kandi, Sangareddy,
Telangana-502284.**

Reference: Notice on Expression of Interest (EOI) for Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497 TR (Phase-I) & 7555 TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad Campus, Kandi, Sangareddy.

Dear Sir,

This is to notify you that our company intends to submit a response to the EOI for **Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497 TR (Phase-I) & 7555 TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad Campus, Kandi, Sangareddy.**

Primary and Secondary contacts for our company are:

Primary Contact Secondary Contact

Name:

Designation:

Address:

Mobile No.

e-mail ID

We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to IITH is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the IITH in its short listing process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short listing process or offering or accepting unduly favors from our company in the short listing process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so, for undertaking the installation of said Project at IITH.

It is hereby confirmed that I/We are entitled to act on behalf of our corporation/company/firm/organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this Day of 2026
(Signature) (In the capacity of)
Duly authorized to sign the EoI Response for and on behalf of:

Sincerely,
[SYSTEM INTEGRATOR'S NAME]

Name

Title

Signature

Date

(Name and Address of Company) Seal/Stamp of System Integrator

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I, certify that I am of the, and
that..... who signed the above response is
authorized
to bind the corporation by authority of its governing body.

Date:

(Seal Here)

Appendix – II

RESPONSE FORMATS & SUPPORTING DOCUMENTS

The respondent must use the following formats to provide the information against each of the qualifying criteria specified in Section 5.

Form 1

Criterion I: Details of the Organization	
Name	
Nature of the legal status in India	
Nature of business in India	
Date of Incorporation	
Date of Commencement of Business	
Address of the Headquarters	
Address of the Registered Office in India	
Supporting Documents Certificate of Incorporation from Registrar of Companies (ROC), PAN, Service Tax Certificate.	

Form 2

Criterion II: Financial Information			
	FY 2025-26	FY 2024-25	FY 2024-23
Revenue (in INR Crores)			
Profit Before Tax (in INR Crores)			
Revenue from IT Services (in INR Crores)			

Form 3

Criterion III: Similar Project Information (one form for each project reference duly certified by authorized signatory)
Client Information
Name of client
Name of the person who can be referred to from Clients' side, with name, designation, postal address, contact phone, fax number, e-mail id,
Nature of business / operations of client
Revenue/Budget (in case of Government dept.) of the client
Size of operations of customer impacted by the solution in terms of turnover, number of locations, number of employees etc.
Project Details
Brief description of the Project
Functional areas of business covered in the project
Implementation Geographical Location/Number of Locations/business units at which the project is implemented
Duration of engagement (with Start date and end-date/expected end-date)
Scope of the Project (Operation and Maintenance of HVAC systems)
Supporting Documents - Relevant documents indicating the successful completion of the project

Form 4

Criterion IV: Mechanical Engineers and Electrical Engineers & Information	
Number of Mechanical Engineers in the Company	
Number of Electrical Engineers in the Company	
Supporting Documents Certification by the company auditors supporting the number of Mechanical Engineers and Electrical Engineers in the organization	

Form 5

Criterion V: Service Support office in Telangana Information

Date of Commencement of Business:

Address of the Headquarters:

Address of the Registered Office in Telangana

Supporting Documents

Rent Agreement / Labours License / Bank Statements / Undertaking by the competent authority of the company to open the office within 1 month of Work commencement

Appendix- III
LITIGATION IMPACT STATEMENT

On Company letterhead

[Date]

To
The Executive Engineer-Electrical,
Construction and Maintenance Division,
IIT Hyderabad, Kandi, Sangareddy,
Telangana-502284.

Reference: Notice on Expression of Interest(EoI) for Comprehensive Annual Maintenance Contract (CAMC) with Day-to-Day Operations and Maintenance (O&M) of HVAC systems including 4497 TR (Phase-I) & 7555 TR (Phase-II) installed capacity including associated (High Side & Low Side) HVAC Equipment's installed in Phase-I and Phase-II constructed buildings, IIT Hyderabad Campus, Kandi, Sangareddy.

Dear Sir,

We have read and understood the contents of the Notice on Expression of Interest and pursuant to this hereby confirm that we satisfy the eligibility criteria laid out therein. We hereby confirm that save as may be set out in the schedule attached to this statement, there is no litigation (including court, arbitration and other proceedings), inquiry or order from any regulatory authority, current or pending against us, which if adversely determined might have material adverse impact on our ability to carry on our business or pay our debts as they fall due or on our ability to enter into any of the transactions contained in or contemplated in respect of the

(Signature) (In the capacity of)

Duly authorized to sign the EoI Response for and on behalf of:

Sincerely,
[BIDDER NAME]

Name

Title

Signature

Date

(Name and Address of Company) Seal/Stamp of System Integrator

SV4
CWS-01 / AC PLANT 01

SV24
(CWS-05 / AC PLANT 05)

SV23
(CWS-04 / AC PLANT 04)

SV18
CWS-02 / AC PLANT 02

