

INDIAN INSTITUTE OF MANAGEMENT UDAIPUR  
(An Autonomous Institute under the Ministry of Education, Govt. of India)

**TENDER DOCUMENT ( 2<sup>nd</sup> Call)  
FOR  
Consultancy services for the work of augmentation of the existing Water-cooled  
Chiller Plant at the Indian Institute of Management, Udaipur**



Tender No. : IIMU/Tender/chiller plant/03    Dated 26 Jun 2024

---

Indian Institute of Management Udaipur  
Balicha, Udaipur-313001,  
Rajasthan Website:  
[www.iimu.ac.in](http://www.iimu.ac.in)

## **CONTENT OF TENDER DOCUMENT**

<b>S. No.</b>	<b>Topic</b>	<b>Page no.</b>
1	Cover Page	1
2	Content of Tender Document	2
3	Notice Inviting Tender	3
4	Tender Information Summary (TIS)	4
5	Table of Contents	5
6	Section-1 Technical Bid Submission Forms	06 to 14
(a)	Form-1 Company/Agency Details	6
(b)	Form-2 Tender Acceptance Letter	7
(c)	Form-3 Declaration Certificate	8
(d)	Form-4 Eligibility Criteria	09 & 11
(e)	Form-5 Declaration regarding Blacklisting/Non-Blacklisting	12
(f)	Form-6- Declaration Form	13
(e)	Form-7- Certificate of Site Inspection	14
7	Section-2 Instruction to the Bidders	15 to 23
8	Section-3 General Condition of Contract	24 to 30
9	Section-4 Scope of Work with Technical Requirement	31 to 32
10	Section-5:- Checklist for Submission of Bids	33
11	Annexure-01: Chiller Plant Room Drawing	34
12	Annexure-02: Heat Load Calculations	35 to 60
13	Annexure-03: Details of installed HVAC units at IIM Udaipur	61 to 64

## **Notice Inviting Tender (NIT)**

### **Consultancy services for the work of augmentation of the existing Water-cooled Chiller Plant at the Indian Institute of Management, Udaipur**

Indian Institute of Management Udaipur (hereinafter referred to as “Institute” or “IIMU”) is an Autonomous Institute under the Ministry of Education (MoE), Government of India. IIM Udaipur is recognized as a premier management institution in the country. IIM Udaipur has started its operations in the year 2011 and operating from its permanent campus located at Balicha, Udaipur, Rajasthan.

**IIM Udaipur invites Open Tender enquiry through E-tender (online tender) from leading agencies having experience in planning, designing of water cooled chiller plant having relevant experience & requisite infrastructure to undertake such works (hereinafter referred to as "Agency" or “Bidder” or “Consultants”)**

Bidders must read the complete “Tender Documents: This NIT is an integral part of the Tender Document and serves a purpose of invitation and does not purport to contain all relevant details for submission of bids. The Bidders must go through the complete Tender Document for details before submission of their Bids.

**‘The Bidders shall sign and stamp each page of this tender document as a token of having read, understood, and comply with tender, the terms, and conditions contained herein. Manual bid/tender will not be accepted under any circumstances. Incomplete bids/ documents shall be rejected without giving any reason.**

Availability of the Tender Document -This tender document containing eligibility criteria, the scope of work, terms and conditions, specifications, and other documents, can be downloaded at/from the Central Public Procurement (CPP) Portal <https://eprocure.gov.in/cppp/> or Indian Institute of Management Udaipur website: [www.iimu.ac.in](http://www.iimu.ac.in) .

Clarifications – A Bidder requiring any clarification regarding the Tender Document may ask questions in electronically from the Office/ Contact Person as mentioned in Tender Information Summary on page no.-4, provided the questions are raised before the clarification end date mentioned in TIS. This deadline shall not be extended.

Submission of Bids- Bids shall be submitted through online mode under the e-procurement system of CPPP. No manual Bids shall be made available or accepted for submission. The bidders have to apply online through E-Procurement portal <https://eprocure.gov.in/cppp/> only.

### **TENDER INFORMATION SUMMARY (TIS)**

<b>S.No</b>	<b>Description of the items</b>	
1	Name of Work	Consultancy services for the work of Augmentation of existing Water-cooled Chiller Plant at Indian Institute of Management, Udaipur
2	Estimated Cost of tender	Rs. 3,46,640.00/-
3	Period for Completion of work	30 Days
4	Validity of Bid	90 Days from the date of submission of bid
5	Date of Publishing	26.06.2024
6	Tender Downloading Start Date	26.06.2024
7	Prebid meeting	01.07.2024
8	Tender Submission Last Date	08.07.2024 by 1000 hrs
9	Date and Time of Technical Bid Opening	08.07.2024 at 1100 hrs
10	Date and time of Financial Bid Opening	To be notified later
11	Submission of Bids	The bid shall be submitted online on CPP Portal
12	Tender Opening Place	<b>On CPP portal</b>
13	Office/ Contact Person/ email for clarifications	<b>Phone - 02942477254</b> <a href="mailto:procurement@iimu.ac.in">Email - procurement@iimu.ac.in</a>

## **TABLE OF CONTENTS**

**Section 1:- Technical Bid Submission Forms (page no.-6 to 13)**

**Section 2:- Instructions to the Bidders (page no.-14 to 21)**

**Section 3:- General Conditions of the Contract (GCC)  
(page no.-22 to 28)**

**Section 4:- Scope of the Work with Technical Requirement  
(page no.-29 &30)**

**Section 5:- Checklist for preparation of Bids (page no.-31)**

**Section 6:- Annexures (page no.- 32 to 63)**

## Section 1

### TECHNICAL BID SUBMISSION FORM

#### **FORM- 1** **Bidder's Details**

[On the letterhead of the Bidder]

<b>1</b>	<b>Name of the Firm/ Company</b>		
<b>2</b>	<b>Name and Designation of Authorized Signatory</b>		
<b>3</b>	<b>Office Address of the Firm/ Communication Address:</b>		
<b>4</b>	<b>Phone No. / Mobile No:</b>		
<b>5</b>	<b>E-Mail ID:</b>		
<b>6</b>	<b>GST registration Number:</b>		
<b>7</b>	<b>PAN Number:</b>		
<b>8</b>	<b>Firm's Bank Account details</b>	<b>Bank Account No.:</b>	
		<b>Name of the Bank:</b>	
		<b>IFSC Code No:</b>	
		<b>Name of Branch:</b>	
<b>Particular Details of the Bidders Representative</b>			
<b>9</b>	<b>Contact Person:</b>	<b>Name of Person:</b>	
	<b>/ Mobile No.:</b>	<b>Designation:</b>	
		<b>Tele / Mobile No:</b>	
		<b>E-Mail ID:</b>	

#### **UNDERTAKING**

**I, the undersigned, certify that I have gone through the terms and conditions mentioned in the bidding document and undertake to comply with them.**

Date:

Authorized Signatory (signature in full):

**FORM- 2**  
**TENDER ACCEPTANCE LETTER**  
(To be given on Agency Letter Head)

Date :

To,

The Director,  
IIM Udaipur Balicha,  
Udaipur, Rajasthan-  
313001.

Sub. : Acceptance of Terms & Conditions of Tender.

Tender Reference No.: IIMU/Tender/chiller plant/03

Name of Tender/Work: Consultancy services for the work of augmentation of existing Water-cooled Chiller Plant at Indian Institute of Management, Udaipur

Dear Sir,

1. I/We have downloaded/obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely: CPPP Portal 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 from Page No. 01 to 64 (including all documents like annexure(s), schedule(s), etc.) which form part of the contract agreement and I/we shall abide by with the terms/conditions/clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/organization too have all 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. In case any provisions of this tender are found to be violated, then your department/organization shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full earnest money deposit absolutely.

Yours faithfully,

(Signature of the Bidder, with  
Official Seal)

### FORM - 3

#### DECLARATION ON THE LETTER HEAD OF THE BIDDER

1. I/we, the undersigned certify that I/we have gone through the terms and conditions mentioned in the tender documents and undertake to comply with them.
2. The rates quoted by me/us are valid and binding on me/us during the period of validity of the tender.
3. I/we, the undersigned hereby bind myself/ ourselves to the Indian Institute of Management Udaipur, Balicha Udaipur, Rajasthan-313001 during the period of contract.
4. The Performance Security deposited by me/us shall remain in the custody of the Indian Institute of Management Udaipur, Balicha Udaipur, Rajasthan-313001 subject to settlement of all dues on either side. The performance Security Deposit will not carry any interest.
5. The conditions herein contained shall form part of and shall be taken as included in the agreement itself.
- 6. I/we will be wholly responsible for undertaking "Consultancy services for the work of Augmentation of existing Water-cooled Chiller Plant at Indian Institute of Management, Udaipur.)".**
7. An affidavit to the effect that there is no vigilance/CBI or court case pending/contemplated against the firm as on the date of submission of bid.
8. The decision of the IIM Udaipur regarding acceptance/rejection of Tender shall be final & binding on me/us.

#### ***Affirmation***

1. I, Son / Daughter of Shri Partner / Director Authorized Signatory of affirm that I am competent to sign this declaration and execute this tender document.
2. I have carefully read and understood all the terms and conditions of the tender and hereby convey my acceptance of the same.
3. The information / documents furnished along with the above application are true and authentic to the best of my knowledge and belief. I am aware of the fact that furnishing any false information / fabricated document would lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate law.

Date: \_\_\_\_\_ Signature of Bidders / Managing  
Partner / Director

Place: \_\_\_\_\_ Name:  
Seal: \_\_\_\_\_

**N.B. The above declaration, duly signed and sealed by the authorized signatory of the Company, should be enclosed with Technical Bid.**



## FORM 4

### ELIGIBILITY CRITERIA

**Only those Bidders who meet the following minimum criteria will be considered for opening of financial bid. Supporting documents/annexures should be attached with this and must be serially numbered. A checklist given on “Section -5 on page no. 31” must be filled in to facilitate quick reference to the relevant page number.**

- i. Legally valid entity:** The Tenderer shall necessary be a legally valid entity either in the form of a Limited Company or a Private Limited Company registered under the Companies Act, 1956/ Partnership or Proprietary concern/ registered with appropriate govt. authorities. Proof in support of the legal validity of the Tenderer shall be submitted.

S No.	Certificate/ License No.	Validity	Page number of the attached copy

- ii.** The Bidder should have valid Indian Permanent Account (PAN) and GST number as per the detail given below: -

S No	Type	Number	Page number of the attached self-attested Copy
1	PAN		
2	GST		

- iii.** The Bidder should have experience of executing successfully (completed similar works) during the last seven years ending on the last day of the month previous to the one in which tenders are invited in reputed Organizations (Central/State govt. Dept./PSUS of Central or State Govt./Railways/Similar Govt. Organizations/ Private Corporate Bodies).

The consultant/ applicant needs to fulfill the prequalification criteria to become eligible for the subject work. The consultant needs to have adequately qualified and experienced staff and should have successfully completed Providing consultancy service of :- (1) Central Air-conditioning plant in new building or (2) Retrofitting/repairs of AC plants in existing building or (3) full replacement of old AC plant in existing building of the work valued as follows:-

- i. Three similar works of value not less than Rs. **69.32 lacs**

**or**

- ii. Two similar works value not less than **Rs. 103.99 Lacs.**

Or

- iii. One similar work of the value of not less than **Rs. 138.65 Lacs.**

**( Note: The amount mentioned above is cost of the project executed not the consultancy charges)**

Years	Name of Organization	Description/ nature of multi-specialty work	Amount of work executed	Page no of the attached copy	Date of Completion
FY 2017-18					
FY 2018-19					
FY 2019-20					
FY 2020-21					
FY 2021-22					
FY 2022-23					
FY 2023-24					

Note:- The no. of rows in this table can be extended as per the requirement and the amount mentioned above is cost of the project executed not the consultancy charges

**iv. Turnover (Rs. 3.50 Lacs (Rupees Three Lacs Fifty Thousand only) per annum)** during the last Three (3) financial years ended on 31 Mar 2024. The documentary evidence duly certified by CA, indicating yearly total turnover and turnover from similar services related work, should be attached in the following format.

**v.**

Financial Year	Total Turnover in Rupees (in words and figures)	Turnover from similar services in Rupees (in words and figures)
FY 2021-22		
FY 2022-23		
FY 2023-24		

**vi.** The consultant should have a separate in-house team of professionals consisting of at least an experienced/qualified Consultant and a Quantity Surveyor for designing, preparation of drawings, preparation of BoQ and tender documents.

S.No.	Details of Qualified consultant and support staff	Qualification	Page no. of attached Copy of relevant certificate

**vi.** There should be no case pending with the police against the Bidder/ Proprietor/ Firm /Partner/Director or the Company (agency) and should not be blacklisted by any Govt agency. A self-undertaking to this effect on the agency's letterhead should be attached.

S.No.	Agency/ Bidder is blacklisted. (Yes/No.)	Site on which it is Blacklisted	Page number of the Undertaking on agency letterhead (If not blacklisted)

--	--	--	--

Note: - All third-party certificates along with all the Tender document should be duly signed and stamped by the bidding organization.

Certified that all above information is correct to the best of my/our information, knowledge, and belief. All the attached relevant documents are duly signed, sealed, and serially numbered.

Place:

Date:

(Signature of the bidder with seal)

**Form 5**

**DECLARATION REGARDING BLACKLISTING/NON BLACKLISTING**

[On the letterhead of the Bidder]

I /We Proprietor / Partner (s) / Director (s) of M/s  
 .....hereby declare that the firm/ company namely M/S  
 .....has not been  
 blacklisted  
 or debarred in the past by any organization from taking part in Government tenders.

Or

I / We proprietor / partner (s) / Director (s) of M/S.....  
 hereby declare that the firm/ company namely  
 M/S..... Was blacklisted or  
 debarred by any Government Department from taking part in Government tenders  
 for a period of..... years  
 w.e.f..... The period over on ..... And now the firm/ company is entitled  
 to take part in Government tender. In case the above information found false I /  
 we are fully aware that the tender/ contract will be rejected / cancelled by IIMU shall  
 be forfeited. In addition to the above IIMU. Will not be responsible to pay the bills for  
 any completed/ partially completed work.

Date:

Authorized Signatory (Signature In full):

Name and title of Signatory:

Stamp of the Company:

**In case of proprietorship firm, certificate will be given by the proprietor, and in case of partnership firm, certificate will be given by all the partners and in case of limited company by all the Directors of the company or company secretary on behalf of all directors.**

**Form 6- DECLARATION**

[On the letterhead of the Bidder]

I, \_\_\_\_\_ Son/Daughter/Wife of \_\_\_\_\_ Resident  
of \_\_\_\_\_

Proprietor / Director / Authorized Signatory of the Company / Firm, mentioned above, is competent to sign this declaration and execute this tender document.

I/We hereby certify that I/We have read the entire terms and conditions of the tender documents from Page No. \_\_\_\_ to (including all documents like annexure(s), schedules(s), etc.,) which form part of the contract agreement and I/We shall abide hereby by the terms / conditions / clauses contained therein.

The information / documents furnished along with the above application are true and authentic to the best of my knowledge and belief. I / we are well aware of the fact that furnishing of any false information / fabricated document would lead to rejection of my tender at any stage besides liabilities towards prosecution under appropriate law.

The corrigendum(s) issued from time to time by your department/organization too have all been taken into consideration, while submitting this declaration letter.

I/We hereby unconditionally accept the tender conditions of above mentioned tender document(s) in it's totally / entirely.

**In case any provision of this tender are found violated, then your department/organization shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.**

Date:

Authorized Signatory (Signature In full):

Name and title of Signatory:

Stamp of the Company:

**Form 7**

**CERTIFICATE OF SITE INSPECTION**

[On the letterhead of the Bidder]

THIS IS TO CERTIFY that:

I, \_\_\_\_\_ (name of bidder or his representative) of the (name of the firm) visited the site in connection with the Bid No. \_\_\_\_\_ for the Consultancy services for the work of augmentation of the existing Water-cooled Chiller Plant at the Indian Institute of Management, Udaipur.

Having examined the bid documents, I certify that I have acquainted with the nature, geographical and exact location of the works; the general conditions of execution; the neighboring area and other work that might affect the construction methods; the physical conditions specific to the sites; the climatic conditions; local conditions; means of communication and transport; the possibility of supplying electricity; the availability of labor sufficient in number and quantity; all constraints and obligations resulting from social, tax; and all conditions and circumstances which might influence the execution or price of the works.

I further certify that I am satisfied with the description of the works and that I understand perfectly the works to be undertaken as specified and implied in the execution of the Contract.

**\*Note: All the bidders are advised to visit the site before bidding. In case the bidder is not making site visit he will be solely responsible for all or any discrepancy.**

Signature of Bidder with seal:

Name and title of Signatory:

Stamp of Address of Company:

## **Section 2**

### **INSTRUCTIONS TO THE BIDDERS**

#### **1. GENERAL INSTRUCTIONS:**

- a) For Bidding / Tender Document Purposes, 'Office of the Director, Indian Institute of Management, Udaipur, Rajasthan referred to as 'Client' and the Bidde Successful Bidder shall be referred to as 'Agency/ Contractor' and / or Bidder interchangeably.
- b) The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates.
- c) While all efforts have been made to avoid errors in the drafting of the tender documents, the Bidder is advised to check the same carefully. No claim on account of any errors detected in the tender documents shall be entertained.
- d) Each page of the Tender documents must be stamped and signed by the person or persons authorized to submit the Tender in token of his/their having acquainted himself/themselves and accepted the entire tender documents including various conditions of contract. Any bid with any of the Documents not so signed is liable to be rejected at the discretion of the client.**
- e) The Bidder shall attach the copy of the authorization letter / Power of Attorney as the proof of authorization for signing on behalf of the tendering company/ firm/ tenderer.
- f) All Bidders are hereby explicitly informed that conditional offers or offers with deviations from the conditions of Contract, the bids not meeting the minimum eligibility criteria, technical bids not accompanied with EMD of requisite amount/format, or any other requirements, stipulated in the tender documents, are liable to be rejected.
- g) The parties to the Bid shall be referred to as the 'Bidders' /Agency (to whom the work has been awarded) and 'Office of the Director, Indian Institute of Management, Udaipur, Rajasthan' shall be referred to as 'Client'.
- h) For all purposes of the contract including arbitration there under, the address of the Bidder mentioned in the bid shall be final unless the Bidder notifies a change of address by a separate letter sent by registered post with acknowledgement to the 'Office of the Director, Indian Institute of Management, Udaipur, Rajasthan. The Bidder shall be solely responsible for the consequences of any

omission or error to notify change of address in the aforesaid manner.

- i) **Bidders are advised to visit personally the worksite/place i.e. Indian Institute of Management Udaipur, village Balicha, Udaipur, Rajasthan 313001 to acquaint themselves with site conditions.**

## **2. VALIDITY OF TENDERS AND RATES**

2.1 Bid shall remain valid and open for acceptance for a period of 90 days from the last date of submission of Tenders.

**2.2 Rates must be inclusive of GST and taxes.**

## **3. PREPARATION/SUBMISSION OF BIDS**

- i. Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- ii. 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 documents that need to be submitted. Any deviations from these may lead to the rejection of the bid.
- iii. 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 the black and white option which helps in reducing the size of the scanned document.
- iv. To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

**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.

## **4. SUBMISSION OF TENDER**

- 1) Bidder should log into the site well in advance for bid submission so 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.

- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) **Bidders are requested to note that they should necessarily submit their financial bids 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 in by all the bidders. Bidders are required to download the BoQ file, open it and complete the white-colored (unprotected) cells with their respective financial quotes and other details (such as the 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.**
- 4) 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.
- 5) 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.
- 6) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 7) 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.
- 8) 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.
- 9) 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.
- 10) 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.
- 11) The Agencies are requested to submit the bids through online e-

tendering system to the Tender Inviting Authority (TIA) well before the bid submission end date & time (as per Server System Clock). The **TIA will** not be held responsible for any sort of delay or the difficulties faced during the submission of bid online by the Agencies at the eleventh hour.

- 12) Not more than one tender shall be submitted by one Agency or Agencies having a business relationship. Under no circumstance will the father and his son(s) or other close relations who have a business relationship with one another (i.e. when one or more partner(s)/director(s) are common) be allowed to tender for the same contract as separate competitors. A breach of this condition will render the tenders of both parties liable to rejection.
- 13) Bidder who has downloaded the tender from the IIMU website [www.iimu.ac.in](http://www.iimu.ac.in) and Central Public Procurement Portal (CPPP) website <https://eprocure.gov.in/eprocure/app> **shall not alter/modify the tender form including downloaded price bid template in any manner.** In case if the same is found to be altered/ modified in any manner, tender will be completely rejected and EMD would be forfeited, and Bidder is liable to be banned from doing business with IIMU.

## 5. TENDER OPENING PROCEDURE

- 5.1 The tender will be opened online on the Central Public Procurement Portal (CPP Portal).

## 6. CLARIFICATION ON TENDER EVALUATION

- 6.1 The Tender shall be evaluated based on the available documents submitted by the tenderer.
- 6.2 IIMU, also reserves right to seek confirmation/ clarification on the supporting documents submitted by the tenderer.

## 7. RIGHT OF ACCEPTANCE

- 7.1 Director, IIM Udaipur, Rajasthan reserves all rights to reject any tender including of those tenderer's who fail to comply with the instructions without assigning any reason whatsoever and does not bind itself to accept the lowest or any specific tender. The decision of the Competent Authority in this regard shall be final and binding.
- 7.2 Any failure on the part of the Tenderer to observe the prescribed procedure and any attempt to canvass shall render the Tenderer liable for rejection.
- 7.3 The Competent Authority reserves the right to award any or part of full contract to any successful tenderer's at its discretion and this will be binding on the Tenderer's.
- 7.4 Director, IIM Udaipur, may terminate the contract if it is found at any stage that Contractor is blacklisted on previous occasion by

any institution.

## 8. LETTER OF ACCEPTANCE

- 8.1 After determining the successful evaluated Tenderer, Client shall issue a Letter of Acceptance (LoA) in duplicate, who will return one copy to client duly acknowledged, accepted and signed by the authorized signatory, within 3 days of receipt of the same by him.
- 8.2 The issuance of the Letter of Acceptance to the Tenderer shall constitute an integral part of the contract and it will be binding on the contractor.

## 9. Contract Agreement:

The successful Bidder shall be bound to execute an agreement on on-judicial stamp paper of ₹ 500/- (Rupees Five Hundred only). IIMU reserves the right to amend the terms & conditions of the contract by mutual discussion and such amendments shall be in writing. The amended terms and conditions will form part of the agreement. The Bidder shall bear the entire cost of the stamp paper and agreement.

- 10. Eligibility (Pre-qualification) Criteria:** IIMU has set up minimum eligibility criteria for the Bidding purpose. All Bidding parties must meet criteria mentioned at annexure-I before they apply for the TENDER. The Bidding parties meeting the criteria must enclose their supporting document photocopies along with the proposal, failing which their TENDERS will be summarily rejected and will not be considered any further.

## 11. Period of Validity of Offer:

- a) The TENDER shall be valid for a period of 90 days from the date of opening of TENDER.
- b) Extension of TENDER Validity, if any shall be decided by IIMU.
- c) Prior to the expiry of the original TENDER, IIMU may request Bidders to extend the Bid Validity Period for a specified additional period.

- 12. Performance Guarantee-Security Deposit:** The successful firms shall have to deposit a Performance Security Deposit of the 3% of the total amount of work order immediately on receipt of the LOA. The performance security deposit will be furnished in the form of a Demand draft/ Bank Guarantee/Banker's Cheque/Fixed Deposit of any scheduled bank drawn in favor of "Director, IIM Udaipur" Payable at Udaipur. The performance security deposit should be valid for sixty days beyond the date of completion of all contractual obligations.

- 13. Technical Bid Opening:** The Technical bids will be opened as per the schedule indicated in the TENDER. The Firms can view the TENDER opening event online at their remote end.

## 14. Price Bid:

- 16.1 The price/financial bids (BOQ) of technically qualified Firms shall be opened online as per schedule. The Firms can view the bid opening event online at their remote end or may be present at IIMU. The Price/Financial

bid format (BOQ) is provided in a spreadsheet file, which is to be downloaded from <https://eprocure.gov.in/eprocure/app> and the rates offered should be entered in the allotted space and uploaded after filling the relevant columns (such as rates & particulars of the Firms).

- 16.2 The financial bids shall be opened online of only technically qualified Firms whose bids have been found eligible as per the criteria mentioned in the technical bid. All eligibility conditions have to be satisfied on the respective dates in such condition and not on a later date.
- 16.3 The Price bid/BOQ template shall not be modified/replaced by the Firms; else the Bid submitted is liable to be rejected.

### **17 TENDER Evaluation Criteria & Award Criteria:**

- 17.1.1 After the opening of the technical bid, the same will be evaluated by the institute. In case, IIMU decides for seeking further information/clarification, the same shall be provided by the Firms. Those bids which are technically qualified as per the pre-qualification criteria and completed in all aspects with all annexures and meeting the requirements, the financial bid of such qualified Firms will be opened on a specified date and time by the institute.
- 17.1.2 The contract will be awarded to technically suitable and overall lowest quoted Firms whose TENDER has been found to be responsive and who is found eligible and qualified as per the TENDER document. In case two or more agencies are found to have quoted the same rates, the Competent Authority of IIMU shall decide about the Firms to which the offer shall be granted based on the report of length of experience based on submitted documents etc. The decision of the Competent Authority of IIMU shall be final.-
- 17.1.3 Any conditional bids received shall not be considered and will be summarily rejected in very first instance without any recourse to the Firms and shall not be evaluated.
- 17.1.4 Report which will be held with the institute due to dispute between the institute & Contractor or due to administrative delay for the reasons beyond the control of the institute.
- 17.1.5 Institute reserves the right to recover amount paid in excess during the contract from any other work or source after the contract if any found paid excess.
- 17.1.6 All taxes will be amended as per the Government rules and norms from time to time and payment will be made accordingly.

**18. Liquidated Damage:** In the event of failure to meet the job completion in stipulated date/ time, liquidated damage may be imposed on the consultancy firm for sum not less than 0.5% of the contract value for each week or part thereof, subject to a ceiling of 10 % of the total contract value (including all taxes & duties and other charges). In the event of LD exceeds 10 % of the order value, IIMU reserves the right to terminate the contract and IIMU will get the job completed by any other competent party/ agency at the cost, risk and responsibilities of contract and excess expenditure incurred on account of this will be recovered by IIMU from his Security deposit or pending bill or by raising a separate claim.

**19. IIMU Right to reject any of all TENDERS:** The Competent Authority of IIMU reserves the right to reject any TENDER and to annual the TENDER

process and reject all bids at any time prior to award of contract without thereby incurring any liability to the affected bidders or any obligation to inform the affected bidders (s) off the grounds for such decision. Any effort by a bidder or bidder's agent / consultant or representative, whosoever described to influence the IIMU/ in any way concerning scrutiny / consideration / evaluation / comparison of the TENDER or decision concerning award of contract shall entail rejection of the TENDER.

- 19.1 The Competent Authority of the IIMU reserves the right to annul TENDERS or discontinue this TENDER process, without assigning any reason at any time prior to signing of agreement with the successful Firms.
- 19.2 By acceptance of this document, the recipient agrees that any information herewith will be superseded by any subsequent written information on the same subject made available to the recipient with access to any additional information or to update this document or to correct any inaccuracies, therein, which may become apparent, and IIMU reserves the right at any frame of time and without advance notice, to change the procedure for the selection of Firm.

**20. Termination of the Contract:** The contract may be curtailed/terminated before the contract period, inter alia owing to deficiency in services or substandard quality of services by the empaneled agency etc. as may be specified in the contract to be signed between the parties. The IIMU, however, reserves the right to terminate this initial contract at any time after giving one month's notice to the selected Service Provider with or without assigning any reasons. Where a contract terminated by IIMU on account of the committed by the agency, it shall have the right to award the contract to any other agency at the cost, risk and responsibilities of contract and excess expenditure incurred on account of this will be recovered by IIMU from his Security deposit or pending bill or by raising a separate claim.

**21. Extension of time:** If the Firms desire any extension of time for completion of work on grounds of their having been unavoidable hindrances in execution or any other ground, they shall apply in writing immediately after the occurrence of the hindrances. Such application shall contain complete details of hindrances which hindered the Firms in the execution of the work. If in the opinion of IIMU's Engineer, works be delayed by force majeure such as (a) war / hostilities, (b) riots or civil commotion, (c) earthquakes, fire tempest, lightening or other natural / physical disasters, etc., (d) restrictions imposed by the Government which prevent or delay the execution of the order or by any other reasons. If any such extension of time is granted by the IIMU, the extension of time will be given without prejudice to IIMU's right to recover liquidated damages or compensation under the relevant contract clause and no extra claim will be paid by the IIMU whatsoever on account of delay.

**22. Indemnity:** The Firms shall indemnify the institute against all other damages/charges and expenses for which this institute may be held liable or pay on account of the negligence of the Firms or his staff or any person under his control whether in respect of accident, injury to the person or damage to the property of any member of the public or any person or in executing the

work or otherwise and against all claims and demand thereof. The institute shall not be responsible financially or otherwise for any injury to the worker or person deployed by the Firms during the course of performing duties. In case of death or mishap leading to any injury or disability whatsoever, occurred during discharging the duty, the compensation/legal or any other liability will solely rest with the contractor / firm.

- 23. Relaxation of Terms and Conditions:** The Director, IIMU is empowered to relax any term or condition mentioned herein.
- 24. Pre- Bid Meeting:** -The purpose of the pre-bid meeting will be to clarify issues and to answer questions on any matter concerning bids that may be raised at that stage or for any clarification in connection with this tender document. The bidder may submit any queries in writing or by e-mail before the pre-bid meeting. Proceedings of the pre-bid meeting, including copies of the queries raised and responses given, will be furnished expeditiously to all those attending the meeting either in person or online. Any modification of the bidding documents which may become necessary as a result of the pre-bid meeting or otherwise shall be made by the IIM Udaipur through the issuance of an Addendum (or Amendment) to this tender document and shall form part of the resultant contract. The pre-bid meeting will be conducted on the date and time mentioned in TIS via both online mode (link will be shared on the portal) and in person at IIM Udaipur.

## **Section 3**

### **GENERAL CONDITIONS OF CONTRACT (GCC)**

#### **1. DEFINITIONS**

Unless repugnant to the subject or context of usage, the following expressions used herein shall carry the meaning hereunder respectively assigned to them, namely:

1. "**Annexure**" referred to in the Tender document shall mean the relevant annexure appended to the Tender Document and the Contract.
2. "**Approved**" shall mean approved in writing including subsequent confirmation of previous verbal approval. "Approval" shall mean approval in writing including as aforesaid.
3. "**Agreement**" the word "Agreement" and "Contract" has been used interchangeably.
4. "**Bidder**" shall mean the Bidder who submits the tender for the work and shall include the successors and permitted assigns of the Bidder.
5. "**Organisation**" shall mean the Indian Institute of Management located at Udaipur, Rajasthan.
6. "**Engineer-in-charge**" shall mean an Officer appointed to work in the capacity of Competent Officer of the Indian Institute of Management, Udaipur (presently Estate Officer)
7. "**Commencement Date**" shall mean the date upon which the Contractor receives the notice to commence the supply of Services.
8. "**Competent Authority**" shall mean the Director, Indian Institute of Management, Udaipur, Rajasthan.
9. "**Competent Officer**" shall mean an officer authorized by the Director.
10. "**Contract**" shall mean the contract for the work and shall include the Tender Documents, the Special Conditions of Contract, the General Conditions of Contract, the Letter of acceptance and the accepted rates, the offer, the Agreement and mutually accepted conditions in the authorized correspondence exchanged between the Contractor and the Competent Officer and any other document forming part of the contract.

11. **“Contract Amount”** shall mean the sum quoted by the Contractor in his offer and accepted by Competent Authority.

12. **“Contractor”** shall mean the individuals or firm or company whether incorporated or not, undertaking the contract and shall include legal representatives of such individual or persons composing such firm or unincorporated company or successors of such firm or company as the case may be and permitted assigns of such individual or firm or company. This shall be synonymous with term “Bidder” used in the Detailed Tender Notice and shall mean the successful “Bidder”.

13. **“Letter of Acceptance”** means the formal acceptance of Bid issued by the Competent Officer.

14. **“Owner”** shall mean the Director, Indian Institute of Management, Udaipur, Rajasthan.

15. **“Prescribed”** shall mean as prescribed in the Tender Document.

16. **“Specifications”** means the specifications referred to in the Tender and any modification thereof or addition or deduction thereto as may from time to time be furnished or approved in writing by the Competent Authority. In case where no particular specification is given, the relevant specification, where one exists, of the Bureau of Indian Standards shall apply.

17. **“Tender”** means the Contractor’s bid offered to the Competent Authority for the supply of the Services and remedying of any defects therein in accordance with the provisions of the Contract, the installation and services as accepted by the Letter of Acceptance.

18. **“Time for completion”** means the time for completing the supply of services or any part thereof as stated in the Contract calculated from the Commencement Date.

19. **“Similar Work” and “Scope of work”** shall be as per eligibility criteria mentioned in form 4.

Any term that has not been defined hereinabove shall be governed by the meaning explained in Oxford Dictionary and/or should be determined by the General Clauses Act relevant to such contracts.

## **2. PERFORMANCE GUARANTEE (SECURITY DEPOSIT)**

2.1 The successful tenderer will have to deposit a Bank Guarantee/FDR of 3% of contract value in favour of “Indian Institute of Management Udaipur” payable at Udaipur drawn on any scheduled Bank before signing of the contract and valid for 60 days beyond the expiry period of contract.

## **3. CONTRACTOR'S OBLIGATIONS**

3.1 The Contractor shall provide services at Client's premises as per Scope of Work (Section 4) which may be amended from time to time by the



Client during the Contractual period and it shall always form part and parcel of the Contract. The Contractor shall abide by such assignments as provided by the Client from time to time.

- 3.2 Contractor shall not engage any sub-contractor for the work assigned to him.
- 3.3 In the event of substandard performance or non-performance during the contract period, the client shall have the right to foreclose the contract and forfeit the Performance Guarantee/ Security Deposit.
- 3.4 The Agency/contractor has to make their own arrangement of machinery and T&P to undertake the work in mechanised manner.

#### **4. VALIDITY OF CONTRACT**

**The contract, if awarded, shall be for 90 days from the date of award.** In case of breach of Contract or in the event of not fulfilling the minimum requirements / statutory requirements, the Client shall have the right to terminate the contract forthwith in addition to forfeiting the performance security amount deposited by the contractor and initiating administrative actions for black listing etc. solely at the discretion of the Competent Authority of the office of the Client.

#### **5. PAYMENTS**

- 5.1 40% of the total fees payable after submission and approval of the completion of all specifications, construction/execution drawings, estimates and tender documents.
- 5.2 30% of the total fees payable after finalization of agency and award of work.
- 5.3 30% of the total fees payable after certifying the completion certificate of the work provided by the executing agency.
- 5.4 Invoice (i.e. Tax invoice as per Service Tax rules should clearly indicate GST and Tax registration number, service classification, rate and amount of tax shown separately).
- 5.5 However, the final payment shall be made only after adjusting all the dues/claims of the institute.
- 5.6 No claim for interest will be entertained by the institute in respect of any payment which will be held with the institute due to a dispute between the institute & Contractor or due to administrative delay for reasons beyond the control of the institute.
- 5.7 The Institute reserves the right to recover the amount paid in excess during the contract from any other work or source after the contract if any is found paid in excess.
- 5.8 All taxes will be amended as per the Government rules and norms from time to time and payment will be made accordingly.

#### **6. FORECLOSURE OF CONTRACT DUE TO ABANDONMENT OR REDUCTION IN SCOPE OF WORK**

If at any time after acceptance of the tender, Competent Authority shall decide to abandon or reduce the scope of the works for any reasons

whatsoever and hence not require the whole or any part of the works to be carried out, the Engineer-in-charge shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

#### **7. DEVIATION CLAUSE**

The department reserves the right to short close the agreement any time without assigning any reasons by giving advance notice of one month to this effect. and if required 30% deviation may be done in the work on the same terms and conditions.

#### **8. PENALTY CLAUSE**

If the consultant fails to certify the completion certificate given by the executing agency within 07 (seven) days of intimation given, the institute will impose a penalty in the form of deducting twice the visiting charge being given to the consultant. The institute may relax the timeline for further 07 (seven) days considering the genuine reasons of the delay informed by the agency. However, no further relaxation will be granted. The agency may submit the reasons of the delay to the Engineering-In-Charge.

#### **9. PAYMENT TERMS**

The interim or running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format provided by the institute in triplicate. Engineer-in-Charge shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements of the work. In the event of the failure of the contractor to submit the bills, the Engineer-in-Charge shall prepare or cause to be prepared such bills in which event no claims whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer-in-Charge certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Engineer-in-Charge. The amount admissible shall be paid by 15th working day after the day of presentation of the bill complete in nature by the Contractor to the Engineer-in-Charge.

All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requirement of bad, unsound, and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in-Charge relating to the work done or materials delivered forming part of such payment, may be modified, or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/ are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine, or affect in any way powers of the Engineer-in-Charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

Pending consideration of the extension of the date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the IIMU to take action under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.

If the Engineer-In-Charge finds the bill complete, correct in nature and accepts the amount claimed by the agency, the same will be forwarded to the finance for making payment.

## **10. TAXES AND DUTIES**

The rates quoted by the tenderer, shall be firm and final and inclusive of all taxes i.e. GST, TDS, Cess etc.

## **11. RIGHT TO INSPECTION**

The Competent authority or his/ her subordinates shall have unabridged right to inspect and supervise the day-to-day activity of the contractor to ensure maintenance of high-quality standards conformity to the tender terms and conditions.

## **12. RISK & COST**

Non completion of work or willful abandoning the work or non-fulfillment of any condition of contract shall render the contract liable for termination of his contract. Upon such termination the work shall be taken out of his hand and will be executed at the risk and cost of the defaulting contractor. The extra cost incurred shall be recovered from the dues of the defaulting contractor or as per the legal course of action available with the department.

## **13. DISPUTES & ARBITRATIONS**

Any dispute, difference or question with regard to any matter in connection with this contract shall be referred to two arbitrators, one to be nominated by each party. In case of difference between the Arbitrators, the decision of the umpire appointed by the Arbitrators shall be final and binding on both the parties. The appointment of the arbitrators and the procedure to be followed shall be governed by Indian Arbitration and Conciliation Act, 1996 or any statutory modification thereof. The arbitrators or the Umpire may from time to time with the consent of the parties extend the time for making and publishing the Award. The arbitrators and Umpire shall be Engineers only. The Contractor shall continue to execute the work at site during the arbitration proceedings, and maintain the same pace of progress of work and required under the conditions of contract.

## **14. FORCE MAJEURE - OBLIGATIONS OF THE PARTIES**

"Force Majeure" shall mean any event beyond the control of Client or of the Contractor, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected, and which could not have been prevented by exercise of reasonable skill and care and good industry practices and shall include, without limitation, the

following:

14.1 War, hostilities, invasion, act of foreign enemy and civil war;

14.2 Rebellion, revolution, insurrection, mutiny, conspiracy, riot, civil commotion and terrorist acts;

14.3 Strike, sabotage, unlawful lockout, epidemics, quarantine, and plague. (iv) Earthquake, fire, flood or cyclone, or other natural disaster.

As soon as reasonably practicable but not more than 48 (forty-eight) hours following the date of commencement of any event of Force Majeure, an Affected Party shall notify the other Party of the event of Force Majeure setting out, inter alia, the following in reasonable detail:

(i) The date of commencement of the event of Force Majeure;

(ii) The nature and extent of the event of Force Majeure;

(iii) The estimated Force Majeure Period,

(iv) Reasonable proof of the nature of such delay or failure and its anticipated effect upon the time for performance and the nature of and the extent to which, performance of any of its obligations under the Contract is affected by the Force Majeure.

(v) The measures which the Affected Party has taken or proposes to take to alleviate/mitigate the impact of the Force Majeure and to resume performance of such of its obligations affected thereby.

(vi) Any other relevant information concerning the Force Majeure and / or the rights and obligations of the Parties under the Contract.

## 15. CORRUPT & FRAUDULENT PRACTICES

Director requires that bidders under the resultant contract observe the highest standard of ethics during the period of contract. In pursuance of this policy, the Director:

15.1 Defines, for the purpose of these provisions, the terms set forth below as follows:

(a) **“Corrupt practice”** means the offering, giving, receiving or soliciting of anything of value to influence the action of a public servant; and

(b) **“Fraudulent practice”** means a misrepresentation of facts in order to influence the execution of a contract to the detriment of the Employer and includes collusive practice among Applicants / Bidders (prior to or after bid submission) designed to establish bid prices as artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.

15.2 Will reject a proposal for award of contract, if it is determined that the Applicant recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question will declare an Applicant/ Bidder ineligible, either indefinitely or for a stated period of time, for award a contract/ contracts, if it at any time it is found that the Applicant/ Bidder has engaged in corrupt or fraudulent practices in competing for, or in executing the contract.

- (a) All pages of TENDER document including technical TENDER and financial TENDER should be serially numbered and stamped, signed by authorized person/persons to having a token of acceptance to all conditions of TENDER.
- (b) In case of breach of any terms and conditions attached to this contract. The Performance Security deposit of the agency will be liable to be forfeited by this office besides annulment of the contract.
- (c) The successful Firms shall not engage any sub-Contractor or transfer the contract to any other person/firm/agency in any manner. The Firms shall not be permitted to transfer their rights and obligations under the contract to any other person/organization or otherwise.
- (d) The Contracting Agency shall render the consultancy services as mentioned in the scope of work.
- (e) If any of the personnel of the contractor indulges in theft or any illegal/irregular activities, misconduct, the contractor will take appropriate action as per law and rules against its erring personnel in consultation with this office and intimate the action taken to this office. If need be, an FIR should be lodged against the erring personnel. Such personnel who indulge in such type of activities, should not be further employed in this office by the agency in any case.
- (f) In case the office is closed on TENDER opening date due to some reason, the last date and time will automatically shifted to the next working day.
- (g) Accordingly, interested recipients should carry out an independent assessment and analysis of the requirements and of the information, facts and observation contained herein.
- (h) This document has not been filed, registered, or approved in any jurisdiction. Recipients of this document should inform themselves of and observe any applicable legal requirement.
- (i) The proposal and all correspondence and documents shall be written in English. All proposals and accompanying document received within the stipulated times shall become the property of IIMU and will not be returned.
- (j) The Firms will be bound by the details furnished by him/ her to IIMU while submitting the TENDER or at subsequent stage. In case, any of such documents furnished if found to be false at any stage, it would be deemed to be a breach of terms of contract making him / her liable for legal action besides termination of contract.

## **Section-4**

### **SCOPE OF WORK WITH TECHNICAL REQUIREMENTS**

#### **4.1 STUDY THE EXISTING AIR-CONDITIONING SYSTEM**

- 4.1.1 The Consultant has to study the existing AC system in detail to acclimate with the proposed system.

#### **4.2 STUDY THE REQUIREMENTS OF AIR CONDITIONING FOR IIMU**

- 4.2.1 The consultant need to study in detail the requirement of additional air-conditioning for the IIM Udaipur vis-à-vis the existing 03 nos. (2W + 1S) installed chillers of capacity of 200 TR each-combined installed capacity of AHUs and FCUs as per the attached sheet subscribed as **“Annexure-3”**
- 4.2.2 Calculate TR capacity of proposed chiller plant on the basis of Heat load calculations provided by the Institute or by calculating the same during site visit, IIMU will provide the requisite information in this regard. These heat load calculations were received from the original design consultant of the Institute.
- 4.2.3 If required, Consultant may give suggestions to optimize the utilization of the existing AC system to its fullest in view of the energy savings.

#### **4.3 PROJECT PLANNING & DESIGN:**

- 4.3.1 Selection & suggestion for the most suitable HVAC system (Chiller Plant) for IIMU.
- 4.3.2 Planning for the provisions to be made with respect to civil structure to accommodate plants, piping & ducting.
- 4.3.3 The consultant can suggest modifications in the design in respect to Existing AHU/Existing ducts/ Existing pipelines to get the energy savings.
- 4.3.4 The Consultant may also propose unitary or ductable AC at a few locations where AC system may prove costlier.
- 4.3.5 To work out budgetary cost of the proposed HVAC scheme.

#### **4.4 DETAIL DESIGN:**

- 4.4.1 Detailed design of high side of the Air Conditioning System.
- 4.4.2 The Air-Conditioning plant proposed must be Energy Efficient, Economical, Durable and with minimum maintenance.

#### **4.5 EXECUTION:** Consultant to prepare tender document based on the approved Design.

- 4.5.1 Consultant to prepare Technical Bid, Price Bid, working drawings, Terms and conditions of the contract along with complete set of bid document, BOQ based on latest CPWD DSR. Consultant to prepare Analysis of Rates for non-DSR items supported by price list/quotations,

justification of the rates after getting price bid submitted by lowest tenderer to IIMU. The agency has to submit a hard copy along with soft copy of all the above documents.

- 4.5.2 The consultant with supporting staff (if required) is required to pay periodic site visits during the progress of work & for certification of completed work. The no. of visit will depend on the project requirement based upon mutual consent. In this regard the decision of the IIMU will be final and binding on the agency.
- 4.5.3 The consultant is also require to certify the completion to be declared by the executing agency.
- 4.5.4 The consultant will have to attend the technical bid meeting and should respond to all queries raised by the participants.
- 4.5.5 The quoted rates should include to-and-fro transportation. However, the Institute will provide accommodation & food, other than this nothing extra shall be paid for in this regard.

#### **4.6 The quantum of work to be discharged is as below:**

- 4.6.1 Prepare tender document for two bid systems with technical bid and Price bid.
- 4.6.2 Prepare the comparative statement of Technical and Price bids.
- 4.6.3 Set an online kick-off meeting with the contractor and explain to him the entire work.
- 4.6.4 Certify the completion of work.
- 4.6.5 Providing soft copy of the final drawing in the shape of dwg and pdf file and 03 nos. colored hard copy of all the final drawings and supporting document.

#### **4.7 Annexures for reference:-**

- (i) **Annexure-01:- Chiller Plant Room Drawing ( Page no. 34)**
- (ii) **Annexure-02:- Heat Load Calculations (Page no. 35 to 60)**
- (iii) **Annexure-03:- Details of installed HVAC units IIM Udaipur (Page no. 61 to 64)**

## **Section-5**

### **CHECKLIST FOR PREPARATION OF BIDS**

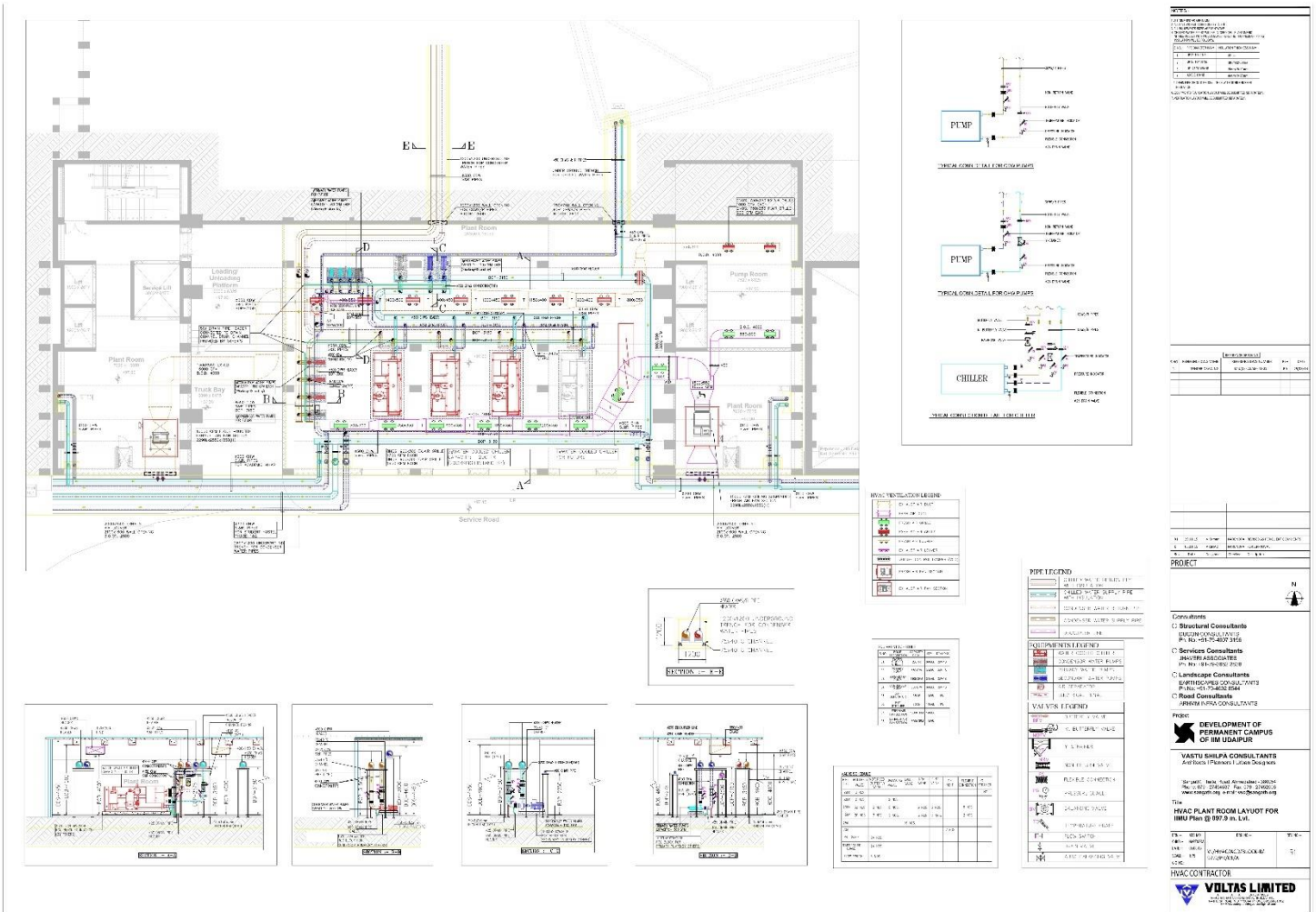
<b>S.No.</b>	<b>Particulars</b>	<b>Yes/ No</b>	<b>Page no</b>
1	Have you signed, stamped, and enclosed the following Forms/documents mentioned in the tender document? Please indicate the page no. of the enclosed document.		
1.1	Form-1 Company/Agency Details		
1.2	Form-2 Tender Acceptance Letter		
1.3	Form-3 Declaration Certificate		
1.4	Form-4 Eligibility Criteria		
(a)	Legally Valid Entity		
(b)	PAN/TAN and GST Registration		
(c)	Work Experience details in the format mentioned in the "Form-4 Eligibility Criteria"		
(d)	Turnover certificate as per Eligibility criteria. The documentary evidence duly certified by CA.		
(e)	Details of Qualified consultant and support staff		
1.5	Form-5 Declaration regarding Blacklisting/Non-Blacklisting		
1.6	Form-6- Declaration		
1.7	Form-7- Certificate of Site Inspection		
2	Have you read and understood various conditions of the Contract, and shall you abide by them?		
3	Have you taken prints of the Tender document, and signed on all the pages of the tender documents? (as per NIT page no.3)		



## Section - 6

# Annexures

## Annexure-01:- Chiller Plant Room Drawing





## **Annexure-02:- Heat Load Calculations**

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

### TECHNICAL SPECIFICATIONS

#### 1.0 BASIS OF DESIGN:

Geographical location

<b>Site location</b>	Indian Institute of Management at Udaipur.
<b>Latitude</b>	25°11' N
<b>Altitude</b>	257 Mtrs.

Outside Ambient Conditions considered for Design:

For Academic Block, Dining Block

**Summer: DB 113 °F, WB 75 °F, RH 17%**

**Monsoon: DB 99 °F, WB 80 °F, RH 43%**

**Winter: DB 45 °F, WB 41 °F, RH 70%**

For Student Hostel Block (Evening Condition Considered)

**Summer: DB 104 °F, WB 75 °F, RH 17%**

**Monsoon: DB 99 °F, WB 80 °F, RH 43%**

Desired Indoor Design Conditions:

DB : As mentioned in Heat Load Summary Sheet

RH : 50% ± 5%

#### 1.1 REFERENCE STANDARDS:

The entire System will be designed in accordance with following Standards

- National Building Code.
- ASHRAE Application 2007
- ASHRAE Fundamentals 2005
- Indoor Air Quality as per ASHRAE 62-1999.
- ISHRAE Codes.
- Duct construction standards as per relevant BIS Codes, IS 655:1963
- Motors, Cabling, wiring and accessories as per BIS code Cable Insulation - IS 8130, IS 5831.

#### 1.2 ASSUMPTIONS:

##### A Basis of Design –

- 1) Inside condition - As mentioned in Heat Load Summary Sheet.
- 2) Outside Condition (Ambient Condition) - 113 °F (45.0 °C) DBT / 75 °F (23.88 °C) WBT & 17 % RH.
- 3) Occupancy - As mentioned in Heat Load Summary Sheet.
- 4) Equipment Load - As mentioned in Heat Load Summary Sheet.
- 5) Lighting Load - 0.50 Watt per Sq. Ft for Class Room & 0.80 Watt per Sq. Ft. for all areas. This standard to be followed by lighting consultant.
- 6) Fresh Air CFM - As per ASHRAE Standard only.
- 7) Exposed Glass - For Library Area & non shaded Areas - Glass unit of Solar Heat Gain Co-

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

efficient ( SHGC ) - 0.2 & U Value - 1.6 W / Sq. Mt. °K ( 0.28 BTU / Hr. Sq. Ft. °F ). For Class Room & all other Areas with external shaded jaali - Glass unit of Solar Heat Gain Co-efficient ( SHGC ) - 0.116 ( 0.58 x 20 % factor for all externally shaded windows ) & U Value - 1.6 W / Sq. Mt. °K ( 0.281 BTU / Hr. Sq. Ft. °F ).

- 8) Exposed Walls - 20 mm Stone + 50 mm cavity + 150 mm RCC + 450 mm Cavity + 50 mm wood with 'U' value of 0.56 W / Sq. Mt. °K ( 0.0986 BTU / Hr. Sq. Ft. °F ) and with 20 mm Stone + 50 mm cavity acting is a external shading.
- 9) Roof - Insulated with 'U' Value of 0.4 W / Sq. Mt. °K ( 0.070 BTU / Hr. Sq. Ft. °F ).

### B Heat Load Summary Sheet – Enclosed as an Annexure.

#### HEAT LOAD SUMMARY SHEET – ACDEMIC BLOCK (PHASE I)

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 102 MIDDLE PLAZA</b>									
1	Class Room-1	4090	21	78.80	9.50	300	2495	7355	29.44
2	Control Room	286	10	78.80	3.22	1	22	736	1.52
Sub Total		4376			12.72	301	2518	8090	30.96
<b>LEVEL - 105.3 ACADEMIC FLOOR PLAN</b>									
<b>Faculty Block -01</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	308	0.74
2	R.A Cabin-2	110	10	78.80	0.09	4	27	293	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	308	0.74
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	319	0.76
5	R.A Cabin-5	110	10	78.80	0.09	4	27	304	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	319	0.76
<b>Faculty Support Admin -01</b>									
1	Support staff Cabin	123	10	78.80	0.10	4	27	307	0.74
2	Pantry / Dining Room	238	10	77.00	0.19	12	74	675	1.64
3	Meeting Room	238	10	78.80	0.19	12	74	644	1.66
4	Meeting Room	124	10	78.80	0.10	8	47	364	0.97
<b>Faculty Block -02</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	273	0.68
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	271	0.67
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	281	0.69
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	319	0.76
<b>Faculty Block &amp; Support Admin -01</b>									
1	Support staff Cabin	123	10	78.80	0.10	4	27	329	0.78
2	Pantry / Dining Room	238	10	77.00	0.19	12	74	699	1.69
3	Faculty Cabin	124	10	78.80	0.10	4	27	281	0.69
4	R.A Cabin	109	10	78.80	0.09	4	27	303	0.73
5	Faculty Cabin	124	10	78.80	0.10	4	27	284	0.70
<b>Faculty Block -03</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	273	0.68
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	271	0.67
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	281	0.69
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	340	0.81
Sub Total		3585			2.87	136	895	9235	22.60

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 108.6 ACADEMIC FLOOR PLAN</b>									
1	CPU & LV Room	985	10	70.00	15.77	2	69	6336	8.33
<b>Faculty Block -05</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	309	0.75
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	309	0.75
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	319	0.77
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	319	0.77
<b>Faculty &amp; Support Admin -02</b>									
1	Support staff Cabin	123	10	78.80	0.10	4	27	308	0.74
2	Pantry / Dining Room	238	10	77.00	0.19	12	74	675	1.64
3	Meeting Room	238	10	78.80	0.19	12	74	644	1.66
4	Meeting Room	124	10	78.80	0.10	8	47	364	0.97
<b>Faculty Block -06</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	273	0.68
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	270	0.67
4	Faculty Cabin-4	118	10	78.80	0.09	4	27	276	0.68
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	118	10	78.80	0.09	4	27	313	0.75
1	Class Room-06	1688	20	78.80	5.30	78	686	4666	12.29
2	LV Room	91	10	78.80	3.80	1	13	764	1.55
3	Class Room-05	892	10	78.80	0.71	25	241	1614	4.23
4	Class Room-04	1688	20	78.80	5.30	78	686	4676	12.31
5	LV Room	91	10	78.80	3.80	1	13	764	1.55
<b>Faculty Block -06</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	272	0.67
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	309	0.75
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	319	0.77
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	282	0.69
<b>Faculty Block -07</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	272	0.67
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	309	0.75
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	319	0.77
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	282	0.69
<b>Faculty Admin Support -03</b>									
1	Support staff Cabin	123	10	78.80	0.10	4	27	308	0.74
2	Pantry / Dining Room	238	10	77.00	0.19	12	74	719	1.72
3	Meeting Room	238	10	78.80	0.19	12	74	672	1.72
4	Meeting Room	124	10	78.80	0.10	8	47	384	1.01
1	Class Room-03	1688	20	78.80	1.00	51	484	3623	9.25
2	LV Room	91	10	78.80	3.80	1	13	764	1.55
1	Class Room-02	892	10	78.80	0.71	41	361	1800	5.18
2	Class Room-01	1688	20	78.80	5.30	78	686	4666	12.29
3	LV Room	91	10	78.80	3.80	1	13	764	1.55
<b>Sub Total</b>		<b>14175</b>			<b>52.73</b>	<b>525</b>	<b>4363</b>	<b>41647</b>	<b>97.62</b>

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 111.9 ACADEMIC FLOOR PLAN</b>									
<b>Faculty &amp; Support Admin -02</b>									
1	Support Staff Cabin	123	10	78.80	0.10	4	27	286	0.70
2	Pantry / Dining Room	238	10	77.00	0.19	12	74	719	1.72
3	Faculty Cabin-1	124	10	78.80	0.10	4	27	319	0.77
4	R.A Cabin-2	109	10	78.80	0.09	4	27	303	0.73
5	Faculty Cabin-3	124	10	78.80	0.10	4	27	282	0.69
<b>Faculty Block -08</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	309	0.75
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	309	0.75
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	319	0.77
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	319	0.77
1	Class Room-11	1688	20	78.80	1.00	78	686	4240	11.45
2	LV Room	91	10	78.80	3.80	1	13	778	1.58
<b>Faculty Block -09</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	309	0.75
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	309	0.75
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	319	0.77
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	319	0.77
<b>Faculty &amp; Support Admin -04</b>									
1	Support Staff Cabin	123	10	78.80	0.10	4	27	327	0.78
2	Pantry / Dining Room	238	10	77.00	0.19	12	74	675	1.64
3	Meeting Room	238	10	78.80	0.19	12	74	672	1.72
4	Meeting Room	124	10	78.80	0.10	8	47	364	0.97
<b>Faculty Block -10</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	274	0.68
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	272	0.67
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	282	0.69
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	319	0.77
1	Class Room	892	10	78.80	0.71	25	241	1614	4.23
1	Class Room-09	892	10	78.80	0.71	25	241	1608	4.22
<b>Faculty &amp; Support Admin -05</b>									
1	Support Staff Cabin	123	10	78.80	0.10	4	27	329	0.79
2	Pantry / Dining Room	238	10	77.00	0.19	12	74	719	1.72
3	Meeting Room	238	10	78.80	0.19	12	74	672	1.72
4	Meeting Room	124	10	78.80	0.10	8	47	385	1.02
1	Class Room-07	892	10	78.80	0.71	41	361	1723	5.03
2	Class Room-08	1698	20	78.80	5.30	78	687	4939	12.82
3	LV Room	91	10	78.80	3.80	1	13	778	1.58
4	Student Idea Lounge -01	874	10	78.80	0.70	30	277	1852	4.88

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dissipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 115.2 ACADEMIC FLOOR PLAN</b>									
<b>Faculty &amp; Support Admin -03</b>									
1	Support Staff Cabin	123	10	78.80	0.10	4	27	349	0.82
2	Pantry / Dining Room	238	10	77.00	0.19	12	74	719	1.72
3	Meeting Room	238	10	78.80	0.19	12	74	672	1.72
4	Meeting Room	124	10	78.80	0.10	8	47	329	0.90
<b>Faculty Block -11</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	309	0.75
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	309	0.75
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	319	0.77
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	319	0.77
<b>Faculty Block -12</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	309	0.75
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	309	0.75
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	319	0.77
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	319	0.77
<b>Faculty &amp; Support Admin -06</b>									
1	Support Staff Cabin	123	10	78.80	0.10	4	27	327	0.78
2	Pantry / Dining Room	238	10	77.00	0.19	12	74	675	1.64
3	Meeting Room	238	10	78.80	0.19	12	74	672	1.72
4	Meeting Room	124	10	79	0.10	8	47	329	0.90
<b>Faculty Block -13</b>									
1	Faculty Cabin-1	124	10	78.80	0.10	4	27	274	0.68
2	R.A Cabin-2	109	10	78.80	0.09	4	27	292	0.71
3	Faculty Cabin-3	124	10	78.80	0.10	4	27	272	0.67
4	Faculty Cabin-4	124	10	78.80	0.10	4	27	282	0.69
5	R.A Cabin-5	109	10	78.80	0.09	4	27	303	0.73
6	Faculty Cabin-6	124	10	78.80	0.10	4	27	319	0.77
<b>Admission Office - 01</b>									
1	Waiting & Passage	501	10	78.80	0.40	6	60	711	1.66
2	Staff Cabin	134	10	78.80	0.11	4	28	286	0.70
3	Cabin-1	169	10	78.80	0.14	6	40	375	0.94
4	Cabin-2	197	10	78.80	0.16	6	42	375	0.95
5	Cabin-3	197	10	78.80	0.16	6	42	384	0.96
6	Cabin-4	169	10	78.80	0.14	6	40	385	0.96
7	Committee Meeting Room For Students	370	10	78.80	0.30	14	92	714	1.88
1	Class Room-12	892	10	78.80	0.71	25	241	1732	4.46
<b>Admission Office - 02</b>									
1	Waiting & Passage	502	10	78.80	0.40	6	60	791	1.81
2	Staff Cabin	134	10	78.80	0.11	4	28	315	0.76
3	Staff Area	347	10	78.80	0.28	10	71	719	1.77
4	Cabin-1	168	10	78.80	0.13	4	30	347	0.83
5	Cabin-2	168	10	78.80	0.13	4	30	373	0.88
6	Committee Meeting Room For Students	370	10	78.80	0.30	14	92	695	1.84
<b>Accounts Office</b>									
1	Accounts Office	542	10	78.80	0.43	12	93	967	2.34
2	Cabin-1	109	10	78.80	0.09	3	22	263	0.62
3	Cabin-2	108	10	78.80	0.09	3	21	249	0.60
4	Cabin-3	120	10	78.80	0.10	3	22	264	0.63
<b>Admission Office - 03</b>									
1	Accounts Archives	508	10	78.80	0.41	6	60	952	2.13
2	Admission Archives	366	10	78.80	0.29	6	52	840	1.89
<b>Administration Office - 02</b>									
1	Staff Area	638	10	78.80	0.51	16	118	750	2.05
2	Cabin-1	128	10	78.80	0.10	3	23	243	0.59
3	Cabin-2	128	10	78.80	0.10	3	23	231	0.56
<b>COA Office</b>									
1	Personal Assistant Cum	370	10	78.80	0.30	5	47	669	1.52
2	COA Office	309	10	78.80	0.25	4	39	554	1.26
3	Meeting Room	220	10	78.80	0.18	8	53	474	1.20
<b>Administration Office - 01</b>									
1	Administration Office - 01	1074	10	78.80	0.86	20	164	1548	3.81
2	Cabin-1	183	10	78.80	0.15	4	31	376	0.89
3	Cabin-2	156	10	78.80	0.12	4	29	350	0.83
4	Cabin-3	183	10	78.80	0.15	4	31	366	0.87
5	Cabin-4	156	10	78.80	0.12	4	29	339	0.81

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dissipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 118.5 ACADEMIC FLOOR PLAN</b>									
<b>Computer Centre</b>									
1	Reception & Waiting	851	10	78.8	0.68	8	91	1131	2.60
2	Admin Staff	161	10	78.8	0.13	4	30	315	0.76
3	Comp. Cent . Director's Office	231	10	78.8	0.18	4	34	461	1.06
4	Conference Room	195	10	78.8	0.16	6	42	408	1.01
5	Computer Centre 29 Seats	1221	10	78.8	0.98	29	437	2033	5.65
6	Server / UPS room	111	10	78.8	2.50	1	12	635	1.30
7	Assistant Technician	186	10	78.8	0.15	2	21	310	0.70
8	Peripherals Store	181	10	78.8	0.14	1	16	294	0.64
9	Computer Centre 64 Seats	2070	10	78.8	14.00	66	908	5604	14.54
10	Library (Triple HT Area)	543	32	78.8	0.43	6	95	601	1.53
11	Library (Double HT Area)	673	21	78.8	0.54	8	121	1479	3.36
12	Library (Single HT Area)	1442	10	78.8	1.15	30	323	2602	6.47
13	Faculty Lounge	3137	10	78.8	2.51	55	651	4863	12.21
<b>Class Rooms</b>									
1	Class Room-13	1688	21	78.8	1.00	51	484	3809	9.62
2	LV Room	91	10	78.8	3.80	1	13	776	1.58
3	Class Room-14	892	10	78.8	0.71	41	312	1776	5.00
<b>Placement Office - 2</b>									
1	Waiting Area & Passage	467	10	78.8	0.37	5	53	688	1.58
2	Interview Cabin - 1	170	10	78.8	0.14	6	40	352	0.90
3	Interview Cabin - 2	168	10	78.8	0.13	6	40	350	0.89
4	Interview Cabin - 3	168	10	78.8	0.13	6	40	378	0.95
5	Group Discussion Room	516	10	78.8	0.41	20	131	1022	2.69
6	Staff Cabin	169	10	78.8	0.14	8	50	477	1.20
<b>Dean's Office - 2</b>									
1	Personal Assistant Cum	350	10	78.8	0.28	6	51	671	1.55
2	Dean's Cabin-1 & Meeting	526	10	78.8	0.42	12	92	1013	2.43
<b>Placement Office - 1</b>									
1	Waiting Area & Passage	467	10	78.8	0.37	5	53	688	1.58
2	Interview Cabin - 1	170	10	78.8	0.14	6	40	352	0.90
3	Interview Cabin - 2	168	10	78.8	0.13	6	40	350	0.89
4	Incharge Cabin - 1	168	10	78.8	0.13	4	30	355	0.84
5	Incharge Cabin - 2	168	10	78.8	0.13	4	30	373	0.88
6	Group Discussion Room	340	10	78.8	0.27	18	110	750	2.06
7	Staff Cabin	169	10	78.8	0.14	8	50	477	1.20
<b>Dean's Office - 1</b>									
1	Personal Assistant Cum	366	10	78.8	0.29	6	52	767	1.75
2	Dean's Cabin-1	306	10	78.8	0.24	4	38	600	1.35
3	Meeting Room	204	10	78.8	0.16	8	52	484	1.22
<b>Director's Office</b>									
1	Director's Office	747	14	78.8	0.60	10	95	1471	3.31
2	Board Room	935	14	78.8	0.75	28	196	1875	4.67



## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dissipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 121.8 ACADEMIC FLOOR PLAN</b>									
<b>Faculty Block -14</b>									
1	Faculty Cabin-1	124	10	78.8	0.10	4	27	271	0.67
2	R.A Cabin-2	109	10	78.8	0.09	4	27	240	0.61
3	Faculty Cabin-3	124	10	78.8	0.10	4	27	313	0.75
4	Faculty Cabin-4	124	10	78.8	0.10	4	27	331	0.79
5	R.A Cabin-5	109	10	78.8	0.09	4	27	258	0.64
6	Faculty Cabin-6	124	10	78.8	0.10	4	27	289	0.71
<b>Faculty Support Admin -07</b>									
1	Support Staff Cabin	123	10	78.8	0.10	4	27	349	0.82
2	Pantry / Dining Room	238	10	77.0	0.19	12	74	719	1.72
3	Faculty Cabin-1	124	10	78.8	0.10	4	27	331	0.79
4	R.A Cabin-2	109	10	78.8	0.09	4	27	258	0.64
5	Faculty Cabin-3	124	10	78.8	0.10	4	27	289	0.71
1	Class Room-15	1688	20	78.8	1.00	78	686	3749	10.49
2	LV Room	91	10	78.8	3.80	1	13	764	1.55
1	Reception & Waiting Library	968	10	78.8	0.77	6	88	1446	3.18
2	Seminar/Conference Room	844	10	78.8	0.68	23	166	1519	3.80
3	Group Discussion -6 seats	196	10	78.8	0.16	6	42	371	0.94
4	Group Discussion -6 seats	228	10	78.8	0.18	6	44	429	1.06
5	Group Discussion -18 seats	417	10	78.8	0.33	18	115	848	2.27
6	Server Room	159	10	78.8	2.50	1	15	674	1.38
7	Accession, Binding, Repair	417	10	78.8	0.33	2	35	814	1.73
8	Publication Room	417	10	78.8	0.33	2	35	757	1.61
9	Admin Staff	181	10	78.8	0.14	6	41	328	0.85
10	Librarian's Office	231	10	78.8	0.18	4	34	517	1.17
11	Deputy Librarian's Office	171	10	78.8	0.14	4	30	458	1.05
1	Library (Double H.T)	517	20	78.8	0.41	6	92	575	1.48
2	Library (Single H.T)	925	10	78.8	0.74	15	186	1418	3.53
3	Library Seating Area	2068	10	78.8	1.65	70	598	3632	9.89
4	Reading Lounge	1485	10	78.8	1.19	25	303	3534	8.17
5	Library 78 Seating Area	4569	10	78.8	3.66	80	948	6861	17.34
<b>Publication &amp; Printing</b>									
1	Entrance Foyer	511	10	78.8	0.41	2	71	876	1.95
2	Cabin-1	247	10	78.8	0.20	4	50	524	1.23
3	Cabin-2	247	10	78.8	0.20	4	50	515	1.21
<b>Administration Support</b>									
1	Student Idea Lounge - 2	892	10	78.8	0.71	30	279	1939	5.05
<b>Engineering office</b>									
1	Waiting & Passage	441	10	78.8	0.35	6	83	766	1.83
2	Staff Area	536	10	78.8	0.43	14	134	955	2.47
3	Incharge Cabin-1	169	10	78.8	0.14	4	40	376	0.91
4	Incharge Cabin-2	169	10	78.8	0.14	4	40	330	0.82
5	Incharge Cabin-3	169	10	78.8	0.14	4	40	330	0.82
6	Discussion Room	176	10	78.8	0.14	6	51	417	1.05

### DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dissipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 125.1 ACADEMIC FLOOR PLAN</b>									
<b>Faculty Block -15</b>									
1	Faculty Cabin-1	124	10	78.8	0.10	4	27	271	0.67
2	R.A Cabin-2	109	10	78.8	0.09	4	27	240	0.61
3	Faculty Cabin-3	124	10	78.8	0.10	4	27	313	0.75
4	Faculty Cabin-4	124	10	78.8	0.10	4	27	331	0.79
5	R.A Cabin-5	109	10	78.8	0.09	4	27	258	0.64
6	Faculty Cabin-6	124	10	78.8	0.10	4	27	289	0.71
1	Class Room-16	892	10	78.8	0.71	25	232	1579	4.13
1	Library 78 Seating Area	4347	20	78.8	3.48	80	922	6878	17.30
2	Library (Single H.T)	1603	10	78.8	1.28	15	267	2170	5.23
3	Library Seating Area	2071	20	78.8	1.66	74	619	3554	9.85
4	Reading Lounge	1442	20	78.8	1.15	40	373	4721	10.93
5	Library 78 Seating Area	4374	20	78.8	3.50	80	925	7087	17.72
<b>Sub Total</b>		<b>15443</b>			<b>12.35</b>	<b>338</b>	<b>3500</b>	<b>27689</b>	<b>69.34</b>
<b>LEVEL - 128.4 ACADEMIC FLOOR PLAN</b>									
<b>Faculty Block -16</b>									
1	Faculty Cabin-1	124	10	78.8	0.10	4	27	287	0.70
2	R.A Cabin-2	109	10	78.8	0.09	4	27	254	0.64
3	Faculty Cabin-3	124	10	78.8	0.10	4	27	329	0.79
4	Faculty Cabin-4	124	10	78.8	0.10	4	27	348	0.82
5	R.A Cabin-5	109	10	78.8	0.09	4	27	273	0.67
6	Faculty Cabin-6	124	10	78.8	0.10	4	27	305	0.74
<b>Faculty Support Admin -08</b>									
1	Support Staff Cabin	123	10	78.8	0.10	4	27	367	0.86
2	Pantry / Dining Room	236	10	77.0	0.19	12	74	750	1.78
3	Faculty Cabin-1	124	10	78.8	0.10	4	27	348	0.82
4	R.A Cabin-2	109	10	78.8	0.09	4	27	273	0.67
5	Faculty Cabin-3	124	10	78.8	0.10	4	27	305	0.74
1	Class Room -17	1688	20	78.8	1.00	78	686	2861	9.14
2	LV Room	91	10	78.8	3.80	1	13	776	1.58
3	Library (Single H.T) 35 seats	2660	10	78.8	2.13	35	494	2016	6.26
<b>Sub Total</b>		<b>5869</b>			<b>8.07</b>	<b>166</b>	<b>1539</b>	<b>9491</b>	<b>26.20</b>

HEAT LOAD SUMMARY SHEET – ACDEMIC BLOCK (PHASE II)

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dissipation load ( KW )	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 112.50 ACADEMIC FLOOR PLAN</b>									
1	Faculty Cabin-21	142	9.00	78.8	0.11	6	39	403	0.99
2	RA Cabin-11	95	9.00	78.8	0.08	2	16	283	0.61
3	Faculty Cabin-22	142	9.00	78.8	0.11	6	39	403	0.99
4	Faculty Cabin-23	142	9.00	78.8	0.11	6	39	417	1.01
5	RA Cabin-12	95	9.00	78.8	0.08	2	16	308	0.66
6	Faculty Cabin-24	142	9.00	78.8	0.11	6	39	417	1.01
7	Faculty Cabin-25	142	9.00	78.8	0.11	6	39	415	1.01
8	RA Cabin-13	95	9.00	78.8	0.08	2	16	283	0.61
9	Faculty Cabin-26	142	9.00	78.8	0.11	6	39	455	1.08
10	Faculty Cabin-27	142	9.00	78.8	0.11	6	39	415	1.01
11	RA Cabin-14	95	9.00	78.8	0.08	2	16	283	0.61
12	Faculty Cabin-28	142	9.00	78.8	0.11	6	39	444	1.06
13	Faculty Cabin-29	142	9.00	78.8	0.11	6	39	418	1.01
14	RA Cabin-15	95	9.00	78.8	0.08	2	16	283	0.61
15	Faculty Cabin-30	142	9.00	78.8	0.11	6	39	496	1.16
16	Faculty Cabin-31	142	9.00	78.8	0.11	6	39	418	1.01
17	RA Cabin-16	95	9.00	78.8	0.08	2	16	283	0.61
18	Faculty Cabin-32	142	9.00	78.8	0.11	6	39	496	1.16
19	Class Room-03(80 STD)	1826	17.00	78.8	2.00	81	717	4318	11.78
20	Extra Room-04	142	9.00	78.8	0.11	5	34	343	0.84
21	Admin-04	95	9.00	78.8	0.08	2	16	300	0.64
22	Meeting-04	242	9.00	78.8	0.19	10	65	676	1.65
<b>Sub Total</b>		<b>4579</b>			<b>4.20</b>	<b>182</b>	<b>1387</b>	<b>12558</b>	<b>31.12</b>
<b>LEVEL - 115.50</b>									
23	Faculty Cabin-09	142	9.00	78.8	0.11	6	39	403	0.99
24	RA Cabin-05	95	9.00	78.8	0.08	2	16	283	0.61
25	Faculty Cabin-10	142	9.00	78.8	0.11	6	39	403	0.99
26	Faculty Cabin-11	142	9.00	78.8	0.11	6	39	417	1.01
27	RA Cabin-06	95	9.00	78.8	0.08	2	16	308	0.66
28	Faculty Cabin-12	142	9.00	78.8	0.11	6	39	417	1.01
29	Faculty Cabin-13	142	9.00	78.8	0.11	6	39	415	1.01
30	RA Cabin-07	95	9.00	78.8	0.08	2	16	283	0.61
31	Faculty Cabin-14	142	9.00	78.8	0.11	6	39	455	1.08
32	Faculty Cabin-15	142	9.00	78.8	0.11	6	39	415	1.01
33	RA Cabin-08	95	9.00	78.8	0.08	2	16	283	0.61
34	Faculty Cabin-16	142	9.00	78.8	0.11	6	39	444	1.06
35	Faculty Cabin-17	142	9.00	78.8	0.11	6	39	415	1.01
36	RA Cabin-09	95	9.00	78.8	0.08	2	16	283	0.61
37	Faculty Cabin-18	142	9.00	78.8	0.11	6	39	455	1.08
38	Faculty Cabin-19	142	9.00	78.8	0.11	6	39	415	1.01
39	RA Cabin-10	95	9.00	78.8	0.08	2	16	283	0.61
40	Faculty Cabin-20	142	9.00	78.8	0.11	6	39	444	1.06
41	Faculty Cabin-21	142	9.00	78.8	0.11	6	39	418	1.01
42	RA Cabin-11	95	9.00	78.8	0.08	2	16	283	0.61
43	Faculty Cabin-22	142	9.00	78.8	0.11	6	39	496	1.16
44	Faculty Cabin-23	142	9.00	78.8	0.11	6	39	418	1.01
45	RA Cabin-12	95	9.00	78.8	0.08	2	16	283	0.61
46	Faculty Cabin-24	142	9.00	78.8	0.11	6	39	496	1.16
47	Extra Room-02	142	9.00	78.8	0.11	5	34	343	0.84
48	Admin-02	95	9.00	78.8	0.08	2	16	300	0.64
49	Meeting-02	242	9.00	78.8	0.19	10	65	676	1.65

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dissipation load ( KW )	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 118.50 ACADEMIC FLOOR PLAN</b>									
50	Faculty Cabin-05	142	9.00	78.8	0.11	6	39	403	0.99
51	RA Cabin-03	95	9.00	78.8	0.08	2	16	283	0.61
52	Faculty Cabin-06	142	9.00	78.8	0.11	6	39	403	0.99
53	Faculty Cabin-07	142	9.00	78.8	0.11	6	39	417	1.01
54	RA Cabin-04	95	9.00	78.8	0.08	2	16	308	0.66
55	Faculty Cabin-08	142	9.00	78.8	0.11	6	39	417	1.01
56	Class Room-02 (80 STD)	1830	17.00	78.8	2.00	81	717	3693	10.63
57	Class Room-03 (80 STD)	1830	17.00	78.8	2.00	81	717	3668	10.59
58	Faculty Cabin-9	142	9.00	78.8	0.11	6	39	379	0.94
59	RA Cabin-5	95	9.00	78.8	0.08	2	16	283	0.61
60	Faculty Cabin-10	142	9.00	78.8	0.11	6	39	496	1.16
61	Faculty Cabin-11	142	9.00	78.8	0.11	6	39	416	1.01
62	RA Cabin-6	95	9.00	78.8	0.08	2	16	334	0.70
63	Faculty Cabin-12	142	9.00	78.8	0.11	6	39	456	1.08
64	Class Room-04(80 STD)	1826	17.00	78.8	2.00	81	717	4705	12.50
65	Extra Room	142	9.00	78.8	0.11	5	34	343	0.84
66	Admin	95	9.00	78.8	0.08	2	16	300	0.64
67	Meeting	242	9.00	78.8	0.19	10	65	676	1.65
68	Faculty Cabin-13	142	9.00	78.8	0.11	6	39	418	1.01
69	RA Cabin-07	95	9.00	78.8	0.08	2	16	283	0.61
70	Faculty Cabin-14	142	9.00	78.8	0.11	6	39	496	1.16
71	Faculty Cabin-15	142	9.00	78.8	0.11	6	39	418	1.01
72	RA Cabin-08	95	9.00	78.8	0.08	2	16	283	0.61
73	Faculty Cabin-16	142	9.00	78.8	0.11	6	39	496	1.16
<b>Sub Total</b>		<b>8239</b>			<b>8.20</b>	<b>344</b>	<b>2822</b>	<b>20375</b>	<b>53.18</b>
<b>LEVEL - 121.50 ACADEMIC FLOOR PLAN</b>									
74	Faculty Cabin-9	142	9.00	78.8	0.11	6	39	403	0.99
75	RA Cabin-5	95	9.00	78.8	0.08	2	16	283	0.61
76	Faculty Cabin-10	142	9.00	78.8	0.11	6	39	403	0.99
77	Faculty Cabin-11	142	9.00	78.8	0.11	6	39	417	1.01
78	RA Cabin-6	95	9.00	78.8	0.08	2	16	308	0.66
79	Faculty Cabin-12	142	9.00	78.8	0.11	6	39	417	1.01
80	Syndicate	815	9.00	78.8	0.25	21	154	1776	4.18
81	Faculty Cabin-13	142	9.00	78.8	0.11	6	39	379	0.94
82	RA Cabin-7	95	9.00	78.8	0.08	2	16	283	0.61
83	Faculty Cabin-14	142	9.00	78.8	0.11	6	39	496	1.16
84	Faculty Cabin-15	142	9.00	78.8	0.11	6	39	416	1.01
85	RA Cabin-8	95	9.00	78.8	0.08	2	16	334	0.70
86	Faculty Cabin-16	142	9.00	78.8	0.11	6	39	456	1.08
87	Class Room-02 (80 STD)	1830	17.00	78.8	2.00	81	717	4509	12.14
<b>Sub Total</b>		<b>4161</b>			<b>3.46</b>	<b>158</b>	<b>1242</b>	<b>10880</b>	<b>27.08</b>
<b>LEVEL - 124.50 ACADEMIC FLOOR PLAN</b>									
88	Faculty Cabin-1	142	9.00	78.8	0.11	6	39	344	0.88
89	RA Cabin-1	95	9.00	78.8	0.08	2	16	240	0.53
90	Faculty Cabin-2	142	9.00	78.8	0.11	6	39	338	0.87
91	Faculty Cabin-3	142	9.00	78.8	0.11	6	39	400	0.98
92	RA Cabin-2	95	9.00	78.8	0.08	2	16	313	0.67
93	Faculty Cabin-4	142	9.00	78.8	0.11	6	39	344	0.88
94	Class Room (80 STD)	1830	17.00	78.8	2.00	81	717	4826	12.72
<b>Sub Total</b>		<b>2588</b>			<b>2.61</b>	<b>109</b>	<b>903</b>	<b>6806</b>	<b>17.52</b>
<b>LEVEL - 127.50 ACADEMIC FLOOR PLAN</b>									
95	Class Room (80 STD)	1830	17.00	78.8	2.00	81	717	3703	10.65
<b>Sub Total</b>		<b>1830</b>			<b>2.00</b>	<b>81</b>	<b>717</b>	<b>3703</b>	<b>10.65</b>

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

### LEVEL WISE HEAT LOAD SUMMARY SHEET – ACADEMIC BLOCK

SR NO	Level	Area (Sq. Ft.)	Heat Dissipation load ( KW )	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>PHASE - I</b>							
1	LEVEL - 102	4376	12.72	301	2518	8090	30.96
2	LEVEL - 105.3	3585	2.87	136	895	9235	22.60
3	LEVEL - 108.6	14175	52.73	525	4363	41647	97.62
4	LEVEL - 111.9	11424	20.18	451	3638	29032	73.93
5	LEVEL - 115.2	13204	10.56	367	2690	27154	66.40
6	LEVEL - 118.5	20415	34.46	489	4874	40588	100.84
7	LEVEL - 121.8	20561	22.20	483	4655	39371	97.67
8	LEVEL - 125.1	15443	12.35	338	3500	27689	69.34
9	LEVEL - 128.4	5869	8.07	166	1539	9491	26.20
<b>Total For Phase - I</b>		<b>109052</b>	<b>176.16</b>	<b>3256</b>	<b>28671</b>	<b>232298</b>	<b>585.56</b>
<b>PHASE - II</b>							
1	LEVEL - 112.5	4579	4.20	182	1387	12558	31.12
2	LEVEL - 115.5	3511	2.81	129	856	10534	24.72
3	LEVEL - 118.5	8239	8.20	344	2822	20375	53.18
4	LEVEL - 121.5	4161	3.46	158	1242	10880	27.08
5	LEVEL - 124.5	2588	2.61	109	903	6806	17.52
6	LEVEL - 127.5	1830	2.00	81	717	3703	10.65
<b>Total For Phase - II</b>		<b>24908</b>	<b>23.28</b>	<b>1003</b>	<b>7927</b>	<b>64856</b>	<b>164.27</b>
<b>Grand Total Phase - I &amp; II</b>		<b>133960</b>	<b>199.44</b>	<b>4259</b>	<b>36598</b>	<b>297154</b>	<b>749.83</b>

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

### HEAT LOAD SUMMARY SHEET – DINING BLOCK

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F / °C)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>PHASE I</b>									
<b>LEVEL - 118.2</b>									
1	Material Office	136	10.23	78.8 / 26	0.20	2	18	381	0.83
2	Meat Preparation	310	10.23	77 / 25	4.77	4	39	1289	2.52
3	Vegetable Preparation	347	10.23	77 / 25	3.82	6	51	1180	2.39
<b>Sub Total</b>		<b>793</b>			<b>8.79</b>	<b>12</b>	<b>108</b>	<b>2849</b>	<b>5.74</b>
<b>LEVEL - 121.5</b>									
1	Dining Hall-1	579	27	77 / 25	1.00	60	554	1925	6.53
2	Dining Hall-2	2942	26	77 / 25	2.00	177	1857	5424	20.06
3	Student Space Dining Hall (Single H.T)	2647	10	77 / 25	1.00	88	1136	3232	11.74
4	Food Service Area	264	12	77 / 25	10.08	15	160	2311	4.97
5	Kitchen	1871	13	77 / 25	0.00	20	3000	3322	18.77
<b>Sub Total</b>		<b>8303</b>			<b>14.08</b>	<b>360</b>	<b>6708</b>	<b>16215</b>	<b>62.07</b>
<b>LEVEL - 125.1</b>									
1	Lounge	1537	9	78.8 / 26	3.00	195	1067	5128	16.50
<b>Sub Total</b>		<b>1537</b>			<b>3.00</b>	<b>195</b>	<b>1067</b>	<b>5128</b>	<b>16.50</b>
<b>Total Phase I</b>		<b>10633</b>			<b>25.87</b>	<b>567</b>	<b>7883</b>	<b>24193</b>	<b>84.31</b>
<b>Total Phase II</b>		<b>10633</b>			<b>25.87</b>	<b>567</b>	<b>7883</b>	<b>24193</b>	<b>84.31</b>
<b>Grand Total</b>		<b>21266</b>			<b>51.74</b>	<b>1134</b>	<b>15765</b>	<b>48385</b>	<b>168.63</b>

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

### HEAT LOAD SUMMARY SHEET - STUDENT HOSTEL BLOCK (PHASE I & II)

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 1</b>									
<b>LEVEL - 107</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	327	0.68
2	Student Room-2	111	9	78.8	0.09	1	12	277	0.58
3	Student Room-3	111	9	78.8	0.09	1	12	291	0.61
4	Student Room-4	111	9	78.8	0.09	1	12	313	0.65
<b>Sub Total</b>		<b>444</b>			<b>0.36</b>	<b>4</b>	<b>47</b>	<b>1208</b>	<b>2.53</b>
<b>LEVEL - 110</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	337	0.70
2	Student Room-2	111	9	78.8	0.09	1	12	291	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	289	0.61
4	Student Room-4	111	9	78.8	0.09	1	12	339	0.70
5	Student Room-5	111	9	78.8	0.09	1	12	327	0.68
6	Student Room-6	111	9	78.8	0.09	1	12	277	0.58
7	Student Room-7	111	9	78.8	0.09	1	12	291	0.61
8	Student Room-8	111	9	78.8	0.09	1	12	313	0.65
<b>Sub Total</b>		<b>888</b>			<b>0.71</b>	<b>8</b>	<b>93</b>	<b>2464</b>	<b>5.16</b>
<b>LEVEL - 113</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	337	0.70
2	Student Room-2	111	9	78.8	0.09	1	12	291	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	276	0.58
4	Student Room-4	111	9	78.8	0.09	1	12	314	0.66
5	Student Room-5	111	9	78.8	0.09	1	12	289	0.61
6	Student Room-6	111	9	78.8	0.09	1	12	339	0.70
7	Student Room-7	110	9	78.8	0.09	1	12	276	0.58
8	Student Room-8	110	9	78.8	0.09	1	12	327	0.68
9	Student Room-9	111	9	78.8	0.09	1	12	291	0.61
10	Student Room-10	111	9	78.8	0.09	1	12	313	0.65
<b>Sub Total</b>		<b>1108</b>			<b>0.89</b>	<b>10</b>	<b>116</b>	<b>3054</b>	<b>6.39</b>
<b>LEVEL - 116</b>									
1	Student Room-1	110	9	78.8	0.09	1	12	336	0.70
2	Student Room-2	110	9	78.8	0.09	1	12	290	0.61
3	Student Room-3	110	9	78.8	0.09	1	12	276	0.58
4	Student Room-4	110	9	78.8	0.09	1	12	314	0.66
5	Student Room-5	110	9	78.8	0.09	1	12	303	0.63
6	Student Room-6	110	9	78.8	0.09	1	12	352	0.73
7	Student Room-7	110	9	78.8	0.09	1	12	318	0.66
8	Student Room-8	110	9	78.8	0.09	1	12	340	0.71
9	Student Room-9	120	9	78.8	0.10	1	12	329	0.69
10	Student Room-10	120	9	78.8	0.10	1	12	329	0.69
11	Student Room-11	122	9	78.8	0.10	1	12	304	0.64
12	Student Room-12	122	9	78.8	0.10	1	12	360	0.75
13	Student Room-13	122	9	78.8	0.10	1	12	316	0.66
14	Student Room-14	122	9	78.8	0.10	1	12	359	0.75
15	Student Room-15	122	9	78.8	0.10	1	12	318	0.67
16	Student Room-16	122	9	78.8	0.10	1	12	344	0.72
<b>Sub Total</b>		<b>1852</b>			<b>1.48</b>	<b>16</b>	<b>191</b>	<b>5188</b>	<b>10.83</b>
<b>LEVEL - 119</b>									
1	Student Room-1	122	9	78.8	0.10	1	12	363	0.75
2	Student Room-2	122	9	78.8	0.10	1	12	318	0.67
3	Student Room-3	122	9	78.8	0.10	1	12	304	0.64
4	Student Room-4	122	9	78.8	0.10	1	12	341	0.71
<b>Sub Total</b>		<b>488</b>			<b>0.39</b>	<b>4</b>	<b>49</b>	<b>1326</b>	<b>2.77</b>
<b>Total</b>		<b>4780</b>			<b>3.82</b>	<b>42</b>	<b>497</b>	<b>13240</b>	<b>27.68</b>

### DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dissipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 2</b>									
<b>LEVEL - 98</b>									
1	Student Room-1	112	9	78.8	0.09	1	12	262	0.55
2	Student Room-2	112	9	78.8	0.09	1	12	295	0.62
3	Student Room-3	112	9	78.8	0.09	1	12	293	0.62
4	Student Room-4	112	9	78.8	0.09	1	12	342	0.71
5	Student Room-5	112	9	78.8	0.09	1	12	295	0.62
6	Student Room-6	112	9	78.8	0.09	1	12	262	0.55
<b>Sub Total</b>		<b>672</b>			<b>0.54</b>	<b>6</b>	<b>70</b>	<b>1750</b>	<b>3.67</b>
<b>LEVEL - 101</b>									
1	Student Room-1	112	9	78.8	0.09	1	12	341	0.71
2	Student Room-2	112	9	78.8	0.09	1	12	295	0.62
3	Student Room-3	112	9	78.8	0.09	1	12	324	0.68
4	Student Room-4	112	9	78.8	0.09	1	12	281	0.59
5	Student Room-5	112	9	78.8	0.09	1	12	295	0.62
6	Student Room-6	112	9	78.8	0.09	1	12	262	0.55
7	Student Room-7	112	9	78.8	0.09	1	12	262	0.55
8	Student Room-8	112	9	78.8	0.09	1	12	295	0.62
9	Student Room-9	112	9	78.8	0.09	1	12	293	0.62
10	Student Room-10	112	9	78.8	0.09	1	12	342	0.71
11	Student Room-11	112	9	78.8	0.09	1	12	295	0.62
12	Student Room-12	112	9	78.8	0.09	1	12	295	0.62
<b>Sub Total</b>		<b>1344</b>			<b>1.08</b>	<b>12</b>	<b>141</b>	<b>3581</b>	<b>7.51</b>
<b>LEVEL - 104</b>									
1	Student Room-1	112	9	78.8	0.09	1	12	341	0.71
2	Student Room-2	112	9	78.8	0.09	1	12	295	0.62
3	Student Room-3	112	9	78.8	0.09	1	12	324	0.68
4	Student Room-4	112	9	78.8	0.09	1	12	281	0.59
5	Student Room-5	112	9	78.8	0.09	1	12	295	0.62
6	Student Room-6	112	9	78.8	0.09	1	12	262	0.55
7	Student Room-7	112	9	78.8	0.09	1	12	262	0.55
8	Student Room-8	112	9	78.8	0.09	1	12	295	0.62
9	Student Room-9	112	9	78.8	0.09	1	12	281	0.59
10	Student Room-10	112	9	78.8	0.09	1	12	247	0.53
11	Student Room-11	112	9	78.8	0.09	1	12	293	0.62
12	Student Room-12	112	9	78.8	0.09	1	12	342	0.71
13	Student Room-13	112	9	78.8	0.09	1	12	295	0.62
14	Student Room-14	112	9	78.8	0.09	1	12	295	0.62
<b>Sub Total</b>		<b>1568</b>			<b>1.25</b>	<b>14</b>	<b>164</b>	<b>4109</b>	<b>8.63</b>
<b>LEVEL - 107</b>									
1	Student Room-1	112	9	78.8	0.09	1	12	341	0.71
2	Student Room-2	112	9	78.8	0.09	1	12	295	0.62
3	Student Room-3	112	9	78.8	0.09	1	12	324	0.68
4	Student Room-4	112	9	78.8	0.09	1	12	281	0.59
5	Student Room-5	112	9	78.8	0.09	1	12	293	0.62
6	Student Room-6	112	9	78.8	0.09	1	12	260	0.55
7	Student Room-7	112	9	78.8	0.09	1	12	295	0.62
8	Student Room-8	112	9	78.8	0.09	1	12	262	0.55
9	Student Room-9	112	9	78.8	0.09	1	12	277	0.58
10	Student Room-10	112	9	78.8	0.09	1	12	310	0.65
11	Student Room-11	112	9	78.8	0.09	1	12	295	0.62
12	Student Room-12	112	9	78.8	0.09	1	12	333	0.69
13	Student Room-13	112	9	78.8	0.09	1	12	308	0.64
14	Student Room-14	112	9	78.8	0.09	1	12	357	0.74
15	Student Room-15	112	9	78.8	0.09	1	12	310	0.65
16	Student Room-16	112	9	78.8	0.09	1	12	310	0.65
<b>Sub Total</b>		<b>1792</b>			<b>1.43</b>	<b>16</b>	<b>188</b>	<b>4851</b>	<b>10.16</b>
<b>LEVEL - 110</b>									
1	Student Room-1	112	9	78.8	0.09	1	12	356	0.74
2	Student Room-2	112	9	78.8	0.09	1	12	310	0.65
3	Student Room-3	112	9	78.8	0.09	1	12	339	0.71
4	Student Room-4	112	9	78.8	0.09	1	12	295	0.62
5	Student Room-5	112	9	78.8	0.09	1	12	308	0.64
6	Student Room-6	112	9	78.8	0.09	1	12	346	0.72
7	Student Room-7	112	9	78.8	0.09	1	12	310	0.65
8	Student Room-8	112	9	78.8	0.09	1	12	332	0.69
<b>Sub Total</b>		<b>896</b>			<b>0.72</b>	<b>8</b>	<b>94</b>	<b>2595</b>	<b>5.41</b>
<b>Total</b>		<b>6272</b>			<b>5.02</b>	<b>56</b>	<b>656</b>	<b>16886</b>	<b>35.38</b>



### DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dissipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 3</b>									
<b>LEVEL - 113</b>									
1	Student Room-1	112	9	78.8	0.09	1	12	337	0.70
2	Student Room-2	112	9	78.8	0.09	1	12	295	0.62
3	Student Room-3	112	9	78.8	0.09	1	12	336	0.70
4	Student Room-4	112	9	78.8	0.09	1	12	287	0.60
5	Student Room-5	112	9	78.8	0.09	1	12	295	0.62
6	Student Room-6	112	9	78.8	0.09	1	12	262	0.55
7	Student Room-7	112	9	78.8	0.09	1	12	262	0.55
8	Student Room-8	112	9	78.8	0.09	1	12	295	0.62
9	Student Room-9	112	9	78.8	0.09	1	12	303	0.64
10	Student Room-10	112	9	78.8	0.09	1	12	353	0.73
11	Student Room-11	112	9	78.8	0.09	1	12	295	0.62
12	Student Room-12	112	9	78.8	0.09	1	12	329	0.69
<b>Sub Total</b>		<b>1344</b>			<b>1.08</b>	<b>12</b>	<b>141</b>	<b>3650</b>	<b>7.65</b>
<b>LEVEL - 116</b>									
1	Student Room-1	112	9	78.8	0.09	1	12	337	0.70
2	Student Room-2	112	9	78.8	0.09	1	12	295	0.62
3	Student Room-3	112	9	78.8	0.09	1	12	336	0.70
4	Student Room-4	112	9	78.8	0.09	1	12	287	0.60
5	Student Room-5	112	9	78.8	0.09	1	12	295	0.62
6	Student Room-6	112	9	78.8	0.09	1	12	262	0.55
7	Student Room-7	112	9	78.8	0.09	1	12	262	0.55
8	Student Room-8	112	9	78.8	0.09	1	12	295	0.62
9	Student Room-9	112	9	78.8	0.09	1	12	303	0.64
10	Student Room-10	112	9	78.8	0.09	1	12	353	0.73
11	Student Room-11	112	9	78.8	0.09	1	12	295	0.62
12	Student Room-12	112	9	78.8	0.09	1	12	329	0.69
<b>Sub Total</b>		<b>1344</b>			<b>1.08</b>	<b>12</b>	<b>141</b>	<b>3650</b>	<b>7.65</b>
<b>LEVEL - 119</b>									
1	Student Room-1	112	9	78.8	0.09	1	12	337	0.70
2	Student Room-2	112	9	78.8	0.09	1	12	295	0.62
3	Student Room-3	112	9	78.8	0.09	1	12	336	0.70
4	Student Room-4	112	9	78.8	0.09	1	12	287	0.60
5	Student Room-5	112	9	78.8	0.09	1	12	295	0.62
6	Student Room-6	112	9	78.8	0.09	1	12	262	0.55
7	Student Room-7	112	9	78.8	0.09	1	12	262	0.55
8	Student Room-8	112	9	78.8	0.09	1	12	295	0.62
9	Student Room-9	112	9	78.8	0.09	1	12	287	0.60
10	Student Room-10	112	9	78.8	0.09	1	12	313	0.65
11	Student Room-11	119	9	78.8	0.10	1	12	326	0.68
12	Student Room-12	123	9	78.8	0.10	1	12	383	0.79
13	Student Room-13	123	9	78.8	0.10	1	12	325	0.68
14	Student Room-14	123	9	78.8	0.10	1	12	359	0.75
<b>Sub Total</b>		<b>1608</b>			<b>1.29</b>	<b>14</b>	<b>166</b>	<b>4362</b>	<b>9.13</b>
<b>LEVEL - 122</b>									
1	Student Room-1	123	9	78.8	0.10	1	12	367	0.76
2	Student Room-2	123	9	78.8	0.10	1	12	325	0.68
3	Student Room-3	123	9	78.8	0.10	1	12	399	0.82
4	Student Room-4	123	9	78.8	0.10	1	12	316	0.66
5	Student Room-5	123	9	78.8	0.10	1	12	325	0.68
6	Student Room-6	121	9	78.8	0.10	1	12	290	0.61
7	Student Room-7	121	9	78.8	0.10	1	12	290	0.61
8	Student Room-8	123	9	78.8	0.10	1	12	325	0.68
9	Student Room-9	123	9	78.8	0.10	1	12	313	0.66
10	Student Room-10	123	9	78.8	0.10	1	12	339	0.71
<b>Sub Total</b>		<b>1226</b>			<b>0.98</b>	<b>10</b>	<b>124</b>	<b>3292</b>	<b>6.87</b>
<b>Total</b>		<b>5522</b>			<b>4.42</b>	<b>48</b>	<b>571</b>	<b>14955</b>	<b>31.29</b>

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 4</b>									
<b>LEVEL - 104</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	325	0.68
2	Student Room-2	111	9	78.8	0.09	1	12	291	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	283	0.60
4	Student Room-4	111	9	78.8	0.09	1	12	329	0.69
5	Student Room-5	111	9	78.8	0.09	1	12	291	0.61
6	Student Room-6	111	9	78.8	0.09	1	12	258	0.55
7	Student Room-7	111	9	78.8	0.09	1	12	258	0.55
8	Student Room-8	111	9	78.8	0.09	1	12	291	0.61
9	Student Room-9	111	9	78.8	0.09	1	12	335	0.70
10	Student Room-10	111	9	78.8	0.09	1	12	293	0.61
<b>Sub Total</b>		<b>1110</b>			<b>0.89</b>	<b>10</b>	<b>117</b>	<b>2955</b>	<b>6.20</b>
<b>LEVEL - 107</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	325	0.68
2	Student Room-2	111	9	78.8	0.09	1	12	291	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	283	0.60
4	Student Room-4	111	9	78.8	0.09	1	12	329	0.69
5	Student Room-5	111	9	78.8	0.09	1	12	291	0.61
6	Student Room-6	111	9	78.8	0.09	1	12	258	0.55
7	Student Room-7	111	9	78.8	0.09	1	12	258	0.55
8	Student Room-8	111	9	78.8	0.09	1	12	291	0.61
9	Student Room-9	111	9	78.8	0.09	1	12	335	0.70
10	Student Room-10	111	9	78.8	0.09	1	12	299	0.63
11	Student Room-11	111	9	78.8	0.09	1	12	291	0.61
12	Student Room-12	111	9	78.8	0.09	1	12	333	0.69
<b>Sub Total</b>		<b>1332</b>			<b>1.07</b>	<b>12</b>	<b>140</b>	<b>3585</b>	<b>7.52</b>
<b>LEVEL - 110</b>									
1	Student Room-1	124	9	78.8	0.10	1	12	359	0.75
2	Student Room-2	124	9	78.8	0.10	1	12	320	0.67
3	Student Room-3	122	9	78.8	0.10	1	12	351	0.73
4	Student Room-4	122	9	78.8	0.10	1	12	325	0.68
5	Student Room-5	111	9	78.8	0.09	1	12	283	0.60
6	Student Room-6	111	9	78.8	0.09	1	12	329	0.69
7	Student Room-7	111	9	78.8	0.09	1	12	291	0.61
8	Student Room-8	111	9	78.8	0.09	1	12	258	0.55
9	Student Room-9	111	9	78.8	0.09	1	12	258	0.55
10	Student Room-10	111	9	78.8	0.09	1	12	291	0.61
11	Student Room-11	111	9	78.8	0.09	1	12	335	0.70
12	Student Room-12	111	9	78.8	0.09	1	12	299	0.63
13	Student Room-13	111	9	78.8	0.09	1	12	291	0.61
14	Student Room-14	111	9	78.8	0.09	1	12	333	0.69
15	Student Room-15	111	9	78.8	0.09	1	12	283	0.60
16	Student Room-16	111	9	78.8	0.09	1	12	309	0.65
<b>Sub Total</b>		<b>1824</b>			<b>1.46</b>	<b>16</b>	<b>189</b>	<b>4917</b>	<b>10.30</b>
<b>LEVEL - 113</b>									
1	Student Room-1	122	9	78.8	0.10	1	12	310	0.65
2	Student Room-2	122	9	78.8	0.10	1	12	356	0.74
3	Student Room-3	120	9	78.8	0.10	1	12	316	0.66
4	Student Room-4	122	9	78.8	0.10	1	12	285	0.60
5	Student Room-5	122	9	78.8	0.10	1	12	285	0.60
6	Student Room-6	120	9	78.8	0.10	1	12	316	0.66
7	Student Room-7	122	9	78.8	0.10	1	12	362	0.75
8	Student Room-8	122	9	78.8	0.10	1	12	325	0.68
9	Student Room-9	111	9	78.8	0.09	1	12	291	0.61
10	Student Room-10	111	9	78.8	0.09	1	12	354	0.73
11	Student Room-11	111	9	78.8	0.09	1	12	283	0.60
12	Student Room-12	111	9	78.8	0.09	1	12	309	0.65
<b>Sub Total</b>		<b>1416</b>			<b>1.13</b>	<b>12</b>	<b>145</b>	<b>3790</b>	<b>7.93</b>
<b>LEVEL - 116</b>									
1	Student Room-1	122	9	78.8	0.10	1	12	318	0.67
2	Student Room-2	122	9	78.8	0.10	1	12	360	0.75
3	Student Room-3	122	9	78.8	0.10	1	12	310	0.65
4	Student Room-4	122	9	78.8	0.10	1	12	336	0.70
<b>Sub Total</b>		<b>488</b>			<b>0.39</b>	<b>4</b>	<b>49</b>	<b>1323</b>	<b>2.76</b>
<b>Total</b>		<b>6170</b>			<b>4.94</b>	<b>54</b>	<b>640</b>	<b>16571</b>	<b>34.70</b>



## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 5</b>									
<b>LEVEL - 107</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	329	0.69
2	Student Room-2	111	9	78.8	0.09	1	12	305	0.64
3	Student Room-3	111	9	78.8	0.09	1	12	289	0.61
4	Student Room-4	111	9	78.8	0.09	1	12	339	0.70
5	Student Room-5	111	9	78.8	0.09	1	12	327	0.68
6	Student Room-6	111	9	78.8	0.09	1	12	289	0.61
7	Student Room-7	111	9	78.8	0.09	1	12	337	0.70
8	Student Room-8	111	9	78.8	0.09	1	12	291	0.61
9	Student Room-9	111	9	78.8	0.09	1	12	289	0.61
10	Student Room-10	111	9	78.8	0.09	1	12	339	0.70
<b>Sub Total</b>		<b>1110</b>			<b>0.89</b>	<b>10</b>	<b>117</b>	<b>3135</b>	<b>6.55</b>
<b>LEVEL - 110</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	327	0.68
2	Student Room-2	111	9	78.8	0.09	1	12	289	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	291	0.61
4	Student Room-4	111	9	78.8	0.09	1	12	313	0.65
5	Student Room-5	111	9	78.8	0.09	1	12	305	0.64
6	Student Room-6	111	9	78.8	0.09	1	12	351	0.73
7	Student Room-7	111	9	78.8	0.09	1	12	289	0.61
8	Student Room-8	111	9	78.8	0.09	1	12	339	0.70
9	Student Room-9	111	9	78.8	0.09	1	12	327	0.68
10	Student Room-10	111	9	78.8	0.09	1	12	289	0.61
11	Student Room-11	111	9	78.8	0.09	1	12	337	0.70
12	Student Room-12	111	9	78.8	0.09	1	12	291	0.61
13	Student Room-13	111	9	78.8	0.09	1	12	305	0.64
14	Student Room-14	111	9	78.8	0.09	1	12	327	0.68
15	Student Room-15	111	9	78.8	0.09	1	12	289	0.61
16	Student Room-16	111	9	78.8	0.09	1	12	339	0.70
<b>Sub Total</b>		<b>1776</b>			<b>1.42</b>	<b>16</b>	<b>187</b>	<b>5010</b>	<b>10.47</b>
<b>LEVEL - 113</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	327	0.68
2	Student Room-2	111	9	78.8	0.09	1	12	289	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	291	0.61
4	Student Room-4	111	9	78.8	0.09	1	12	313	0.65
5	Student Room-5	111	9	78.8	0.09	1	12	305	0.64
6	Student Room-6	111	9	78.8	0.09	1	12	351	0.73
7	Student Room-7	111	9	78.8	0.09	1	12	289	0.61
8	Student Room-8	111	9	78.8	0.09	1	12	339	0.70
9	Student Room-9	111	9	78.8	0.09	1	12	327	0.68
10	Student Room-10	111	9	78.8	0.09	1	12	289	0.61
11	Student Room-11	111	9	78.8	0.09	1	12	337	0.70
12	Student Room-12	111	9	78.8	0.09	1	12	291	0.61
13	Student Room-13	122	9	78.8	0.10	1	12	332	0.69
14	Student Room-14	122	9	78.8	0.10	1	12	354	0.74
15	Student Room-15	118	9	78.8	0.09	1	12	311	0.65
16	Student Room-16	122	9	78.8	0.10	1	12	365	0.76
<b>Sub Total</b>		<b>1816</b>			<b>1.45</b>	<b>16</b>	<b>189</b>	<b>5112</b>	<b>10.68</b>
<b>LEVEL - 116</b>									
1	Student Room-1	110	9	78.8	0.09	1	12	326	0.68
2	Student Room-2	110	9	78.8	0.09	1	12	288	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	291	0.61
4	Student Room-4	122	9	78.8	0.10	1	12	324	0.68
5	Student Room-5	118	9	78.8	0.09	1	12	327	0.68
6	Student Room-6	122	9	78.8	0.10	1	12	377	0.78
7	Student Room-7	122	9	78.8	0.10	1	12	316	0.66
8	Student Room-8	122	9	78.8	0.10	1	12	365	0.76
9	Student Room-9	122	9	78.8	0.10	1	12	354	0.74
10	Student Room-10	122	9	78.8	0.10	1	12	316	0.66
11	Student Room-11	122	9	78.8	0.10	1	12	364	0.75
12	Student Room-12	122	9	78.8	0.10	1	12	318	0.67
<b>Sub Total</b>		<b>1425</b>			<b>1.14</b>	<b>12</b>	<b>146</b>	<b>3966</b>	<b>8.28</b>
<b>LEVEL - 119</b>									
1	Student Room-1	122	9	78.8	0.10	1	12	354	0.74
2	Student Room-2	122	9	78.8	0.10	1	12	316	0.66
3	Student Room-3	122	9	78.8	0.10	1	12	318	0.67
4	Student Room-4	122	9	78.8	0.10	1	12	340	0.71
<b>Sub Total</b>		<b>488</b>			<b>0.39</b>	<b>4</b>	<b>49</b>	<b>1327</b>	<b>2.77</b>
<b>Total</b>		<b>6615</b>			<b>5.29</b>	<b>58</b>	<b>687</b>	<b>18550</b>	<b>38.74</b>



**DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR**

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dissipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 6</b>									
<b>LEVEL - 116</b>									
1	Gym	111	9	78.80	0.09	3	36	258	0.65
2	Gym	111	9	78.80	0.09	3	36	258	0.65
3	Café	111	9	78.80	0.09	4	37	252	0.66
4	Café	111	9	78.80	0.09	4	37	252	0.66
Sub Total		444			0.36	14	145	1021	2.62
<b>LEVEL - 119</b>									
1	Student Room-1	111	9	78.80	0.09	1	12	337	0.70
2	Student Room-2	111	9	78.80	0.09	1	12	291	0.61
3	Student Room-3	111	9	78.80	0.09	1	12	306	0.64
4	Student Room-4	111	9	78.80	0.09	1	12	256	0.54
5	Student Room-5	111	9	78.80	0.09	1	12	256	0.54
6	Student Room-6	111	9	78.80	0.09	1	12	289	0.61
7	Student Room-7	111	9	78.80	0.09	1	12	305	0.64
8	Student Room-8	111	9	78.80	0.09	1	12	351	0.73
9	Student Room-9	111	9	78.80	0.09	1	12	289	0.61
10	Student Room-10	111	9	78.80	0.09	1	12	339	0.70
Sub Total		1110			0.89	10	117	3020	6.33
<b>LEVEL - 122</b>									
1	Student Room-1	111	9	78.80	0.09	1	12	291	0.61
2	Student Room-2	111	9	78.80	0.09	1	12	313	0.65
3	Student Room-3	111	9	78.80	0.09	1	12	277	0.58
4	Student Room-4	111	9	78.80	0.09	1	12	244	0.52
5	Student Room-5	111	9	78.80	0.09	1	12	244	0.52
6	Student Room-6	111	9	78.80	0.09	1	12	277	0.58
7	Student Room-7	111	9	78.80	0.09	1	12	291	0.61
8	Student Room-8	111	9	78.80	0.09	1	12	337	0.70
9	Student Room-9	111	9	78.80	0.09	1	12	305	0.64
10	Student Room-10	111	9	78.80	0.09	1	12	327	0.68
11	Student Room-11	111	9	78.80	0.09	1	12	289	0.61
12	Student Room-12	111	9	78.80	0.09	1	12	256	0.54
13	Student Room-13	111	9	78.80	0.09	1	12	256	0.54
14	Student Room-14	111	9	78.80	0.09	1	12	289	0.61
15	Student Room-15	111	9	78.80	0.09	1	12	291	0.61
16	Student Room-16	111	9	78.80	0.09	1	12	313	0.65
17	Student Room-17	111	9	78.80	0.09	1	12	305	0.64
18	Student Room-18	111	9	78.80	0.09	1	12	351	0.73
19	Student Room-19	111	9	78.80	0.09	1	12	289	0.61
20	Student Room-20	111	9	78.80	0.09	1	12	339	0.70
Sub Total		2220			1.78	20	233	5887	12.35
<b>LEVEL - 125</b>									
1	Student Room-1	111	9	78.80	0.09	1	12	315	0.66
2	Student Room-2	111	9	78.80	0.09	1	12	277	0.58
3	Student Room-3	111	9	78.80	0.09	1	12	370	0.77
4	Student Room-4	111	9	78.80	0.09	1	12	258	0.55
5	Student Room-5	111	9	78.80	0.09	1	12	305	0.64
6	Student Room-6	111	9	78.80	0.09	1	12	327	0.68
7	Student Room-7	111	9	78.80	0.09	1	12	289	0.61
8	Student Room-8	111	9	78.80	0.09	1	12	256	0.54
9	Student Room-9	111	9	78.80	0.09	1	12	256	0.54
10	Student Room-10	111	9	78.80	0.09	1	12	289	0.61
11	Student Room-11	111	9	78.80	0.09	1	12	291	0.61
12	Student Room-12	111	9	78.80	0.09	1	12	313	0.65
13	Student Room-13	111	9	78.80	0.09	1	12	305	0.64
14	Student Room-14	111	9	78.80	0.09	1	12	351	0.73
15	Student Room-15	111	9	78.80	0.09	1	12	277	0.58
16	Student Room-16	111	9	78.80	0.09	1	12	244	0.52
17	Student Room-17	111	9	78.80	0.09	1	12	244	0.52
18	Student Room-18	111	9	78.80	0.09	1	12	277	0.58
19	Student Room-19	111	9	78.80	0.09	1	12	291	0.61
20	Student Room-20	111	9	78.80	0.09	1	12	337	0.70
21	Student Room-21	111	9	78.80	0.09	1	12	305	0.64
22	Student Room-22	111	9	78.80	0.09	1	12	327	0.68
23	Student Room-23	111	9	78.80	0.09	1	12	289	0.61
24	Student Room-24	111	9	78.80	0.09	1	12	256	0.54
25	Student Room-25	111	9	78.80	0.09	1	12	256	0.54
26	Student Room-26	111	9	78.80	0.09	1	12	289	0.61
27	Student Room-27	111	9	78.80	0.09	1	12	291	0.61
28	Student Room-28	111	9	78.80	0.09	1	12	313	0.65
29	Student Room-29	122	9	78.80	0.10	1	12	316	0.66
30	Student Room-30	122	9	78.80	0.10	1	12	361	0.75
31	Student Room-31	122	9	78.80	0.10	1	12	300	0.63
32	Student Room-32	122	9	78.80	0.10	1	12	349	0.73
Sub Total		3596			2.88	32	376	9529	19.98

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 128</b>									
1	Student Room-1	111	9	78.80	0.09	1	12	315	0.66
2	Student Room-2	111	9	78.80	0.09	1	12	277	0.58
3	Student Room-3	111	9	78.80	0.09	1	12	337	0.70
4	Student Room-4	111	9	78.80	0.09	1	12	291	0.61
5	Student Room-5	111	9	78.80	0.09	1	12	305	0.64
6	Student Room-6	111	9	78.80	0.09	1	12	327	0.68
7	Student Room-7	111	9	78.80	0.09	1	12	289	0.61
8	Student Room-8	111	9	78.80	0.09	1	12	256	0.54
9	Student Room-9	111	9	78.80	0.09	1	12	256	0.54
10	Student Room-10	111	9	78.80	0.09	1	12	289	0.61
11	Student Room-11	111	9	78.80	0.09	1	12	291	0.61
12	Student Room-12	111	9	78.80	0.09	1	12	313	0.65
13	Student Room-13	110	9	78.80	0.09	1	12	304	0.64
14	Student Room-14	110	9	78.80	0.09	1	12	350	0.73
15	Student Room-15	110	9	78.80	0.09	1	12	276	0.58
16	Student Room-16	110	9	78.80	0.09	1	12	243	0.52
17	Student Room-17	118	9	78.80	0.09	1	12	266	0.56
18	Student Room-18	122	9	78.80	0.10	1	12	304	0.64
19	Student Room-19	122	9	78.80	0.10	1	12	318	0.67
20	Student Room-20	122	9	78.80	0.10	1	12	364	0.75
21	Student Room-21	122	9	78.80	0.10	1	12	332	0.69
22	Student Room-22	122	9	78.80	0.10	1	12	354	0.74
23	Student Room-23	120	9	78.80	0.10	1	12	314	0.66
24	Student Room-24	122	9	78.80	0.10	1	12	283	0.60
25	Student Room-25	120	9	78.80	0.10	1	12	280	0.59
26	Student Room-26	122	9	78.80	0.10	1	12	316	0.66
27	Student Room-27	122	9	78.80	0.10	1	12	318	0.67
28	Student Room-28	122	9	78.80	0.10	1	12	340	0.71
<b>Sub Total</b>		<b>3228</b>			<b>2.58</b>	<b>28</b>	<b>334</b>	<b>8508</b>	<b>17.83</b>
<b>LEVEL - 131</b>									
1	Student Room-1	122	9	78.80	0.10	1	12	342	0.71
2	Student Room-2	118	9	78.80	0.09	1	12	299	0.63
3	Student Room-3	122	9	78.80	0.10	1	12	318	0.67
4	Student Room-4	122	9	78.80	0.10	1	12	364	0.75
5	Student Room-5	111	9	78.80	0.09	1	12	272	0.57
6	Student Room-6	122	9	78.80	0.10	1	12	338	0.70
7	Student Room-7	111	9	78.80	0.09	1	12	289	0.61
8	Student Room-8	122	9	78.80	0.10	1	12	267	0.56
9	Student Room-9	118	9	78.80	0.09	1	12	316	0.66
10	Student Room-10	122	9	78.80	0.10	1	12	316	0.66
11	Student Room-11	122	9	78.80	0.10	1	12	318	0.67
12	Student Room-12	122	9	78.80	0.10	1	12	340	0.71
13	Student Room-13	122	9	78.80	0.10	1	12	332	0.69
14	Student Room-14	122	9	78.80	0.10	1	12	377	0.78
15	Student Room-15	122	9	78.80	0.10	1	12	304	0.64
16	Student Room-16	122	9	78.80	0.10	1	12	353	0.73
<b>Sub Total</b>		<b>1922</b>			<b>1.54</b>	<b>16</b>	<b>195</b>	<b>5144</b>	<b>10.75</b>
<b>LEVEL - 134</b>									
1	Student Room-1	122	9	78.80	0.10	1	12	365	0.76
2	Student Room-2	122	9	78.80	0.10	1	12	316	0.66
3	Student Room-3	122	9	78.80	0.10	1	12	332	0.69
4	Student Room-4	122	9	78.80	0.10	1	12	387	0.80
<b>Sub Total</b>		<b>488</b>			<b>0.39</b>	<b>4</b>	<b>49</b>	<b>1400</b>	<b>2.91</b>
<b>Total</b>		<b>13008</b>			<b>10.41</b>	<b>124</b>	<b>1449</b>	<b>34508</b>	<b>72.77</b>

### DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 7</b>									
<b>LEVEL - 119</b>									
1	Student Room-1	111	9	78.80	0.09	1	12	327	0.68
2	Student Room-2	111	9	78.80	0.09	1	12	289	0.61
3	Student Room-3	111	9	78.80	0.09	1	12	313	0.65
4	Student Room-4	111	9	78.80	0.09	1	12	291	0.61
5	Student Room-5	111	9	78.80	0.09	1	12	305	0.64
6	Student Room-6	111	9	78.80	0.09	1	12	329	0.69
7	Student Room-7	111	9	78.80	0.09	1	12	289	0.61
8	Student Room-8	111	9	78.80	0.09	1	12	339	0.70
Sub Total		888			0.71	8	93	2483	5.19
<b>LEVEL - 122</b>									
1	Student Room-1	110	9	78.80	0.09	1	12	326	0.68
2	Student Room-2	110	9	78.80	0.09	1	12	288	0.61
3	Student Room-3	110	9	78.80	0.09	1	12	337	0.70
4	Student Room-4	110	9	78.80	0.09	1	12	290	0.61
5	Student Room-5	110	9	78.80	0.09	1	12	288	0.61
6	Student Room-6	110	9	78.80	0.09	1	12	255	0.54
7	Student Room-7	110	9	78.80	0.09	1	12	255	0.54
8	Student Room-8	110	9	78.80	0.09	1	12	288	0.61
9	Student Room-9	110	9	78.80	0.09	1	12	290	0.61
10	Student Room-10	110	9	78.80	0.09	1	12	312	0.65
11	Student Room-11	110	9	78.80	0.09	1	12	304	0.64
12	Student Room-12	110	9	78.80	0.09	1	12	328	0.68
13	Student Room-13	110	9	78.80	0.09	1	12	288	0.61
14	Student Room-14	110	9	78.80	0.09	1	12	338	0.70
Sub Total		1540			1.23	14	162	4189	8.78
<b>LEVEL - 125</b>									
1	Student Room-1	111	9	78.80	0.09	1	12	327	0.68
2	Student Room-2	111	9	78.80	0.09	1	12	289	0.61
3	Student Room-3	111	9	78.80	0.09	1	12	313	0.65
4	Student Room-4	111	9	78.80	0.09	1	12	291	0.61
5	Student Room-5	111	9	78.80	0.09	1	12	305	0.64
6	Student Room-6	111	9	78.80	0.09	1	12	329	0.69
7	Student Room-7	111	9	78.80	0.09	1	12	289	0.61
8	Student Room-8	111	9	78.80	0.09	1	12	256	0.54
9	Student Room-9	111	9	78.80	0.09	1	12	256	0.54
10	Student Room-10	111	9	78.80	0.09	1	12	289	0.61
11	Student Room-11	111	9	78.80	0.09	1	12	338	0.70
12	Student Room-12	111	9	78.80	0.09	1	12	291	0.61
13	Student Room-13	110	9	78.80	0.09	1	12	304	0.64
14	Student Room-14	110	9	78.80	0.09	1	12	310	0.65
15	Student Room-15	111	9	78.80	0.09	1	12	289	0.61
16	Student Room-16	111	9	78.80	0.09	1	12	256	0.54
17	Student Room-17	111	9	78.80	0.09	1	12	256	0.54
18	Student Room-18	111	9	78.80	0.09	1	12	289	0.61
19	Student Room-19	110	9	78.80	0.09	1	12	290	0.61
20	Student Room-20	110	9	78.80	0.09	1	12	319	0.67
21	Student Room-21	118	9	78.80	0.09	1	12	327	0.68
22	Student Room-22	122	9	78.80	0.10	1	12	356	0.74
23	Student Room-23	122	9	78.80	0.10	1	12	316	0.66
24	Student Room-24	122	9	78.80	0.10	1	12	365	0.76
Sub Total		2700			2.16	24	282	7253	15.20

### DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>LEVEL - 128</b>									
1	Student Room-1	110	9	78.80	0.09	1	12	326	0.68
2	Student Room-2	110	9	78.80	0.09	1	12	288	0.61
3	Student Room-3	110	9	78.80	0.09	1	12	290	0.61
4	Student Room-4	110	9	78.80	0.09	1	12	312	0.65
5	Student Room-5	111	9	78.80	0.09	1	12	305	0.64
6	Student Room-6	111	9	78.80	0.09	1	12	329	0.69
7	Student Room-7	111	9	78.80	0.09	1	12	289	0.61
8	Student Room-8	110	9	78.80	0.09	1	12	255	0.54
9	Student Room-9	110	9	78.80	0.09	1	12	255	0.54
10	Student Room-10	110	9	78.80	0.09	1	12	288	0.61
11	Student Room-11	110	9	78.80	0.09	1	12	337	0.70
12	Student Room-12	110	9	78.80	0.09	1	12	290	0.61
13	Student Room-13	110	9	78.80	0.09	1	12	304	0.64
14	Student Room-14	110	9	78.80	0.09	1	12	310	0.65
15	Student Room-15	111	9	78.80	0.09	1	12	289	0.61
16	Student Room-16	111	9	78.80	0.09	1	12	256	0.54
17	Student Room-17	111	9	78.80	0.09	1	12	271	0.57
18	Student Room-18	111	9	78.80	0.09	1	12	304	0.64
19	Student Room-19	110	9	78.80	0.09	1	12	305	0.64
20	Student Room-20	110	9	78.80	0.09	1	12	334	0.69
<b>Sub Total</b>		<b>2207</b>			<b>1.77</b>	<b>20</b>	<b>232</b>	<b>5938</b>	<b>12.45</b>
<b>LEVEL - 131</b>									
1	Student Room-1	122	9	78.80	0.10	1	12	354	0.74
2	Student Room-2	122	9	78.80	0.10	1	12	316	0.66
3	Student Room-3	122	9	78.80	0.10	1	12	318	0.67
4	Student Room-4	122	9	78.80	0.10	1	12	340	0.71
5	Student Room-5	111	9	78.80	0.09	1	12	305	0.64
6	Student Room-6	111	9	78.80	0.09	1	12	329	0.69
7	Student Room-7	111	9	78.80	0.09	1	12	289	0.61
8	Student Room-8	111	9	78.80	0.09	1	12	256	0.54
9	Student Room-9	118	9	78.80	0.09	1	12	278	0.59
10	Student Room-10	122	9	78.80	0.10	1	12	316	0.66
11	Student Room-11	122	9	78.80	0.10	1	12	364	0.76
12	Student Room-12	122	9	78.80	0.10	1	12	318	0.67
13	Student Room-13	122	9	78.80	0.10	1	12	332	0.69
14	Student Room-14	122	9	78.80	0.10	1	12	338	0.70
15	Student Room-15	120	9	78.80	0.10	1	12	314	0.66
16	Student Room-16	124	9	78.80	0.10	1	12	368	0.76
<b>Sub Total</b>		<b>1904</b>			<b>1.52</b>	<b>16</b>	<b>194</b>	<b>5134</b>	<b>10.73</b>
<b>LEVEL - 134</b>									
1	Student Room-1	122	9	78.80	0.10	1	12	314	0.66
2	Student Room-2	122	9	78.80	0.10	1	12	356	0.74
3	Student Room-3	122	9	78.80	0.10	1	12	316	0.66
4	Student Room-4	122	9	78.80	0.10	1	12	316	0.66
<b>Sub Total</b>		<b>488</b>			<b>0.39</b>	<b>4</b>	<b>49</b>	<b>1302</b>	<b>2.72</b>
<b>Total</b>		<b>9727</b>			<b>7.78</b>	<b>86</b>	<b>1014</b>	<b>26299</b>	<b>55.07</b>

### DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 8</b>									
<b>LEVEL - 125</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	327	0.68
2	Student Room-2	111	9	78.8	0.09	1	12	289	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	305	0.64
4	Student Room-4	111	9	78.8	0.09	1	12	327	0.68
5	Student Room-5	111	9	78.8	0.09	1	12	305	0.64
6	Student Room-6	111	9	78.8	0.09	1	12	329	0.69
7	Student Room-7	111	9	78.8	0.09	1	12	289	0.61
8	Student Room-8	111	9	78.8	0.09	1	12	339	0.70
<b>Sub Total</b>		<b>888</b>			<b>0.71</b>	<b>8</b>	<b>93</b>	<b>2511</b>	<b>5.25</b>
<b>LEVEL - 128</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	327	0.68
2	Student Room-2	111	9	78.8	0.09	1	12	289	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	272	0.57
4	Student Room-4	111	9	78.8	0.09	1	12	327	0.68
5	Student Room-5	111	9	78.8	0.09	1	12	305	0.64
6	Student Room-6	111	9	78.8	0.09	1	12	329	0.69
7	Student Room-7	111	9	78.8	0.09	1	12	289	0.61
8	Student Room-8	111	9	78.8	0.09	1	12	339	0.70
<b>Sub Total</b>		<b>888</b>			<b>0.71</b>	<b>8</b>	<b>93</b>	<b>2478</b>	<b>5.18</b>
<b>LEVEL - 131</b>									
1	Student Room-1	110	9	78.8	0.09	1	12	326	0.68
2	Student Room-2	110	9	78.8	0.09	1	12	288	0.61
3	Student Room-3	110	9	78.8	0.09	1	12	304	0.64
4	Student Room-4	110	9	78.8	0.09	1	12	326	0.68
5	Student Room-5	122	9	78.8	0.10	1	12	332	0.69
6	Student Room-6	122	9	78.8	0.10	1	12	356	0.74
7	Student Room-7	122	9	78.8	0.10	1	12	316	0.66
8	Student Room-8	122	9	78.8	0.10	1	12	365	0.76
<b>Sub Total</b>		<b>928</b>			<b>0.74</b>	<b>8</b>	<b>96</b>	<b>2613</b>	<b>5.45</b>
<b>LEVEL - 134</b>									
1	Student Room-1	122	9	78.8	0.10	1	12	354	0.74
2	Student Room-2	122	9	78.8	0.10	1	12	316	0.66
3	Student Room-3	122	9	78.8	0.10	1	12	332	0.69
4	Student Room-4	122	9	78.8	0.10	1	12	354	0.74
<b>Sub Total</b>		<b>488</b>			<b>0.39</b>	<b>4</b>	<b>49</b>	<b>1355</b>	<b>2.82</b>
<b>Total</b>		<b>3192</b>			<b>2.55</b>	<b>28</b>	<b>332</b>	<b>8957</b>	<b>18.71</b>



## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 9</b>									
<b>LEVEL - 125</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	333	0.69
2	Student Room-2	111	9	78.8	0.09	1	12	291	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	299	0.63
4	Student Room-4	111	9	78.8	0.09	1	12	325	0.68
5	Student Room-5	111	9	78.8	0.09	1	12	299	0.63
6	Student Room-6	111	9	78.8	0.09	1	12	335	0.70
7	Student Room-7	111	9	78.8	0.09	1	12	291	0.61
8	Student Room-8	111	9	78.8	0.09	1	12	258	0.55
9	Student Room-9	111	9	78.8	0.09	1	12	258	0.55
10	Student Room-10	111	9	78.8	0.09	1	12	291	0.61
11	Student Room-11	110	9	78.8	0.09	1	12	328	0.68
12	Student Room-12	110	9	78.8	0.09	1	12	282	0.59
13	Student Room-13	110	9	78.8	0.09	1	12	290	0.61
14	Student Room-14	111	9	78.8	0.09	1	12	325	0.68
<b>Sub Total</b>		<b>1551</b>			<b>1.24</b>	<b>14</b>	<b>163</b>	<b>4206</b>	<b>8.81</b>
<b>LEVEL - 128</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	333	0.69
2	Student Room-2	111	9	78.8	0.09	1	12	291	0.61
3	Student Room-3	111	9	78.8	0.09	1	12	299	0.63
4	Student Room-4	111	9	78.8	0.09	1	12	325	0.68
5	Student Room-5	111	9	78.8	0.09	1	12	299	0.63
6	Student Room-6	111	9	78.8	0.09	1	12	335	0.70
7	Student Room-7	111	9	78.8	0.09	1	12	291	0.61
8	Student Room-8	111	9	78.8	0.09	1	12	258	0.55
9	Student Room-9	111	9	78.8	0.09	1	12	258	0.55
10	Student Room-10	111	9	78.8	0.09	1	12	291	0.61
11	Student Room-11	110	9	78.8	0.09	1	12	328	0.68
12	Student Room-12	110	9	78.8	0.09	1	12	282	0.59
13	Student Room-13	110	9	78.8	0.09	1	12	298	0.62
14	Student Room-14	111	9	78.8	0.09	1	12	325	0.68
15	Student Room-15	111	9	78.8	0.09	1	12	291	0.61
16	Student Room-16	111	9	78.8	0.09	1	12	325	0.68
<b>Sub Total</b>		<b>1773</b>			<b>1.42</b>	<b>16</b>	<b>186</b>	<b>4830</b>	<b>10.12</b>
<b>LEVEL - 131</b>									
1	Student Room-1	110	9	78.8	0.09	1	12	332	0.69
2	Student Room-2	110	9	78.8	0.09	1	12	290	0.61
3	Student Room-3	110	9	78.8	0.09	1	12	298	0.62
4	Student Room-4	110	9	78.8	0.09	1	12	324	0.68
5	Student Room-5	118	9	78.8	0.09	1	12	321	0.67
6	Student Room-6	122	9	78.8	0.10	1	12	360	0.75
7	Student Room-7	122	9	78.8	0.10	1	12	318	0.67
8	Student Room-8	120	9	78.8	0.10	1	12	283	0.60
9	Student Room-9	120	9	78.8	0.10	1	12	283	0.60
10	Student Room-10	122	9	78.8	0.10	1	12	318	0.67
11	Student Room-11	122	9	78.8	0.10	1	12	356	0.74
12	Student Room-12	118	9	78.8	0.09	1	12	305	0.64
13	Student Room-13	110	9	78.8	0.09	1	12	298	0.62
14	Student Room-14	110	9	78.8	0.09	1	12	324	0.68
15	Student Room-15	110	9	78.8	0.09	1	12	290	0.61
16	Student Room-16	110	9	78.8	0.09	1	12	324	0.68
<b>Sub Total</b>		<b>1844</b>			<b>1.48</b>	<b>16</b>	<b>191</b>	<b>5022</b>	<b>10.50</b>
<b>LEVEL - 134</b>									
1	Student Room-1	122	9	78.8	0.10	1	12	360	0.75
2	Student Room-2	122	9	78.8	0.10	1	12	318	0.67
3	Student Room-3	122	9	78.8	0.10	1	12	325	0.68
4	Student Room-4	122	9	78.8	0.10	1	12	351	0.73
5	Student Room-5	122	9	78.8	0.10	1	12	325	0.68
6	Student Room-6	122	9	78.8	0.10	1	12	351	0.73
7	Student Room-7	122	9	78.8	0.10	1	12	318	0.67
8	Student Room-8	122	9	78.8	0.10	1	12	352	0.73
<b>Sub Total</b>		<b>976</b>			<b>0.78</b>	<b>8</b>	<b>99</b>	<b>2701</b>	<b>5.63</b>
<b>Total</b>		<b>6144</b>			<b>4.92</b>	<b>54</b>	<b>639</b>	<b>16758</b>	<b>35.06</b>

**DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR**

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 10</b>									
<b>LEVEL - 125</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	333	0.69
2	Student Room-2	111	9	78.8	0.09	1	12	283	0.60
3	Student Room-3	111	9	78.8	0.09	1	12	291	0.61
4	Student Room-4	111	9	78.8	0.09	1	12	329	0.69
5	Student Room-5	111	9	78.8	0.09	1	12	283	0.60
6	Student Room-6	111	9	78.8	0.09	1	12	309	0.65
<b>Sub Total</b>		<b>666</b>			<b>0.53</b>	<b>6</b>	<b>70</b>	<b>1828</b>	<b>3.83</b>
<b>LEVEL - 128</b>									
1	Student Room-1	111	9	78.8	0.09	1	12	333	0.69
2	Student Room-2	111	9	78.8	0.09	1	12	283	0.60
3	Student Room-3	111	9	78.8	0.09	1	12	291	0.61
4	Student Room-4	111	9	78.8	0.09	1	12	333	0.69
5	Student Room-5	111	9	78.8	0.09	1	12	291	0.61
6	Student Room-6	111	9	78.8	0.09	1	12	329	0.69
7	Student Room-7	111	9	78.8	0.09	1	12	283	0.60
8	Student Room-8	111	9	78.8	0.09	1	12	250	0.53
9	Student Room-9	111	9	78.8	0.09	1	12	250	0.53
10	Student Room-10	111	9	78.8	0.09	1	12	283	0.60
11	Student Room-11	111	9	78.8	0.09	1	12	311	0.65
12	Student Room-12	111	9	78.8	0.09	1	12	294	0.62
13	Student Room-13	111	9	78.8	0.09	1	12	291	0.61
14	Student Room-14	111	9	78.8	0.09	1	12	333	0.69
15	Student Room-15	111	9	78.8	0.09	1	12	283	0.60
16	Student Room-16	111	9	78.8	0.09	1	12	309	0.65
<b>Sub Total</b>		<b>1776</b>			<b>1.42</b>	<b>16</b>	<b>187</b>	<b>4747</b>	<b>9.95</b>
<b>LEVEL - 131</b>									
1	Student Room-1	110	9	78.8	0.09	1	12	332	0.69
2	Student Room-2	110	9	78.8	0.09	1	12	282	0.59
3	Student Room-3	110	9	78.8	0.09	1	12	290	0.61
4	Student Room-4	110	9	78.8	0.09	1	12	332	0.69
5	Student Room-5	118	9	78.8	0.09	1	12	313	0.66
6	Student Room-6	122	9	78.8	0.10	1	12	355	0.74
7	Student Room-7	122	9	78.8	0.10	1	12	310	0.65
8	Student Room-8	118	9	78.8	0.09	1	12	272	0.57
9	Student Room-9	111	9	78.8	0.09	1	12	250	0.53
10	Student Room-10	111	9	78.8	0.09	1	12	283	0.60
11	Student Room-11	111	9	78.8	0.09	1	12	311	0.65
12	Student Room-12	111	9	78.8	0.09	1	12	294	0.62
13	Student Room-13	110	9	78.8	0.09	1	12	290	0.61
14	Student Room-14	111	9	78.8	0.09	1	12	333	0.69
15	Student Room-15	110	9	78.8	0.09	1	12	282	0.59
16	Student Room-16	110	9	78.8	0.09	1	12	308	0.64
<b>Sub Total</b>		<b>1805</b>			<b>1.44</b>	<b>16</b>	<b>188</b>	<b>4838</b>	<b>10.14</b>
<b>LEVEL - 134</b>									
1	Student Room-1	122	9	78.8	0.10	1	12	359	0.75
2	Student Room-2	122	9	78.8	0.10	1	12	310	0.65
3	Student Room-3	122	9	78.8	0.10	1	12	318	0.67
4	Student Room-4	122	9	78.8	0.10	1	12	360	0.75
5	Student Room-5	122	9	78.8	0.10	1	12	359	0.75
6	Student Room-6	122	9	78.8	0.10	1	12	310	0.65
7	Student Room-7	122	9	78.8	0.10	1	12	336	0.70
8	Student Room-8	118	9	78.8	0.09	1	12	283	0.60
9	Student Room-9	110	9	78.8	0.09	1	12	290	0.61
10	Student Room-10	110	9	78.8	0.09	1	12	332	0.69
11	Student Room-11	110	9	78.8	0.09	1	12	282	0.59
12	Student Room-12	110	9	78.8	0.09	1	12	308	0.64
<b>Sub Total</b>		<b>1412</b>			<b>1.13</b>	<b>12</b>	<b>145</b>	<b>3846</b>	<b>8.04</b>
<b>LEVEL - 137</b>									
1	Student Room-1	122	9	78.8	0.10	1	12	310	0.65
2	Student Room-2	122	9	78.8	0.10	1	12	336	0.70
3	Student Room-3	122	9	78.8	0.10	1	12	318	0.67
4	Student Room-4	122	9	78.8	0.10	1	12	360	0.75
<b>Sub Total</b>		<b>488</b>			<b>0.39</b>	<b>4</b>	<b>49</b>	<b>1323</b>	<b>2.76</b>
<b>Total</b>		<b>6147</b>			<b>4.92</b>	<b>54</b>	<b>639</b>	<b>16581</b>	<b>34.72</b>

### DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

SR NO	AREA DESCRIPTION	Area (Sq. Ft.)	Height (Ft.)	Inside Condition (°F)	Heat Dessipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>CLUSTER - 11</b>									
<b>LEVEL - 125</b>									
1	Student Room-1	112	9	78.80	0.09	1	12	331	0.69
2	Student Room-2	112	9	78.80	0.09	1	12	293	0.62
3	Student Room-3	112	9	78.80	0.09	1	12	342	0.71
4	Student Room-4	112	9	78.80	0.09	1	12	295	0.62
5	Student Room-5	112	9	78.80	0.09	1	12	293	0.62
6	Student Room-6	112	9	78.80	0.09	1	12	260	0.55
7	Student Room-7	112	9	78.80	0.09	1	12	260	0.55
8	Student Room-8	112	9	78.80	0.09	1	12	293	0.62
9	Student Room-9	112	9	78.80	0.09	1	12	311	0.65
10	Student Room-10	112	9	78.80	0.09	1	12	333	0.69
11	Student Room-11	112	9	78.80	0.09	1	12	293	0.62
12	Student Room-12	112	9	78.80	0.09	1	12	343	0.71
<b>Sub Total</b>		<b>1344</b>			<b>1.08</b>	<b>12</b>	<b>141</b>	<b>3647</b>	<b>7.64</b>
<b>LEVEL - 128</b>									
1	Student Room-1	112	9	78.80	0.09	1	12	331	0.69
2	Student Room-2	112	9	78.80	0.09	1	12	293	0.62
3	Student Room-3	112	9	78.80	0.09	1	12	342	0.71
4	Student Room-4	112	9	78.80	0.09	1	12	295	0.62
5	Student Room-5	112	9	78.80	0.09	1	12	311	0.65
6	Student Room-6	112	9	78.80	0.09	1	12	333	0.69
7	Student Room-7	112	9	78.80	0.09	1	12	293	0.62
8	Student Room-8	112	9	78.80	0.09	1	12	260	0.55
9	Student Room-9	112	9	78.80	0.09	1	12	260	0.55
10	Student Room-10	112	9	78.80	0.09	1	12	293	0.62
11	Student Room-11	112	9	78.80	0.09	1	12	295	0.62
12	Student Room-12	112	9	78.80	0.09	1	12	317	0.66
13	Student Room-13	112	9	78.80	0.09	1	12	311	0.65
14	Student Room-14	112	9	78.80	0.09	1	12	333	0.69
15	Student Room-15	112	9	78.80	0.09	1	12	293	0.62
16	Student Room-16	112	9	78.80	0.09	1	12	343	0.71
<b>Sub Total</b>		<b>1792</b>			<b>1.43</b>	<b>16</b>	<b>188</b>	<b>4903</b>	<b>10.26</b>
<b>LEVEL - 131</b>									
1	Student Room-1	112	9	78.80	0.09	1	12	331	0.69
2	Student Room-2	112	9	78.80	0.09	1	12	293	0.62
3	Student Room-3	112	9	78.80	0.09	1	12	342	0.71
4	Student Room-4	112	9	78.80	0.09	1	12	295	0.62
5	Student Room-5	112	9	78.80	0.09	1	12	311	0.65
6	Student Room-6	112	9	78.80	0.09	1	12	333	0.69
7	Student Room-7	112	9	78.80	0.09	1	12	293	0.62
8	Student Room-8	112	9	78.80	0.09	1	12	260	0.55
9	Student Room-9	112	9	78.80	0.09	1	12	260	0.55
10	Student Room-10	112	9	78.80	0.09	1	12	293	0.62
11	Student Room-11	112	9	78.80	0.09	1	12	295	0.62
12	Student Room-12	112	9	78.80	0.09	1	12	317	0.66
13	Student Room-13	112	9	78.80	0.09	1	12	311	0.65
14	Student Room-14	112	9	78.80	0.09	1	12	333	0.69
15	Student Room-15	112	9	78.80	0.09	1	12	293	0.62
16	Student Room-16	112	9	78.80	0.09	1	12	343	0.71
<b>Sub Total</b>		<b>1792</b>			<b>1.43</b>	<b>16</b>	<b>188</b>	<b>4903</b>	<b>10.26</b>
<b>LEVEL - 134</b>									
1	Student Room-1	112	9	78.80	0.09	1	12	346	0.72
2	Student Room-2	112	9	78.80	0.09	1	12	308	0.64
3	Student Room-3	112	9	78.80	0.09	1	12	356	0.74
4	Student Room-4	112	9	78.80	0.09	1	12	310	0.65
5	Student Room-5	112	9	78.80	0.09	1	12	325	0.68
6	Student Room-6	112	9	78.80	0.09	1	12	347	0.72
7	Student Room-7	112	9	78.80	0.09	1	12	308	0.64
8	Student Room-8	112	9	78.80	0.09	1	12	275	0.58
9	Student Room-9	112	9	78.80	0.09	1	12	275	0.58
10	Student Room-10	112	9	78.80	0.09	1	12	308	0.64
11	Student Room-11	112	9	78.80	0.09	1	12	310	0.65
12	Student Room-12	112	9	78.80	0.09	1	12	332	0.69
13	Student Room-13	112	9	78.80	0.09	1	12	325	0.68
14	Student Room-14	112	9	78.80	0.09	1	12	348	0.72
15	Student Room-15	112	9	78.80	0.09	1	12	308	0.64
16	Student Room-16	112	9	78.80	0.09	1	12	357	0.74
<b>Sub Total</b>		<b>1792</b>			<b>1.43</b>	<b>16</b>	<b>188</b>	<b>5138</b>	<b>10.72</b>
<b>Grand Total</b>		<b>6720</b>			<b>5.38</b>	<b>60</b>	<b>703</b>	<b>18592</b>	<b>38.89</b>

## DEVELOPMENT OF PERMANENT CAMPUS OF IIM UDAIPUR

### LEVEL WISE HEAT LOAD SUMMARY SHEET – STUDENTS HOSTEL BLOCK

SR NO	Cluster	Area (Sq. Ft.)	Inside Condition (°F / °C)	Heat Dissipation load (KW)	Occupancy	Fresh Air CFM	Dehumidified CFM	TR
<b>PHASE I</b>								
1	CLUSTER - 1	4780	78.8 / 26	3.82	42	497	13240	27.68
2	CLUSTER - 2	6272	78.8 / 26	5.02	56	656	16886	35.38
3	CLUSTER - 3	5522	78.8 / 26	4.42	48	571	14955	31.29
4	CLUSTER - 4	6170	78.8 / 26	4.94	54	640	16571	34.70
5	CLUSTER - 5	6615	78.8 / 26	5.29	58	687	18550	38.74
6	CLUSTER - 6	13008	78.8 / 26	10.41	124	1449	34508	72.77
7	CLUSTER - 7	9727	78.8 / 26	7.78	86	1014	26299	55.07
8	CLUSTER - 8	3192	78.8 / 26	2.55	28	332	8957	18.71
9	CLUSTER - 9	6144	78.8 / 26	4.92	54	639	16758	35.06
10	CLUSTER - 10	6147	78.8 / 26	4.92	54	639	16581	34.72
11	CLUSTER - 11	6720	78.8 / 26	5.38	60	703	18592	38.89
<b>Total For Phase I</b>		<b>74297</b>		<b>59.44</b>	<b>664</b>	<b>7826</b>	<b>201898</b>	<b>423.02</b>
<b>Total For Phase II</b>		<b>67577</b>		<b>54.06</b>	<b>604</b>	<b>7123</b>	<b>183306</b>	<b>384.13</b>
<b>Grand Total For Student Hostel</b>		<b>141874</b>		<b>113.50</b>	<b>1268</b>	<b>14949</b>	<b>385203</b>	<b>807.15</b>

### Annexure-03:- Details of installed HVAC units IIM Udaipur

#### Summary of installed capacity of AHUs/FCUs at IIM Udaipur

Case	Timing	Facilities	Capacity (TR)	
<b>A</b>	<b>Running of Plant from 8:00 AM to 8:00 PM</b>	Academic Blocks- complete	663	Considering occupancy factor= 0.8
		Dining Hall	50	
		Hostels (Diversity Factor=0.3 of total capacity of hostels)	209	
	<b>Total Capacity (TR)</b>		<b>922</b>	<b>738</b>
<b>B</b>	<b>Running of Plant from 8:00 PM to 8:00 AM</b>	Hostels-complete	697	Considering occupancy factor= 0.8
		Academic Block (Library 6th & 7th Floor)	77	
	<b>Total Capacity (TR)</b>		<b>774</b>	<b>619</b>

Examining both Cases "A" and "B" reveals that the combined chiller tonnage required is 738 TR.



<b>Case A: Running of Plant from 8:00 AM to 8:00 PM</b>						
<b>Total capacity of AHUs/FCUs/Hi-Wall Units installed in the Academic Blocks</b>						
S.No.	Location	Equipment	Capacity (CFM)	Qty of Units	Total Capacity (CFM)	Total (TR)
21	Academic A Block	Fan Coil Unit	400	98	39200	265365
		Fan Coil Unit (FCU)	600	10	6000	
		Fan Coil Unit (FCU)	800	3	2400	
		Cassette Unit	400	2	800	
22	Academic B Block	Fan Coil Unit (FCU)	400	72	28800	
23	Academic C Block	Fan Coil Unit (FCU)	400	41	16400	
24	Auditorium	Air Handling Unit (AHU)	1000	1	1000	
		Air Handling Unit (AHU)	7100	1	7100	
25	Classroom CR-01	Air Handling Unit (AHU)	5450	1	5450	
26	Classroom CR-02	Fan Coil Unit (FCU)	400	4	1600	
27	Classroom CR-03	Air Handling Unit (AHU)	5450	1	5450	
28	Classroom CR-04	Air Handling Unit (AHU)	4400	1	4400	
29	Classroom CR-05	Fan Coil Unit (FCU)	400	4	1600	
30	Classroom CR-06	Air Handling Unit (AHU)	5450	1	5450	
31	Classroom CR-07	Fan Coil Unit (FCU)	400	4	1600	
32	Classroom CR-08	Fan Coil Unit (FCU)	400	4	1600	
33	Classroom CR-09	Air Handling Unit (AHU)	5450	1	5450	
34	Classroom CR-10	Fan Coil Unit (FCU)	400	4	1600	
35	Classroom CR-11	Fan Coil Unit (FCU)	400	4	1600	
36	Classroom CR-12	Air Handling Unit (AHU)	5610	1	5610	
37	Classroom CR-13	Fan Coil Unit (FCU)	400	4	1600	
38	Classroom CR-14	Air Handling Unit (AHU)	4600	1	4600	
39	Classroom CR-15	Air Handling Unit (AHU)	4520	1	4520	
40	Classroom CR-20	Fan Coil Unit (FCU)	400	4	1600	
41	Classroom CR-21	Air Handling Unit (AHU)	3600	1	3600	
42		Air Handling Unit (AHU)	3600	1	3600	
43	Book Stacking Area	Air Handling Unit (AHU) (6th Floor)	7500	1	7500	
44	Library Common area		5610	1	5610	
45	Library Lobby		3600	1	3600	
46	Book Stacking Area		4750	1	4750	
47	JM Financial Centre		6875	1	6875	
48	Librarian Office	Fan Coil Unit (FCU) (6th Floor)	800	1	800	
49	Conference Room		600	1	600	
50	Acquisition Room		1000	1	1000	
51	Exam Hall-1 & 2		4750	1	4750	
52	PHD Reading Area	Air Handling Unit (AHU) (7th Floor)	3650	1	3650	
53	Common Reading Area		6900	1	6900	
54	Outside Lobby		2900	1	2900	
55	Supply Chain Lab		3000	1	3000	
56	Meeting Room	Fan Coil Unit (FCU) (7th Floor)	1000	2	2000	
57	Meeting Room		800	2	1600	
58	Multipurpose Room		1000	1	1000	
59	Silent Reading Room		600	2	1200	
60	CR-18 & CR-19	Air Handling Unit (AHU) (8th Floor)	12000	1	12000	
61	For half portion of the Centres		3000	1	3000	
62	For other half portion of the Centres		3000	1	3000	
63	CR-16 & CR-17		12000	1	12000	
64	Area opposite to the Centers		12000	1	12000	
65	C- BLOCK	Air Handling Unit (AHU) (9th Floor)	3000	1	3000	

Total capacity of AHUs installed in the Dining Hall							
S.No.	Location	Equipment	Capacity (CFM)	Qty of Units	Total Capacity (CFM)	Total (CFM)	Total (TR)
1	Dining Hall	Air Handling Unit (AHU)	6450	1	6450	19950	50
		Air Handling Unit (AHU)	6450	1	6450		
		Cassette Unit	400	5	2000		
2	Student's Gym	Air Handling Unit (AHU)	5050	1	5050		

Total capacity of FCU/High Wall Units installed in Clusters									
S.No.	Location	Equipment	Capacity (CFM)	Qty of Units	Total Capacity (CFM)	Total (CFM)	Total (TR)	Diveristy Factor (DF)	
								Diveristy Factor (DF)	Remarks
1	Cluster no. -02	High Wall Unit	300	68	20400	278600	697	209	During this time i.e. 8:00 AM to 8:00 PM, most of the students attends their classes in the Academic Building. Hence, the DF of 0.3 has been considered.
2	Cluster no. -03	High Wall Unit	300	40	12000				
3	Cluster no. -04	High Wall Unit	300	66	19800				
4	Cluster no. -05	High Wall Unit	400	21	8400				
			300	47	14100				
5	Cluster no. -06	High Wall Unit	400	58	23200				
			300	54	16200				
6	Cluster no. -07	High Wall Unit	400	40	16000				
			300	48	14400				
7	Cluster no. -08	High Wall Unit	400	13	5200				
			300	11	3300				
8	Cluster no. -09	High Wall Unit	400	26	10400				
			300	32	9600				
9	Cluster no. -10	High Wall Unit	400	30	12000				
			300	24	7200				
10	Cluster no. -11	High Wall Unit	400	36	14400				
		High Wall Unit	300	24	7200				
11	Cluster no. -12 A	High Wall Unit	300	40	12000				
12	Cluster no. -12 B	High Wall Unit	300	40	12000				
13	Cluster no. -13 A	High Wall Unit	300	28	8400				
14	Cluster no. -13 B	High Wall Unit	300	30	9000				
15	Cluster no. -14	High Wall Unit	300	66	19800				
		c/s FCUs	600	6	3600				
<b>Total Capacity (TR)</b>								<b>922</b>	
<b>Considering the Occupancy Factor as 80% =</b>								<b>0.8</b>	
<b>Total Capacity (TR) considering the Occupancy Factor =</b>								<b>738</b>	

### Case B: Running of Plant from 8:00 PM to 8:00 AM

#### Total capacity of FCUs/High Wall Units installed in the Hostels

S.No.	Location	Equipment	Capacity (CFM)	Total Capacity (CFM)	Total (CFM)	Total (TR)
1	Cluster no. -02	High Wall Unit	300	20400	278600	697
2	Cluster no. -03	High Wall Unit	300	12000		
3	Cluster no. -04	High Wall Unit	300	19800		
4	Cluster no. -05	High Wall Unit	400	8400		
			300	14100		
5	Cluster no. -06	High Wall Unit	400	23200		
			300	16200		
6	Cluster no. -07	High Wall Unit	400	16000		
			300	14400		
7	Cluster no. -08	High Wall Unit	400	5200		
			300	3300		
8	Cluster no. -09	High Wall Unit	400	10400		
			300	9600		
9	Cluster no. -10	High Wall Unit	400	12000		
			300	7200		
10	Cluster no.- 11	High Wall Unit	400	14400		
			300	7200		
11	Cluster no. -12 A	High Wall Unit	300	12000		
12	Cluster no. -12 B	High Wall Unit	300	12000		
13	Cluster no. -13 A	High Wall Unit	300	8400		
14	Cluster no. -13 B	High Wall Unit	300	9000		
15	Cluster no. -14	High Wall Unit	300	19800		
		c/s FCUs	600	3600		

#### Total capacity of FCUs/High Wall Units installed in the 6th and 7th Floor of the Library

S.No.	Location	Equipment	Capacity (CFM)	Total Capacity (CFM)	Total (CFM)	Total (TR)
1	Library Common area	Air Handling Unit (AHU) (6th Floor)	5610	5610	30735	77
2	Library Lobby		3600	3600		
3	JM Financial Centre		6875	6875		
4	PHD Reading Area	Air Handling Unit (AHU) (7th Floor)	3650	3650		
5	Common Reading Area		6900	6900		
6	Outside Lobby		2900	2900		
7	Silent Reading Room		Fan Coil Unit (FCU) (7th Floor)	600		
<b>Total (in TR)</b>						<b>774</b>

Considering the Occupancy Factor as 80% =

0.8

**Total Capacity (TR) considering the Occupancy Factor =**

**619**