Tender Document

For

“Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan”.

NIT No.	:	CURAJ/R/F.180/2026/7645
NIT Issue Date	:	27.11.2026
Estimated Cost	:	Rs. 34,75,072/-
Last Date of Submission	:	21.12.2026 up to 2.00 PM
Technical Bid Opening	:	22.12.2026 at 3.00 PM

CENTRAL UNIVERSITY OF RAJASTHAN
NH-8, Bandarsindri, Kishangarh, Dist.- Ajmer, Rajasthan – 305817
www.curaj.ac.in

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Name of Work: Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan.

NIT No. CURAJ/R/F.180/2026/7645 Dated. 27.11.2026

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CENTRAL UNIVERSITY OF RAJASTHAN
NOTICE INVITING TENDER

The Registrar, Central University of Rajasthan, NH-8, Bandarsindri, Kishangarh-305817 invites sealed **Percentage Rate Bids** from approved and eligible contractors of CPWD and those of appropriate list of MES, BRO, BSNL, Railway and State PWD or Public sector undertakings set up by the central or state government for following work(s):

S. No.	Name of Work	NIT No.	Estimated Cost	Earnest money	Stipulated Period of Completion of work (in months)	Last date & time of submission of Bid	Date & Tine of Opening of Technical Bid
1	Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan.	CURAJ/R/F.180/2026/7645 dated 24.08.2026	**34,75,072/-**	**Rs. 70,000/-**	**02 months**	21.12.2026 till 02.00 PM	22.12.2026 at 03.00 PM

Note: The tender should be submitted in two parts i.e. Technical Bid and Financial Bid and both the bids shall be uploaded on the CPP Portal on https://eprocure.gov.in/cppp/ by the bidders.
Any other related document, if required, may be submitted to the Dispatch Section, Room No. - 101, Ground Floor, Administrative Building, Central University of Rajasthan, well in time.

Registrar
Central University of Rajasthan

PART- A

CHECK LIST FOR CONTRACTORS FOR SUBMISSION OF BIDS

1. The tenderer should read all the instructions, terms & Conditions, contract clause, nomenclature of items, specifications etc. contained in the tender documents very carefully, before quoting the rates. The tenderer should also read the General Conditions of Contract 2023 and amended as on date for construction works in lines with schedule F, with up to date correction slips up to date of submission of bid.

2. The agency shall quote the Percentage Rates for complete scope of work in both words and figures in the financial bid.

3. The bidders shall quote their rates keeping in mind the site conditions, scope of work, specifications, terms & conditions, additional conditions and special conditions etc. and nothing shall be payable extra what so ever unless otherwise specified.

4. In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so. Such power of attorney should be produced with the tender and it must be disclosed that the firm is duly registered under the Indian partnership act, 1952.

5. GST, Labour Cess etc. as applicable shall be paid by the contractor himself. The department shall deduct from the R/A bills, the TDS as applicable. The contractor shall quote his rates considering all such taxes.

6. The bidder shall quote their rates considering all prevalent taxes/ cess like GST, Workers Cess or any other tax on material /work as applicable on the last date of bid submission and nothing extra shall be paid to the contractor on this account.

7. Electricity Connection for construction, testing & commissioning etc. shall be provided to the contractor on payment basis as per the University norms. Water required for testing of equipment is also in the scope of agency.

8. Damages to existing infrastructure/equipment done by executing agency due to carelessness/poor quality work shall be compensated by Contractor to Central University of Rajasthan.

9. **Scope of Drawings:**

   The Contractor shall have to provide the design & drawing along with heat load calculation details for the required work(s) including structural drawing from structural engineer, wherever required. The bidder shall quote their rates considering the cost incurred on the same and BoQ. If any modification in design/drawings is needed as per site conditions, or subsequent to proof checking, the contractor shall do/re-do the design without any extra cost. The Contractor shall prepare and supply all the coordinated ‘Good for Construction” drawings duly proof checked and approved from authorized structural engineer. The decision of the Engineer- in-charge in this regard shall be final and binding. No claim whatsoever on this account will be entertained on this account.
   The contractor shall prepare & submit three sets of required shop drawings and get them approved from the Engineer-in-charge before the start of the work. The approval of drawings however does not absolve the contractor not to supply the equipment/ materials as per agreement, if there is any contradiction between the approved drawings and agreement.

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR TENDERING FORMING PART OF BID DOCUMENT

The Registrar, Central University of Rajasthan, NH-8, Bandarsindri, Kishangarh-305817 invites sealed **Percentage Rate bids** from approved and eligible contractors of CPWD and those of appropriate list of MES, BRO, BSNL, Railway and State PWD or Public sector undertakings set up by the central or state government for following work(s):

S. No	Name of Work	NIT No.	Estimated Cost	Earnest money	Stipulated Period of Completion of work (in months)	Last date & time of submission of Bid	Date & Tine of Opening of Technical Bid
1	Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan.	CURAJ/R/F.180/2026/7645 dated 24.08.2026	**34,75,072/-**	**Rs. 70,000/-**	**02 months**	21.12.2026 till 02.00 PM	22.12.2026 at 03.00 PM

1. The intending bidder must read the terms and conditions of **CPWD-6** carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required. Information and Instructions for bidders posted on website shall form part of bid document.

2. The bid document consisting of plans, specifications, the bill of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from University website www.curaj.ac.in and CPP portal free of cost.

3. The contractor of CPWD, MES, BRO, State PWD or Public sector undertakings set up by the central or state government have to submit copy of **enlistment in appropriate class valid up to date**.

4. The bidder must ensure to quote rate of each item. Amount should be worked out for all items. Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO). However, If a tenderer quotes nil rates against each item in Percentage Rate tender or does not quote any percentage above/below on the total amount of the tender or any section / sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

5. Tenders with any condition including that of conditional rebates in the tender document shall be rejected forthwith.

6. The tenderer should also read the General Conditions of Contract for Construction works 2023 with latest amendments upto date of submission of bid (available on CPWD website), which is available as Govt. of

India Publications, which will be a part of the agreement including the special conditions and particular specifications etc.

7. GST or any other tax applicable in respect of inputs procured by the contractor for this contract shall be payable by the Contractor and Government will not entertain any claim whatsoever in respect of the same. However, component of GST at time of supply of service (as provided in CGST Act 2017) provided by the contract shall be varied if different from that applicable on the last date of receipt of tender including extension if any.

8. Goods and service tax turn over tax, Excise duty, work contract tax or any other tax on materials as applicable shall be paid by the contractor himself. **The contractor shall quote his rates considering all such taxes.**

9. The tenderer(s) shall have to make his/her own arrangement for housing facilities for staff at their own cost. No labour huts will be allowed to be constructed in University campus. Any decision in this regard shall rest with the Central University of Rajasthan.

10. The work is required to be executed in occupied buildings. The tenderer(s) shall take precaution to ensure quality of workmanship as well as the progress of the work. He shall regulate the labour accordingly. The tenderer(s) shall make arrangements for disposal of dismantled materials and other trash properly in an environmental friendly manner.

11. **Earnest Money Deposit of Rs. 70,000/-** in the form of ~~Demand Draft/FDR~~/CURAJ Account (drawn in favour of Central University of Rajasthan) of any Scheduled Bank payable at Bandarsindri/Kishangarh, District-Ajmer.
    Details of University for deposition of EMD: Name: Central University of Rajasthan
    Name of Bank: Bank of India Branch Name: Central University of Rajasthan
    Account No. 666110210000003 IFSC: BKID0006667

12. **The tender should be submitted in two parts i.e. Technical Bid and Financial Bid and both the bids shall be uploaded on the CPP Portal on https://eprocure.gov.in/cppp/ by the bidders.**
    Any other related document, if required, may be submitted to the Dispatch Section, Room No. - 101, Ground Floor, Administrative Building, Central University of Rajasthan, well in time.

13. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.

14. All needful statutory provisions to be adopted at site to tackle epidemic/ pandemic or similar situation of COVID-19 shall be done by the agency and expenditure on the same shall be borne by the contractor unless statutory orders direct for the reimbursement of the same.

15. **In case of any discrepancy in tender document, "latest CPWD - Manuals, GCC, Specifications with up to date amendments and correction slips" shall prevail and accordingly decision of the University shall be final and binding to the contractors/bidders.**

LIST OF DOCUMENTS TO BE ATTACHED WITH THE TECHNICAL BID

1. **Earnest Money Deposit of Rs. 70,000/-** in the form of ~~Demand Draft/FDR~~/CURAJ Account (drawn in favour of Central University of Rajasthan) of any Scheduled Bank payable at Bandarsindri/Kishangarh, District-Ajmer.
2. Copy of Experience/work completion certificates from the clients regarding the quality and duration of services rendered during last seven years (Form C)
3. Copy of Enlistment Order of the Contractor in appropriate class in CPWD, MES, BRO, State PWD or Public sector undertakings set up by the central or state government having validity at least till last date of bid submission.
4. Copy of GST Registration Certificate.
5. Photo copy of PAN Card.
6. Certificate of Financial Turnover from CA or Copy of audited balance sheets of last three financial years.(Form A)
7. A self-certificate showing the track record of contracting firm/Contractor on the non-judicial stamp paper. (Annexure-III)
8. Undertaking for supply of genuine spare parts (Annexure –IV)
9. Letter of Transmittal (Annexure –I)
10. Documents related to Bidding capacity.
11. Solvency Certificate.

Note:

- **Tenders received without EMD will not be accepted.**
- Each and every page of all the tender documents, annexures, corrigendum/addendum **(if any)** and their annexures should be duly seal & signed and submitted with technical bid.

Registrar
Central University of Rajasthan

SECTION – I
(Brief Particulars of Work)

1. Salient details of the work for which bids are invited are as under:

Sl. No.	Name of Work	Estimated Cost	Period of Completion
01	Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan.	Rs. 34,75,072/-	02 months

2. The work shall be executed according to General Conditions of Contract 2023 available separately at printer's outlets and online including amendments issued there in up to last date of bid. The General Conditions of Contract for Central Public Works Department are also available on website www.cpwd.gov.in.

3. The scope of work includes Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan. The scope of work in this contract shall include all Civil, Electrical & Mechanical works including services.

4. General features & major components of the scope of this work to be executed by the contractor are as under:
   i) **Electrical Works** :
      a) Complete Internal and External Electrical and Mechanical works in the buildings.
      b) All E&M works including external electric supplies, insulation, etc. as required.
      c) Any other work as detailed in BOQ, specified elsewhere in tender documents and even incidental works not defined in this document but essential for completion of work.
   ii) **Civil Works** :
      a) Scope of work also includes masonry/RCC/false ceiling work, plaster work, all external and internal finishing works, Steel/Iron work in frame as per BOQ.
      b) Any other work as detailed in BOQ, specified elsewhere in tender documents and even incidental works not defined in this document but essential for completion of work.
   iii) The work shall be executed according to BOQ items, specifications and conditions specified in tender document, approved architectural, structural and service drawings and directions of Engineer-in-Charge.
   iv) The above-mentioned scope of work of the contractor which is only indicative and not exhaustive. The contractor shall be responsible for executing all items required for completing the buildings and allied works in all respects to make it habitable and ready for occupation, as per direction of Engineer-in-charge.
   v) The scope of work includes cost of all materials, manpower, equipment, T&P, fixtures, accessories, royalties, taxes, watch & ward and all other essential elements for completion and maintenance of works whatsoever, under the scope of this contract. Any changes, modifications, revisions etc. required to be done by University, client, local bodies, design consultants etc. in accordance with applicable standards will have to be executed by the contractor as per provisions of the contract specified elsewhere in this bid document.
   vi) The contractor shall prepare & submit three sets of required shop drawings and get them approved from the Engineer-in-charge before the start of the work. The approval of drawings however does not absolve the contractor not to supply the equipment/ materials as per agreement, if there is any contradiction between the approved drawings and agreement.

SECTION – II
(INFORMATION & INSTRUCTIONS FOR BIDDERS)

1 General :

INFORMATION & INSTRUCTIONS FOR BIDDERS

1.1 Letter of transmittal and forms for deciding eligibility are given in Annexure -I.
All information called for in the enclosed forms should be furnished against the relevant columns in the forms. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against the relevant column. Even if no information is to be provided in a column, a "nil" or "no such case" entry should be made in that column. If any particulars/query is not applicable in case of the bidder, it should be stated as "not applicable". The bidders are cautioned that not giving complete information called for in the application forms or not giving it in clear terms or making any change in the prescribed forms or deliberately suppressing the information may result in the bid being summarily disqualified. Bids made by telegram or e-mailed or telex and those received late will not be entertained.

1.2 References, information and certificates from the respective clients certifying suitability, technical knowledge or capability of the bidder should be signed by an officer not below the rank of Executive Engineer or equivalent.

1.3 The bidder may furnish any additional information which he thinks necessary to establish his capabilities to successfully complete the envisaged work. He is, however, advised not to furnish superfluous information. No information shall be entertained after submission of eligibility criteria document unless it is called for by the Employer.

2 Definitions:

2.1 In this document the following words and expressions have the meaning hereby assigned to them.

2.2 Employer: Means the Central University of Rajasthan, acting through the Registrar, Central University of Rajasthan.

2.3 Bidder: Means the individual, proprietary firm, firm in partnership, limited company private or public or corporation.

2.4 "Year" means "Financial Year" unless stated otherwise.

3 Method of application:

3.1 If the bidder is an individual, the application shall be signed by him above his full type written name and current address.

3.2 If the bidder is a proprietary firm, the application shall be signed by the proprietor above his full type written name and the full name of his firm with its current address.

3.3 If the bidder is a firm in partnership, the application shall be signed by all the partners of the firm above their full type written names and current addresses, or, alternatively, by a partner holding power of attorney for the firm. In the latter case a certified copy of the power of attorney should accompany the application. In both cases a certified copy of the partnership deed and current address of all the partners of the firm should accompany the application.
If the bidder is a limited company or a corporation, the application shall be signed by a duly authorized person holding power of attorney for signing the application accompanied by a copy of the power of attorney. The bidder should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary.

4 Final decision making authority

The employer reserves the right to accept or reject any bid and to annul the process and reject all bids at any time, without assigning any reason or incurring any liability to the bidders.

5 Particulars provisional

The particulars of the work given in Section-I are provisional. They are liable to change and must be considered only as advance information to assist the bidder.

6 Site visit

The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings to

himself collect all information that he considers necessary for proper assessment of the prospective assignment.

7 Minimum Criteria for Technical Eligibility :

7.1 (i) The Contractors have satisfactorily completed the works as mentioned below during the last **Seven** years ending last day of the month previous to the one in which tenders are invited.

- Three similar works each costing not less than **40%** of estimated cost put to tender;

OR

- Two similar works each costing not less than **60%** of estimated cost put to tender;

OR

- One similar work costing not less than **80%** of estimated cost put to tender.

(ii) The bidder should have Average Annual Financial Turnover (gross) of **30% OF THE ESTIMATED COST** of similar works during the immediate last three consecutive financial years balance sheet, ending **31st March 2026**, duly audited by Chartered Accounted. Year in which no turnover is shown would also be considered for working out the average. (Scanned copy of Certificate from CA with Unique Document Identification Number (UDIN) to be attached). The value of annual turnover figures shall be brought to the current value by enhancing the actual turnover figures at simple rate of 7% per annum.

- **Similar work shall mean here – Experience in 'Supply, Installation, Testing & Commissioning Work of Air Conditioners'**.

7.2 The contractor of CPWD, MES, BRO, State PWD or Public sector undertakings set up by the central or state government have to submit **copy of enlistment in appropriate class** valid up to date. They are also required to submit the authorization letter from the manufacturer whose product is quoted, valid up to date.

OR

The original manufacturer has to submit the upto date valid registration certificate in make of which product is quoted or authorized dealer has to submit the dealership letter from the manufacturer whose product is quoted, valid up to date.

7.3 The bidder should not have incurred any loss (profit after tax should be positive) in more than two years during available last five consecutive balance sheets, duly certified and audited by the Chartered Accountant. (The balance sheet in case of Pvt. / Public Ltd. company means its standalone financial statement and consolidated financial statement both).

7.4 The bidder should have sufficient number of Technical and Administrative employees for the proper execution of the contract. The bidder shall have to submit the details of their site-in-charge and other staff stating clearly how these would be involved in this work within 15 days of award of work.

7.5 **Should have bidding capacity equal to or more than the estimated cost of the work put to tender. The bidding capacity shall be worked out by the following formula**:

Bidding Capacity = {[AxNx1.5]-B}
Where,
A = Maximum turnover in construction works executed in any one year during the last seven years taking into account the completed as well as works in progress. The value of completed works shall be brought to current costing level by enhancing at a simple rate of 7% per annum.

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

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

8 The bidders have to submit a list of jobs in progress. Brief details of the units scope of work, names and address (postal mail) of present clients. (Form C-1 of Annexure-II).

9 The track record of the contracting manufacturer/dealer/firm/contractor should be clean and should not be blacklisted or not have any involvement in illegal activities or financial misappropriation / frauds etc. by any Central/State Government/Public Sector Undertaking/Institute on any account. **A self-certificate on the Non-Judicial Stamp paper shall be attached for the purpose**. (Annexure-III)

10 Financial information

Bidder should furnish the Annual financial statement for the last five years in (Form"A"). Banker's Certificate in (Form "B") or Net worth Certificate in (Form"B-1"). Please refer Annexure- II for forms.

11 Experience of similar works

Bidder should furnish the List of eligible similar nature of works successfully completed during the last seven years in (Form "C") and ongoing works as well (Form C-1). Please refer Annexure- II for forms.

12 Organization information

Bidder is required to submit the information in respect of his organization in Forms "E" Please refer APPENDIX- II for forms.

13 Letter of transmittal

The bidder should submit the Letter of Transmittal attached with the document. Please refer Annexure-I for format of letter.

14 Preparation & Submission of bids :

The tender should be submitted in two parts i.e. Technical Bid and Financial Bid and both the bids shall be uploaded on the CPP Portal on https://eprocure.gov.in/cppp/ by the bidders.
Any other related document, if required, may be submitted to the Dispatch Section, Room No. - 101, Ground Floor, Administrative Building, Central University of Rajasthan, well in time.

16 Opening of Price bid

After evaluation of technical bids, a list of short listed bidders will be prepared. Thereafter the financial bids of only the qualified and technically acceptable bidders shall be opened.

17 **Solvency Certificate** - The Bidder should have a Solvency equal to or more than 40% of the cost of the proposed work certified by his bankers for this work. Banker's certificates should be on letter head of the Bank, self-attested and should have been issued within Six months from the original last date of submission of the Bid.

18 Award Criteria

18.1 The employer reserves the right, without being liable for any damages or obligation to inform the bidder, to:
(a) Amend the scope of work and value of contract.
(b) Reject any or all the applications without assigning any reason.

18.2 Any effort on the part of the bidder or his agent to exercise influence or to pressurize the employer would result in rejection of his bid. Canvassing of any kind is prohibited.

CPWD FORM -6

CENTRAL UNIVERSITY OF RAJASTHAN
NOTICE INVITING TENDER

The Registrar, Central University of Rajasthan, NH-8, Bandarsindri, Kishangarh-305817 invites sealed **Percentage Rate Bids** from approved and eligible contractors of CPWD and those of appropriate list of MES, BRO, BSNL, Railway and State PWD or Public sector undertakings set up by the central or state government for following work(s): ***Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan.***

The Estimated Cost: Rs. 34,75,072/- incl. GST. This estimate, however, is given merely as a rough guide.

The contractor of CPWD, MES, BRO, State PWD or Public sector undertakings set up by the central or state government having enlistment in appropriate class valid up to date and fulfilling the eligibility criteria of NIT are invited to apply.

1. Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD-7/8 of GCC 2023 duly amended upto last date of submission of bid, which is available as a Govt. of India Publication and also available on website www.cpwd.gov.in. Bidders shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.

2. The time allowed for carrying out the work will be **02 months** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.

3. The site for the work is mostly available.

4. The bid document consisting of plans, specifications, the bill of quantities of various types of items to be executed and the set of terms & conditions of contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen from website https://etender.cpwd.gov.in, from Estate Section of Central University of Rajasthan, free of cost.

5. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of tender as notified. While submitting the revised bid, contractor can revise the quoted percentage rates but before last time and date of submission of tender as notified.

6. The bid submitted shall become invalid, if
   (i) The bidder is found ineligible.
   (ii) The bidder does not deposit original EMD with technical bid envelope.
   (iii) If a tenderer quotes nil rates against each item in Percentage Rate tender or does not quote any percentage above / below on the total amount of the tender or any section/ sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
   (iv) If any discrepancy is noticed in the documents / details as submitted by bidder.

7. **Earnest Money Deposit:** The bidder shall be required to submit the Earnest Money Deposit (EMD) for an amount of **Rs. 70,000/-** by way of ~~demand drafts~~/CURAJ Account only.

   The demand drafts shall be drawn in favour of "Central University of Rajasthan" payable at Bandarsindri/Kishangarh. **The demand drafts/deposit receipt for earnest money deposit must be enclosed in the envelope containing the technical bid**. The EMD of the successful bidder shall become part of Performance Guarantee and for unsuccessful bidder(s), it would be returned (without interest) after award of the contract. Tenders received without EMD shall not be accepted.

   Details of University for deposition of EMD: Name: Central University of Rajasthan

   Name of Bank: Bank of India Branch Name: Central University of Rajasthan
   Account No. 666110210000003 IFSC: BKID0006667

Note: Firms which are registered with Medium Small and Micro Enterprise Management (MSME) / Small Scale Industries (SSI) are exempted to submit the EMD (copy of registration must be provided along with technical bid). No other relaxation will be allowed.

8. **Performance Guarantee :**
The contractor whose bid is accepted will be required to furnish **performance guarantee of 05% (Five Percent) of the tender accepted amount** within the period specified in Schedule F. This guarantee shall be in the form of Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/ Pay order of any Scheduled Bank of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with bid shall be returned after receiving the aforesaid performance guarantee. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/ registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No, if applicable and also ensure the compliance of aforesaid provisions by the sub-contractors, if any, engaged by the contractor for the said work within the period specified in Schedule F.

9. **Security Deposit:**
   - The contractor whose tender is accepted will also be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to **2.5% (Two and half percent) of the billed amount.** The Security deposit will be collected by deductions from the running bills as well as final bill of the contractor at the rates mentioned above. The Security amount will also be accepted in cash or in the shape of Government Securities. Fixed Deposit Receipt of a Scheduled Bank or will also be accepted for this purpose provided confirmatory advice is enclosed.
   - The said security deposit shall be returned after satisfactorily completion of defect liability period.
   - This security deposit shall be forfeited if he/they fails to comply with any of the conditions of the contract. No interest shall be paid on the security deposit.

10. **Payment Clause:**
a. After initial inspection (wherever specified) & delivery of all material at site in good condition on pro-rata basis: 25%
b. On completion of pro-rata installation: 20 %
c. On commissioning and completion of successful running in period: 20 %
d. On final testing and handing over the site to the department: 25 %
e. Retention for performance and defect liability: 10%

11. **The description of the work is as follows**: - Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan (as per BoQ).
Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and

all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.

Equipment data shall be submitted as per format attached. Tenderers not submitting data in full will do so at the risk of the tenders being evaluated with such information as may be available with the client.

Mere becoming the lowest bidder, prior to financial bid scrutiny will not give any right to the lowest bidder to claim that he is successful in the bidding process. The successful bidder (L1) shall be decided only after following due procedure.

The Bidder meeting the minimum eligibility criteria and with the overall lowest bid price shall be deemed as the successful Bidder and shall be considered eligible L-1 Bidder for further processing.

12. The competent authority on behalf of the Central University of Rajasthan does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the tenders received without the assignment of any reason. All bidders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.

13. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable to rejection.

14. The competent authority on behalf of President of India reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be bound to perform the same at the rate quoted.

15. No Engineer of Gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his/her retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

16. The tender for the works shall remain open for acceptance for a period of **(180) days** from the date of opening of tenders**.** If any bidder withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further, the bidder shall not be allowed to participate in the re-tendering process of the work.

17. Except writing rates and amount, the bidder should not write any conditions or make any changes, additions, alterations and modifications in the printed/downloaded form of tenders. If any changes, additions, alterations , modifications are detected in the submitted bid even at a later date when contract has been awarded , the contract will be liable to be void .The decision of Registrar, Central University of Rajasthan will be final & binding to the Contractor in this regard.

18. The University does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.

19. The Specifications to be followed for execution of work: CPWD General specifications for electrical works Part-I (Internal) 2013, General Specifications for Heating, Ventilation and Air-Conditioning (HVAC) Works 2024, Specifications Civil Vol-I & II and DSR Civil Vol-I &II (2019) as modified

and Correction Slips/amendments issued upto previous day to last date of bid submission or any other relevant CPWD manual/guideline or IS.

20. **Signing of Contract**

The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of-

(i) The notice inviting tender, all the documents including drawings, if any, forms the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.

(ii) Standard C.P.W.D. Form as mentioned in Schedule 'F' consisting of:

(a) Various standard clauses with corrections up to the date stipulated in Schedule 'F' along with annexures thereto.

(b) C.P.W.D. Safety Code.

(c) Model Rules for the protection of health, sanitary arrangements for workers employed by CPWD or its contractors.

(d) CPWD Contractor's Labour Regulations.

(e) List of Acts and omissions for which fines can be imposed.

(f) Integrity Pact

(iii) No payment for the work done will be made unless contract is signed by the contractor.

21. The bid document will include following two components:-

Part A: CPWD-6, CPWD-7 including schedule A to F for the both the components of the work, Standard General Conditions of Contract for CPWD 2023 as amended/ modified up to last date of submission of bid.

Part B: General/specific conditions, specifications and bill of quantities applicable to the work.

In case of any discrepancy between part A and part B of the contract agreement, the provision of Part A shall prevail.

22. Entire work under the scope of composite bid including major and all minor components shall be executed under one agreement.

23. Any dispute unless resolved amicable, shall be settled by a court of law having jurisdiction over Jaipur/Ajmer.

GOVERNMENT OF INDIA
CENTRAL PUBLIC WORKS DEPARTMENT
Percentage Rate Tender/Item Rate Tender & Contract for Works

(A) Tender for the work of :- .....
.....
.....
.....

(i) To be uploaded by……. hours on ……. to/upload at

(ii) (ii) To be opened in presence of tenderers who may be present at ……. hours on ….....……. in the office of.....

TENDER

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

I/We hereby tender for the execution of the work specified for the President of India within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

I/We agree to keep the tender open for ….. days from the due date of its opening in case of single bid system ….....……. from the date of opening of technical bid in case tenders are invited on 2 /3 bid/ system for specialised work and not to make any modification in its terms and conditions. I/We have deposited EMD for the prescribed amount in the office of concerned Executive Engineer as per the bid document.

A copy of earnest money deposit receipt of prescribed amount deposited in the form of Insurance Surety Bonds, Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee (as prescribed) issued by a Commercial Bank, is scanned and uploaded (strike out as the case may be). If I/We, fail to furnish the prescribed performance performance guarantee within prescribed period, I/We agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/ We agree that President of India or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form.

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

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

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

Dated

Signature of Contractor Witness:
Postal Address

Address: Occupation:

A C C E P T A N C E

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the President of India for a sum of Rs. ……. (Rupees.....) The letters referred to below shall form part of this contract agreement:-

(a)
(b)
(c)

For & on behalf of the President of India. Signatures .....

Dated:

Designation .....

FORM OF AGREEMENT

(To be executed on non-judicial stamp paper of Rs.500/-)

Agreement No: _____ Dated: _____

CONTRACT FOR "Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan".

THIS AGREEMENT is made on _____ day of _____ (month), _____(year) between **Central University of Rajasthan, NH-8 Bandarsindri, Tehsil-Kishangarh, District- Ajmer , Rajasthan, Pin-305817**, hereinafter called University, (which expression shall, wherever the context so demands or requires, includes their successors in office and assigns) on the one part and **…….** hereinafter called the Contractor (which expression shall wherever the context so demands or requires, include his/their successors and assigns) on the other part.

WHEREAS the University is desirous that certain works should be executed viz. …… …… and has by Letter of acceptance/award ……dated …….accepted the quotation/offer submitted by the contractor for the execution, maintenance and completion of such works at a total contract price of Rs…… (Rupees …… only).

Now THIS AGREEMENT WITNESSETH as follows:

1. In this agreement, words and expressions shall have the same meaning as are respectively assigned to them in the conditions of contract hereinafter referred to.

2. The following documents shall be deemed to form and be read and construed as part of the agreement viz:
   a) This Form of Agreement
   b) The Letter of Award dated _____
   c) NIT document _____
   d) Priced Schedule/ Bill of quantities.
   e) Scope of work and conditions of contract.
   f) All Annexures to NIT
   g) CPWD GCC with up-to-date correction slips.

   The aforesaid documents shall be taken as complementary and mutually explanatory of one another, but in the case of ambiguities or discrepancies, shall take precedence in the order set out above.

3. In consideration of the payment to be made by the University to the contractor as hereinafter mentioned, the contractor hereby covenants with the University to execute, complete and maintain the works in conformity in all respects within the provisions of the contract.

4. The University thereby covenants to pay to the contractor in consideration of the execution, completion and maintenance of the works at contract price at the time and in the manner prescribed by the contract.

In WITNESS whereof the parties hereto have caused their respective common seals to be here into affixed (or have herewith set their respective hands and seals) the day and year first above written.

Signed, Sealed and Delivered By

For and on behalf of

Central University of Rajasthan
Bandarsindri, Kishangarh, Ajmer, Rajasthan

By:

Name

Designation

In the presence of

WITNESS

1.

2.

Signed, Sealed and Delivered By

For and on behalf of

By:

Name

Designation

In the presence of

WITNESS

1.

2.

PROFORMA OF SCHEDULES A to F

SCHEDULE 'A'
Bill of quantities (Enclosed) **As per Financial Bid**

SCHEDULE 'B'
Schedule of materials to be issued to the tenderer/contractor.

Sl. No.	Description of Item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of Issue
1	2	3	4	5
1.	**NIL**	**NIL**	**NIL**	**NIL**

SCHEDULE 'C'
Tools and plants to be hired to the tenderer/contractor

Sl. No.	Description	Hire charges per day	Place of issue
1	2	3	4
	NIL	**NIL**	**NIL**

SCHEDULE 'D'
Extra schedule for specific requirements/ documents for the work, if any. ***Nil***

SCHEDULE 'E'
1. Reference to General Conditions of contract: General Conditions of contract for Central PWD Works: GCC 2023, Form-7/8 for CPWD works as amended upto last date of submission of bid.
2. **Name of work:-** Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan..
   - **(i) The work is estimated to the cost** : **Rs. 34,75,072/-**
   - **(ii) Earnest Money** : **Rs. 70,000/-**
     (to be returned after receiving performance guarantee without interest)
   - **(iii) Performance guarantee** : **05% (Five percent) of tender accepted amount.**
     (to be returned after completion of work without interest)
   - **(iv) Security Deposit** : **2.5% (Two and half percent) of the billed amount.**
     (to be returned without interest after completion of defect liability/CMC period)

SCHEDULE 'F'
General Rules & Directions

Officer Inviting Tender	Registrar, Central University of Rajasthan, Bandarsindri
Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3	See Below
Definitions:	
2(v) Engineer-in-Charge	Executive Engineer, Central University of Rajasthan, Bandarsindri, NH-8.
2(vii) Accepting Authority	Registrar, Central University of Rajasthan, Bandarsindri, NH-8.
2(x) Percentage on cost of materials and labor to cover	15%

all overhead & profits	
2(xi) Standard Schedule of Rates	DSR 2025 (E&M), DSR Civil 2023 with correction slips up to last date of submission of bid.
2(xii) Department	Central University of Rajasthan
9(ii) Standard CPWD contract Form GCC 2023, CPWD Form 7/ 8 as modified & corrected upto	GCC 2023 or latest, CPWD Form 7 as modified and Correction Slips/amendments issued upto previous day to last date of bid submission.
Clause 1 (Performance Guarantee)	
i) Time allowed for submission of Performance guarantee, Programme Chart (Time and Progress) and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including Provident Fund Code No. or proof of applying thereof from date of issue of letter of acceptance.	**15 days**
ii) Maximum allowable extension with late fee @ 0.1% per day of performance guarantee amount beyond the period provided in (i) above	**05 days**
Clause 2 (Compensation for Delay)	**GCC 2023 for construction works shall be applicable.**
	Registrar, Central University of Rajasthan.
Authority for fixing compensation under clause 2.	
Clause 2 (A). Whether clause 2 (A) shall applicable	**Yes**
Clause 5 Number of days from the date of issue of letter of acceptance for reckoning date of start Mile stone(s) as per table given below:-	**NA**
Time allowed for execution of work	**02 months**
Authority to decide:	
(i) Extension of time	**Registrar, Central University of Rajasthan**
(ii) Rescheduling of milestones	**Registrar, Central University of Rajasthan**
(iii) Shifting of date of start in case of delay in handing over of site	**Registrar, Central University of Rajasthan**
Clause 6 :	**Computerized Measurement Book Applicable**
Clause 7 :	As per decision of the University
Clause 7A :	**NA**
No Running Account Bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-Charge.	
Clause 8A	**Not Applicable**
Clause 10A	
List of testing equipment to be provided by the contractor at site	**As per site requirement**

Clause 10 B (ii)	**Not Applicable**
Clause 10 C Component of labour expressed as percent of value of work:	**NA**
Clause 10 CA Payment due to variation in prices of materials after receipt of tender	**NA**
Clause 10 CC Payment due to Increase / Decrease in Prices/ Wages (excluding materials covered under clause 10 CA) after Receipt of Tender for Works	**NA**
Clause 11 Specifications to be followed for execution of work	CPWD General specifications for electrical works Part-I (Internal) 2013, General Specifications for Heating, Ventilation and Air-Conditioning (HVAC) Works 2024, Specifications Civil and DSR Civil Vol-I &II (2019), other relevant CPWD Manual/guidelines or IS norms as modified and Correction Slips/amendments issued up to previous day to last date of bid submission.
Clause 12 Authority to decide deviation up to 1.5 times of tendered amount	**Upto 50 % (Registrar)**
12.2 & 12.3: Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building/electrical work.	**100% (Hon'ble Vice Chancellor)**
12.5 : (i) Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work (except work).	**NA**
(ii) Deviation Limit for items in earth work subhead of DSR or related items	**NA**
Clause 16 Competent Authority for deciding reduced rates	**Registrar, Central University of Rajasthan**
Clause 18 List of mandatory machinery, tools & plants to be deployed by the contractor at site	As applicable to be arranged by the contractor
Clause 19 Authority to decide penalty for each default	**Registrar, Central University of Rajasthan**
Clause 25 Constitution of Dispute Redressal Committee (DRC) DRC shall constitute one Chairman and two members	Competent Authority to appoint DRC Honorable Vice Chancellor Central University of Rajasthan

Clause 32

Requirement of Technical Representative(s) and recovery Rate

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

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers. Diploma holder with minimum 10 year relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineers.

Clause 38

(i) (a) Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates

(ii) Variations permissible on theoretical quantities:

(a) Cement	
For works with estimated cost put to tender not more than Rs. 25 lakh.	3% plus/minus
For works with estimated cost put to tender more than Rs. 25 lakh.	2% plus/minus
(b) Bitumen All Works	2.5% plus & only & nil on minus side
(c) Steel Reinforcement and structural steel sections for each diameter, section and category	2% plus/minus
(d) All other materials	Nil

INTEGRITY PACT

To,
Executive Engineer,
…… ……

Sub: Submission of Tender for-

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

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process.

I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

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

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

Yours faithfully

(Duly authorized signatory of the Bidder)

To be signed by the tenderer and same signatory competent / authorised to sign the relevant contract on behalf of Central University of Rajasthan

INTEGRITY PACT

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

BETWEEN

Central University of Rajasthan through Registrar, Central University of Rajasthan, Bandarsindri, Dist.-Ajmer. (Hereinafter referred as the 'Principal/Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

.....

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

Through .....……

(Details of duly authorized signatory)

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

Preamble

WHEREAS the Principal / Owner has floated the Tender (NIT No. **……**) (hereinafter referred to as "Tender/Bid") and intends toward, under laid down organizational procedure, contract for **-** ……..

Here in after referred to the "Contract".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Tenderer(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "Integrity Pact" or "Pact"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

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

Article 1: Commitment of the Principal/Owner

1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
   (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
   (b) The Principal/Owner will, during the Tender process, treat all Tenderer(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Tenderer(s) the same information and will not provide to any Tenderer(s) confidential/ additional information through which the Tenderer(s) could obtain an advantage in relation to the tender process or the contract execution.
   (c) The Principal/Owner shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Tenderer(s)/Contractor(s)

1) It is required that each Tenderer/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the Negotiation or award of a contract.
2) The Tenderer(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:
   a) The Tenderer(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
   b) The Tenderer(s)/Contractor(s) will not enter with other Tenderer(s)into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or on-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
   c) The Tenderer(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Tenderer(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents
   provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
   d) The Tenderer(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Tenderer(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
   e) The Tenderer(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
3) The Tenderer(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
4) The Tenderer(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a wilful misrepresentation or omission of facts or submission offake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.
5) The Tenderer(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

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

1) If the Tenderer(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the Contractor shall have

powers to disqualify the Tenderer(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Tenderer/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.

2) Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Principal/Owner has disqualified the Tenderer(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Tenderer/Contractor.
3) Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Tenderer or Contractor, or of an employee or a representative or an associate of a Tenderer or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

1) The Tenderer declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
2) If the Tenderer makes incorrect statement on this subject, he can bed is qualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Tenderer/Contractors deemed fit by the Principal/ Owner.
3) If the Tenderer/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Tenderers/Contractors/Subcontractors

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

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other tenderers, till the Contract has been awarded.

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

Article 7- Other Provisions

1) This Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarters of the Division of the Principal/Owner, who has floated the Tender.
2) Changes and supplements need to be made in writing. Side agreements have not been made.
3) If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.

5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

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

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

.....	.....
(For and on behalf of Principal/Owner)	(For and on behalf of Tenderer/Contractor)

WITNESSES:

1. ..... (Signature, name and address)
2. ..... (Signature, name and address)

Place:
Date:

PART –B

SPECIAL CONDITIONS OF THE CONTRACT

Name of the Work: Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan.

1. The contractor is advised to visit the site(s) of work i.e. "Campus of Central University of Rajasthan, Bandarsindri, Kishangarh, Distt. – Ajmer, Rajasthan." to get an idea of the work; failure to do so, shall not absolve their responsibility to do the work as specified in agreement and/ tender document.

2. The work shall be executed as per CPWD's general specification for Electrical Works Part-I Internal 2013 & (HVAC-2017) IE rules, General Specifications for Heating, Ventilation and Air-Conditioning (HVAC) Works 2024, Indian Standards, as per Rules of NBC 2005 & all the amendment issued upto date and as per directions of Engineer-In-Charge. These additional specifications are to be read in conjunction with above and in case of variations; specifications given in this special conditions shall apply. However, nothing extra shall be paid on account of these technical specifications, special conditions and T&C of NIT document as the same are to be read along with bill of quantities for the work.
3. Assembly and Inspection:
   - Assembly of all parts shall be made to ensure that the parts are properly fitted to minimize erection problems. The owners or their authorized representatives reserve the right to inspect any machinery, material and equipment (herein after collectively called "apparatus") finished or used by the contractor under this contract and may reject which is defective in workmanship or design or otherwise unsuitable for the use and purpose intended or which is not in accordance with the intent of this contract. The Contractor shall on demand by the owners or their authorized representatives remedy / replace at the contractor's expenses any such defective or unsuitable apparatus.
   - The owner or their representative shall at all times have access to all parts of shop where apparatus is being manufactured and also shall be provided with all reasonable inspection facilities by the contractor and his sub suppliers / contractors.
   - All apparatus should be accompanied with QAP Certificates of respective Manufacturers except for site fabricated items.
4. On completion of the work, the contractor shall furnish 3 (three) sets of the following documents and drawings.
   - Comprehensive Operation and Maintenance Manuals.
   - As built drawings duly approved.
   - Test Certificates as applicable.
   - Equipment warranties.
   - Signed copies of Testing and Commissioning Reports.

6. **Material Testing:**
   The owner or his authorized representative shall have the right to get any materials of work to be tested by an independent agency at contractor's expense in order to prove the soundness and adequacy.

7. **Installation**
   The Contractor shall carry out the complete installation, which shall include for transportation of materials from his site store to the site of work. All work shall commence on previously prepared mounting / foundation / supporting hangers / supports. At no time the actual works shall precede the support work. The Contractor shall make his own arrangement to off load equipment/ material received at site.

8. **Testing & commissioning:**
   All routine and type tests shall be carried out at the works of the contractor or the manufacturers of the components. The Engineer-In-Charge or authorized representative shall be free to witness any or all tests, if he so desires.

On the completion of the installation, the contractor shall arrange to carry out various initial tests as detailed below, in the presence of, and to the complete satisfaction of the Engineer-In-Charge or authorized representative. Any defects or shortcomings found during the tests, shall be speedily rectified or made good by the contractor at his own expenses. The final test reports shall be submitted to the Engineer-In-Charge.

The initial tests, as applicable shall include but not be limited to the following:

- A: Pressure testing of water conveying and refrigerant lines.
- B: Pre commissioning checks of all equipment and the installation prior to any equipment start.
- C: Flushing and chemical cleaning of pipelines.
- D: Water balancing
- E: Air balancing
- F: Performance testing of equipment installed.
- G: Control checks.
- H: Endurance Test (72Hrs).
- I: Room conditions etc.

On the satisfactory completion of all 'initial' tests the plant shall be deemed to be commissioned.

9. The Contractor shall provide all necessary tools, calibrated instruments, gauges, flow meter, orifice meter/ manometers, tong testers, velometer, anemometer/anemotherm, pitot tubes, tachometer, etc. as may be required for conducting the various tests. All instruments shall accompany a valid calibration certificate. He shall also provide necessary lubricants and the required personnel for the tests. However, the CURaj shall provide water and electricity for the tests free of cost.

10. **Rejection of Defective Plant**

- If on test, any portion of the plant, equipment or component are found defective or not fulfilling the intent or the meaning of the specifications, the same shall be replaced or repaired to the entire satisfaction of the owner or his authorized representative.
- If the contractor fails to rectify the defect or damage within a reasonable period of time the owner or his authorized representative may fix a date on or by which the defect or damage is to be rectified, and give the contractor, reasonable notice of such date. If the contractor fails to remedy the defect or damage by such date, the owner or his authorized representative, at their sole discretion, shall carry out the work themselves or by others, in a reasonable manner at the Contractor’s risk and cost and recover the costs so incurred from the contractor.
- If the defect or damage is such that the owners have been deprived substantially the benefit of the works, or parts or the works, they reserve the right to terminate the contract in respect of such parts of the work. The owners then shall be entitled to recover all sums paid for such parts of the works together with the cost of dismantling the same, clearing the site and returning Plant and Materials to the Contractor, or otherwise disposing of them in accordance with Contractor's instructions.
- The owners reserve the right to operate all the equipment and complete system whether or not the plant is taken over after the initial test and commissioning. Any defects found during the initial or running tests shall be removed within a suitable period of time as decided by the owner or his authorized representative.

11. **Maintenance of the Plant and Training of Personnel**

The contractor shall arrange to provide, at no extra cost, necessary personnel and material to carry out all special maintenance of the plant as required regularly for a period of twelve months from the date of commissioning.

12. **Machinery for erection**

- All tools and tackles required for unloading/handling of equipment and materials at site, their assembling, erection, testing and commissioning shall be the responsibility of the contractor.
- No T&P shall be issued by the department and nothing extra shall be paid on account of this.

13. **Defects Liability**

All equipment and the entire installation shall be guaranteed against defective/faulty material and workmanship for a period of **12 months reckoned after the plant is commissioned and handed over for beneficial use with the requisite documentation**. In case the testing of plant is delayed for any reason, beyond 6 months the defects liability shall extend for a minimum period of 6 months from the date the test readings are accepted. During the defect liability period the contractor shall rectify, repair or replace such defective parts and components free of cost except those which are to be replaced due to normal wear and tear.

14. **Completeness of the Plant**

The contractor shall arrange all the required material, equipment, ancillary items etc., to install and commission a complete and satisfactory air conditioning plant and systems capable of fulfilling the intent and purpose of the contract whether or not each and every item is mentioned in the specifications and/ or drawings. Any shortcoming noticed at any stage shall be made good at no extra cost.

15. **Quantities set in the bill of quantities are the estimated quantities of the work, but they are not to be taken as actual and correct quantities of the work to be executed by the contractor in fulfillment of his obligations under the contract.**

Any increase in quantity due to changes in 'scope of work/drawings/site etc.', shall be brought to the notice of the CURaj authorities and upon written confirmation only, the contractor shall proceed with the works. In the absence of a written permission, the CURaj shall not be liable for any such works carried out.

In case of additional items of work if any, which are not found in the original contract but required on site, the rate for such additional items of work will be arrived at from the basic rates of materials and labour charges or from Rate only items shown in BOQ.

16. **Partial Occupancy or Services**

During progress of the work (installation or rectification works) completed areas will be occupied and will be used by the owners. The contractor shall however remain fully responsible for the maintenance of installation, till the entire work covered under the contract is satisfactorily completed and handed over to the owners for beneficial use.

17. **Indemnity**

The successful bidder shall at all times indemnify the department, consequent on this works contract. The successful bidder shall be liable, in accordance with the Indian law and regulations for any accident occurring due to any cause and the contractor shall be responsible for any accident or damage incurred or claims arising there from during the period of erection, construction and putting into operation the equipment and ancillary equipment under the supervision of the successful bidder in so far as the latter is responsible. The successful bidder shall also provide all insurance including third party insurance as may be necessary to cover the risk in his own interest. No extra payment would be made to the successful bidder on account of the above.

18. **Verification of correctness of equipment at destination**

The contractor shall have to produce all the relevant records to certify that the genuine equipment has been supplied by the OEM.

19. **Care of the building and other structures / installations**

Care shall be taken by the contractor while handling and installing the various equipment and components of the work to avoid damage to the building and it's surrounding roads, pavements, horticulture work, boundary wall, sewer and water lines etc. He shall be responsible for repairing all damages and restoring the same to their original finish at his cost. He shall also remove at his cost all unwanted and waste materials arising out of the installation from the site of work.

20. **Structural Alterations to Buildings:**
- No structural member in the building shall be damaged/altered, without prior approval from the competent authority through the Engineer-In-Charge.
- Structural provisions like openings, cutouts, if any, provided by the department for the work, shall be used. Where these required modifications, or fresh provisions are required to be made, such contingent works shall be carried out by the contract at his cost.
- All such openings in floors, provided by the department shall be closed by the contractor after installing the cables/conduits/rising mains/GI&MS Pipes etc. as the case may be, by any suitable means as approved by the Engineer-In-Charge without any extra payment.

21. **Painting**

The major equipment shall be factory final finish painted. The agency shall be required to do only touching to the damages caused to the painting during transportation, handling & installation at site, if there is no major damage to the painting. However hangers, supports etc. shall be painted with required shade including painting with two coats of anticorrosive primer paint at site as per the instructions of the Engineer-In-Charge.

22. **Extent of work**

The work shall comprise of entire labour including supervision and all material necessary to make a complete installation and such tests and adjustments and commissioning, as may be required by the department. The term complete installation shall not only mean major items of the plant and equipment covered by specifications but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not those have been specifically mentioned in bill of quantity in the tender document. However, major equipment not covered in the scope of work and required subsequently as an additional feature, not covered in the contract specifications, shall be paid extra. The decision of the Engineer-In-Charge in the matter shall be final and binding on the contractor.

23. **Safe Custody**

The contractor shall be responsible for the safe custody of all equipment and material supplied by him till such time the plant is handed over to the owners with proper documentation. He should therefore, employ sufficient staff for watch and ward at his own expense.

24. **Compliance with regulations and Indian Standards**

All works shall be carried out in accordance with relevant regulation, both statutory and specified by the Indian Standards related to the works covered by the specifications. In particular, the equipment and installation will comply with the following:
- Factories Act.
- Indian Electricity Rules.
- B.I.S. & other standards as applicable.
- Workmen's compensation Act.
- Statutory norms prescribed by local bodies like CEA, Power Supply Co., etc.

25. **Workmanship:**
- Good workmanship is an essential requirement to be complied with. The entire work of manufacturing/fabrication, assembly and installation shall conform to sound engineering practices.
- Proper supervision/skilled workmen: The contractor shall be a licensed electrical contractor of appropriate class suitable for execution of the electrical work. He shall engage suitable skilled/licensed workmen of various categories for execution of work supervised by their Supervisors, Engineers of appropriate qualification and experience, to ensure proper execution of work. They will carry out instruction of Engineer-In-Charge and other senior officers of the University during the progress of work.
- Use of quality material: Only quality material of reputed make as specified in the tender document shall be used.

26. **Safety of Workmen:**

- All workmen shall enter into site with leather soled shoes and a suitable helmet as protection from falling debris or injury otherwise. The helmets shall be of a particular color and propriety made to IS/BS standards. Similarly welders are expected to wear goggles during welding/cutting works using either gas or electric welding sets. Insulators shall wear nose masks to prevent inhaling glue and mastics. While moving or handling heavy/sharp objects workmen shall use hand gloves. All workmen, as a good practice, are expected to wear overall of a particular color for identification from a distance. When working at high levels, guard protection rails/scaffolding must be in place before the workman is instructed to start work. Even in such condition safety belts must be worn and anchored to a fixed and secured support.
- The requirement of safety cannot be overemphasized and needs constant attention of the supervisor in charge of the works of the contractor.

The Contractor and his site in charges shall be responsible solely for the safety of his/her workers and negligence in enforcing safety habits can lead to accidents on site, which may result in his replacement.

27. **Penalty Clause:**

a) In case of minor breakdown/fault in the Air-Conditioning System under DLP, the issue must be resolved within 07 days of lodge of complain, failing to which, after that a penalty of Rs. 500/- per day per unit shall be imposed and recovered from the deposits of the agency/contractor. The detailed report shall also be submitted to the EIC at the earliest.

b) In case of major breakdown/fault in the Air-Conditioning System under DLP, the issue must be resolved within 14 days of lodge of complain, failing to which, after that a penalty of Rs. 500/- per day per unit shall be imposed and recovered from the deposits of the agency/contractor. The detailed report shall also be submitted to the EIC at the earliest.

c) If the work is not completed as per the complaint/work order under DLP, then the University may get it done from any other contractor/agency in case of urgency, at the quoted rates of the new contractor/agency without giving any notice to that effect and the expenditure thus made shall be recovered from the contractor's bill/deposit.

SCOPE OF WORK & TECHNICAL SPECIFICATIONS

1. The scope of work comprises the following:

a. Takeover of sites, detailed inspection of sites, design and submission of drawings/layouts and heat load calculation details etc. as required to the University for Approval, complete in all respects for the required work as per the site suitability.
b. Submission of material samples to the University for Approval.
c. Delivery of equipment and material on proposed sites as per BoQ and tender document along with submission of test certificates and 'delivery challans duly acknowledged at CURaj Security Main Gates at each occasion' to the University.
d. Installation, Testing and Commissioning of equipment and material on site as per standard practice, OEM Norms, BoQ and directions of EIC.
e. Submission of Installation, Testing and Commissioning Reports along with all necessary relevant documents and warranty/guaranty certificates etc. complete in all respects; handing over of sites to the University for further beneficial use.
f. On site Comprehensive Maintenance of complete system along with servicing as per OEM Norms during defect liability period.

2. The prices quoted shall include all the equipment ancillary material as specified and all such items whatsoever and which may be required to fulfill the intent and purpose as laid down in the specifications. The contractor shall calculate all the quantities and sizes of refrigerant pipe, fitting, cables, control cable, communication cable, drain pipes, insulation, etc. before installation to avoid any shortfall or surplus. The tenderer shall also include all necessary civil work/ MS frame work for installation of outdoor and indoor units in air conditioning system as required.

3. The cost quoted by tenderer shall also include the green refrigerant as per OEM specifications & its charging for proper & specified functioning of air conditioning system. The bidder must also quote the rates considering the additional green refrigerant for long piping works on site as required and maintain the pressure as per specifications/guidelines of OEM.

a) Civil work/ MS frame work such as making holes, sleeves and foundations for indoor and outdoor units related to ductable equipment, all cuttings should be properly finished as existing surrounding. The installation of outdoor units on the terrace of building/ground should be checked structurally for safe installation.
b) Proper care should be taken for disposal of condensate drain water so that there is no leakage of condensate water inside the room as well in the route of condensate water pipe line. The layout of refrigerant piping is to be designed in such a way so that it should not disturb the aesthetic of the building/ room, inadvertent damage in the route of pipe should not occur in future & optimum length of pipe line for efficient air conditioning. After completion of the work three sets of 'as erected/ commissioned drawing' of activities listed above shall be submitted.

4. Design Data

a) The work as specified in schedule of work is required to be carried out in 10 Nos. Smart Classrooms at various locations of the University. The campus of Central University of Rajasthan is located at Bandarsindri Village, Tehsil- Kishangarh, District- Ajmer, Rajasthan-305817.
b) The equipment involved in air-conditioning system are complex in nature comprising of instrumentation control etc. The job, therefore calls for highest order of technical expertise and also requirement of experience of air-conditioning installation with proven performance. The tenderer, shall, therefore obtain, before quoting/ the consent of OEM and furnish the same along with the bid document in respect of execution, testing, commissioning and completion of the installation.

5. Outdoor Unit

a) The outdoor unit shall be factory assembled, weather proof casing (Material of construction of casing shall be OEM's standard design), constructed from heavy gauge GI sheets/rust proof mild steel in duly enamel/powder coated paint finished steel panels and coated with baked enamel

finish. The outdoor unit shall be completely factory wired, tested with all necessary controls & filled with first charge of refrigerant before delivering at site.

b) The equipment should be capable so that refrigerant piping between indoor units and outdoor units shall be Extendable upto 50m with maximum height difference between outdoor & indoor unit of 10m & level difference between two indoor units shall be maximum up to 5m.
c) The outdoor unit shall be modular in design and shall be allowed for side by side installation.
d) The outdoor unit shall be factory tested and filled with first charge of green refrigerant before delivering at site.
e) The outdoor units should have anti-corrosion paint free plate for easy mounting of unit.
f) The machine must have a sub cool feature to use coil surface more effectively through proper circuit/ bridge so that it prevents the flushing of refrigerant from long piping due to this effect thereby achieving energy savings.
g) The outdoor unit should be fitted with low noise level and should not be more than 67 db (A) at normal operation when measured at 1.5m distance from ground level.
h) In case, the trouble occurs in an indoor unit (s), the continuous operation of system should be possible.
i) Outdoor and indoor units shall be of the same make.
j) The indoor and outdoor units shall be as per BoQ and OEM standard specifications.

6. Heat Exchanger

a) The heat exchanger shall be constructed with copper tubes mechanically bonded to aluminum fins to form a cross fin coil. The aluminum fins shall be covered by anti-corrosion resin film. The System must have sub-cooling heat exchanger further to Condenser to increase refrigerating effect in Indoor units.
b) The unit shall be provided with necessary number of direct driven low noise level propeller type fans. Each fan shall have a safety guard.

7. Refrigerant Circuit

a) The refrigerant circuit shall include an accumulator, liquid and gas shut off valves and a solenoid valves or pulse with modulation valve.
b) All necessary safety devices shall be provided to ensure the safe operation of the system.

8. Safety Devices

The following safety devices shall be part of the outdoor unit; High Pressure Switch, Low Pressure Switch, Fan Motor Safety Thermostat, Over Current Relay, Fusible Plugs, Fuses and as per OEM standards.

9. Oil Recovery System

a) Unit shall be equipped with an oil recovery system to ensure stable operation with long refrigeration piping lengths.
b) The system must be provided with oil balancing circuit to avoid poor lubrication.

10. Remote Control

The remote should be corded with wide screen display and able to show the Outdoor Status at any given point of time in ductable type ACs. Also it shall have different modes like Fan Mode, Heat Mode, and Cooling Mode etc.; also firm arrange single point operation for remote.

11. Pipe Work General :

All piping work shall conform to quality standards and shall be carried out as per specifications and details given hereunder:-

a) The drain piping will be UPVC/CPVC.
b) Pipe crosses shall be provided at bends, to permit easy cleaning of drain line.
c) The drain line shall be provided upto the nearest drain trap and pitched towards the trap.
d) Drain lines shall be provided at all the lowest points in the system, as well as at equipment, where leakage of water is likely to occur or to remove condensate water from pump glands.
e) The drain pipe shall be insulated as per specification in Part 'Insulation'.

12. Copper Piping :

a) Seamless soft copper tubing, type L shall be used to make connections to equipment, wherever required or specified.

b) The Flare nuts shall be of brass and the tees, elbows, reducers etc. shall all be of copper.

c) Refrigerant Piping :
All refrigerant piping for the air conditioning system shall be constructed from soft seamless copper pipe with copper fittings and silver-soldered joints. The refrigerant piping arrangements shall be in accordance with good standard practice adopted within the air conditioning industry, and are to include charging connections, suction line insulation and all other items normally forming part of proper refrigerant circuits.

d) All joints in copper piping shall be sweat joints using low temperature brazing and or silver solder. Before jointing any copper pipe or fittings, it's interiors shall be thoroughly cleaned by passing a clean cloth via wire or cable through its entire length. The piping shall be continuously kept clean of dirt etc. while constructing the joints. Subsequently, it shall be thoroughly blown out using nitrogen.

e) After the refrigerant piping installation has been completed, the refrigerant piping system shall be pressure tested using nitrogen at pressure of 5Kg per sq.cm. for both high and low side. Pressure shall be maintained in the system for 24 hours. The system shall then be evacuated to minimum vacuum of 700mm Hg and held for 24 hours.

f) The air-conditioning system supplier shall design sizes and erect proper interconnections of the complete refrigerant circuit.

g) The thickness of copper piping should as per respective OEM standards.

h) The suction pipe line size and the liquid pipe line size shall be selected according to the manufacturer's specified outside diameter. All refrigerant pipes shall be properly laid in the cable tray supported and anchored to the building structure using steel hangers, anchors, brackets and supports which shall be fixed to the building structure by means of inserts or expansion shields of adequate size and number to support the load imposed thereon as per BoQ.

13. Insulation General :

The Insulation of copper refrigerant piping shall be carried out as per specifications given below. The materials to be used for insulation shall be as follows, unless some other material is specifically mentioned elsewhere.

Insulation Material for Piping System:

a. The insulation shall be carried out from closed cell, electrometric nitrile rubber tubular insulation. The material should be fire proof.

b. Thermal conductivity of the material shall not exceed 0.035w/mk at an average temperature of 40ºC. The density of material shall be 33+/-3 kg/m3 or 0.033 GM/CC or as per respective OEM standards.

14. Application:

a) The pipe surfaces will be thoroughly cleaned prior to applying the insulation. To avoid application of adhesive in the field the insulation shall be provided with self-adhesive. Otherwise the adhesive of suitable grade shall be uniformly applied on the duct/pipe surface and the insulation and cured, before sticking to the pipe. The insulation can be wrapped around the pipe as one piece where size does not permit. The same be cut to exact width/height of pipe.

b) The pipe insulation joints will be overlapped with a self-adhesive tape of the same material. The tape shall be minimum 2.5mm thick and 50mm wide.

c) For pipe insulation, the material should be cut in such a way that the joining/overlapping of the insulation does not cause any bulging or stretching.

15. Electrical Work

a) The contractor or his authorized representative should always be available at the site of work to take instructions from Engineer-In-Charge and ensure proper execution of work accordingly.

b) No work shall commence in the absence of contractor's engineer, supervisor etc. and they shall certify in writing about the correctness of layout alignment and shall ensure stability of all structural work such as partition panel and other related items.
c) The tenderer shall quote only makes for which he has satisfactorily executed the job and shall also furnish certificate from OEM to the effect that such equipment has performed satisfactorily under Indian weather conditions.
d) All work and material brought and left upon the ground by the contractor or by his orders, for the purpose of forming part of the works, are to be considered to be the property of the CURaj and the same are not to be removed or taken away by the contractor or any other person without consent in writing of the Engineer-In-Charge but the CURaj is not to be in any way responsible for any loss or damage which may happen to or in respect of any such work or materials either by the same being lost or damaged by weather or otherwise.
e) The contractor shall execute the different items simultaneously, as far as possible, so that minimum breakage and repairs are involved.
f) The contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants of adjacent properties and to the public in general and to prevent any damage to such properties and any pollution of environment and waterways. He shall make good at his own cost and to the satisfaction of the Engineer-In-Charge, any damage to public or private property whatsoever caused during the execution of the work or by traffic brought thereon by the contractor. Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants/users of adjoining buildings.
g) If the work is carried out in more than one shift or during night to meet out the time period of completion, nothing extra shall be paid on this account.
h) The contractor shall be bound to follow the instruction and restrictions imposed by the Administration / Police authorities on the working and movement of labour / material / vehicles etc. and nothing extra shall be paid on this account.
i) **All the material other than the BoQ and Preferred Makes of Equipment & Materials as in Annexure-VI, are to get approved from the Engineer-In-Charge before using the same in the work.**
j) The electrical work will be carried out in accordance with the General Specifications 2013 for electrical works in (part I) internal, CPWD specifications (part II) external, except as otherwise specified in the description of items given in the Bill of quantities or in the attached Technical Specification while complying in all respects with the requirements of the latest Indian Electricity Rules in force at the time of execution.
k) The electrical work shall be carried out simultaneously with the civil and interior works.
l) If any minor alterations are found necessary, the contractor shall do the same within tendered rates.
m) The contractor shall employ adequate labour to complete the work within the stipulated time and make his own arrangements for storage of materials etc.
n) Necessary clarification required by the department shall have to be furnished by the tenderer within the time given by the department for the same. The tenderer will have to depute his representative to discuss with the officer(s) of the department as and when so desired. In case, in the opinion of the department a tenderer is taking undue long time in furnishing the desired clarifications, his bid will be rejected without making any reference.

16. Civil Work: The false ceiling work and all other civil works are to be carried out in accordance with the CPWD civil manuals, BoQ and directions of Engineer-In-Charge.

EQUIPMENT TECHNICAL DATA SHEET

Contractor should furnish technical data of the equipment and accessories offered by him as per the scheme and bill of quantities. Some sample technical data sheets are enclosed for the contractor to understand the expected technical data. Similarly the technical data for all other equipment are supposed to be enclosed with offer. Manufacture's printed data sheet for all components should be enclosed along with technical data sheet.

S. No.	Description	Unit	Condition of services
	Indoor Unit / Evaporator Unit		
1.	Unit no./model no.		
2.	Manufacturer		
3.	Operating weight	Kg	
4.	Overall dimension	mm	
5.	Dimension of Coil	Mtr/mm	
6.	Material of Coil		
7.	Operating Range Cooling		
8.	Operating Range Heating		
9.	Fan Air Flow Rate	CFM	
10.	Fan Speed	RPM	
11.	Air Flow Type		
12.	Sound Level	db	
	Outdoor Unit		
1.	Discharge Type		
2.	Make		
3.	Model		
4.	Cooling Capacity	Btu/h or kW	
5.	Heating Capacity	Btu/h or kW	
6.	Dimension (H*W*D)	mm	
7.	Machine Weight	Kg	
8.	Sound Level	db	
9.	Airflow rate	m^3/min	
10.	Compressor Type : Screw / Rotary / Scroll		
11.	Compressor Make		
12.	Compressor Model		
13.	Refrigerant Type		
14.	Refrigerant Charge	Kg	
15.	Condenser Tube Material		
16.	Condenser Tube thickness	Mm	
17.	Condenser Tube diameter	Mm	

ANNEXURE – I
(to be submitted with technical bid)

INFORMATION REGARDING ELIGIBILITY
LETTER OF TRANSMITTAL

From:

To
The Executive Engineer
……..

Subject: Submission of bids for the work of ……

Sir,
I/we have examined the details given in the bid document for the above work, I/we hereby submit the relevant information:

1. I/we hereby certify that all the statement made and information supplied in the enclosed forms A to E and accompanying statement are true and correct.
2. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I/we submit the requisite certified solvency certificate and authorize the Executive Engineer ……..to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I/we also authorize Executive Engineer ……. to approach individuals, employers, firms and corporation to verify our competence and general reputation.
4. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following eligible similar works:

Name of work	Certificate from

Certificate: It is certified that the information given in the enclosed eligibility bid are correct. It is also certified that, I/We shall be liable to be debarred, disqualified/cancellation of enlistment in case any information furnished by me/us is found to be incorrect.

Enclosures:

Date of submission:

Seal of bidder

Signature(s) of Bidder(s)

ANNEXURE-II

(to be submitted with technical bid)

FORM 'A'

FINANCIAL INFORMATION

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

Financial years					

(i) Gross Annual Turn Over on construction works.

(ii) Profit/Loss (standalone financial statement and consolidated financial statement both).

II. Financial arrangements for carrying out the proposed work.

Signature of Chartered Accountant with Seal

Signature of Bidder(s)

ANNEXURE-II

(to be submitted with technical bid)

FORM "B"
BANKER'S CERTIFICATE FROM A COMMERCIAL BANK
(OM No. DG/SOP 2022/07 dated 09.11.2022)

This is to certify that to the best of our knowledge and information that M/s./ Sh……..... ..... having marginally noted address, …….as a Customer of our bank are/ is respectable and can be treated as good for any engagement upto a limit of Rs……. (Rupees……..)

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

(Signature) For the Bank

NOTE
1. Banker's Certificates should be on letter head of the Bank, addressed to tendering authority.
2. In case of Partnership firm, certificate should include names of all partners as recorded with the Bank.

FORM "B-1"
FORM FOR CERTIFICATE OF NET WORTH FROM CHARTERED ACCOUNTANT

It is to certify that as per the audited balance sheet and profit & loss account during the financial year ..... , the Net Worth of M/s ……..…… (Name & Registered Address of individual/firm/ company), as on ……..……. (the relevant date) is Rs. …… after considering all liabilities. It is further certified that the Net Worth of the company has not eroded by more than 30 % in the last three years ending on (the relevant date)." Unique Document Identification Number (UDIN) …….

Signature of Chartered Accountant ……..……
Name of Chartered Accountant ……..……
Membership No. of ICAI ……..……
Date and Seal ……..……

ANNEXURE-II

(to be submitted with technical bid)

FORM 'C'

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

S. No.	Name of work/ project and location	Owner or sponsoring organization	Cost of work in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation/ arbitration cases pending/ in progress with details*	Name and address/ telephone number of officer to whom reference may be made	Whether the work was done on back to back basis Yes/ No
1	2	3	4	5	6	7	8	9	10

* Indicate gross amount claimed and amount awarded by the Arbitration Tribunal.

Signature of Bidder(s)

FORM 'C'-1

PROJECTS UNDER EXECUTION

S. No.	Name of work/ project and location	Owner or sponsoring organization	Cost of work in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Upto date percentage progress of work	Slow progress if any and reasons thereof	Name and address/ telephone number of officer to whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

Signature of Bidder(s)

ANNEXURE-II

(to be submitted with technical bid)

FORM "E"

STRUCTURE & ORGANISATION

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

Organization/Place of registration	Registration No
1.	
2.	
3.	

5. Names and titles of Directors & Officers with designation to be concerned with this work
6. Designation of individuals authorized to act for the organization
7. Has the bidder, or any constituent partner in case of partnership firm, limited company / Joint Venture, ever been convicted by the court of Law? If so, give details
8. In which field of Civil Engineering construction the bidder has specialization and interest?
9. Any other information considered necessary but not included above.

Signature of Bidder(s)

ANNEXURE-III

(to be submitted with technical bid)

SELF DECLARATION CERTIFICATE
(To be submitted on Non-Judicial Stamp Paper of Rs. 100/-)

I hereby certify that the ……. firm has not been ever blacklisted by any Central / State Government / Public Undertaking / Institute on any account.

I also certify that firm will execute the work as per the specification given by Institute and also abide all the terms and conditions stipulated in tender.

I also certify that the information given in the bid is true and correct in all aspects and if in any case at a later date it is found that any detail/s provided are false and incorrect, any contract given to the concern firm or participation may be summarily terminated at any stage, the firm will be blacklisted and Institute may imposed any action as per rules.

Date:

Name :

Place:

Business Address :

Signature of Bidder :

Seal of the Bidder :

ANNEXURE-IV

(to be submitted with technical bid)

UNDERTAKING FOR SUPPLY OF GENUINE PARTS
(On letter head of firm)

I hereby certify that the ……. firm will supply genuine spare parts of the said work required during defect liability period/AMC period, etc. or as and when required or as per directions of the Engineer-In-Charge.

I also certify that the firm will execute the work as per the standards of manufacturer and specification given by department and also abide all the terms and conditions stipulated in NIT document.

Date:

Name :

Place:

Business Address :

Signature of Bidder :

Seal of the Bidder :

ANNEXURE-V

(to be submitted with technical bid)

FORM OF PERFORMANCE SECURITY (GUARANTEE)
BANK GUARANTEE BOND

In consideration of the President of India (hereinafter called " The Government") having offered to accept the terms and conditions of the proposed agreement between……..and ……(hereinafter called "the said Contractor(s)") for the work……(hereafter called "the said agreement") having agreed to production of a irrevocable Bank Guarantee for Rs……(Rupees……..……only) as a security/guarantee from the Contractor(s) for compliance of this obligations in accordance with the terms and conditions in the said agreement.

We……. (Hereinafter referred to as "the Bank") hereby (indicate the name of the Bank) undertake to pay to the Government in amount not exceeding Rs……(Rupees…….Only) on demand by the Government.

2) We ……. do hereby undertake to pay the amounts due and payable (indicate the name of the Bank) under this Guarantee without any demure, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractor(s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs…….
…….(Rupees……only).

3) We, the said bank further undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) shall have no claim against us for making such payment.

4). We ……..… further agree that the guarantee herein contained(indicate the name of the Bank) shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-Charge on behalf of the government certified that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.

5) We ……. further agree with the Government that(indicate the name of the Bank) the Government shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said Contractor (s) and to for bear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the Government or any indulgence by the Government to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6) This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

7) We …… lastly undertake not to revoke this (indicate the name of the Bank) guarantee except with the previous consent of the Government in writing.

8) This guarantee shall be valid upto _____ . Unless extended on demand by Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. _____ (Rs. _____only) and unless a claim in writing is lodged with us within 06 Months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged. Dated the _____ day of _____for
_____ (indicate the name of Bank)

ANNEXURE-VI

PREFERRED MAKES OF EQUIPMENT & MATERIALS

S. No.	Details of Materials / Equipment	Manufacturer's Name / Make
A.	**Internal EI**	
1.	MCB, Isolator, Industrial Plug Socket, RCCB, RCBO's	Schneider Electric ACTI-9 (N) / Legrand (DX3) / Hager/ L&T (Exora) / C&S (Win Trip 1/2) / ABB (S200M) / Siemens (Betaguard) /MK(Honeywell)
2.	MCBDB & Loose Wire Box	Legrand (EKINOX-3) / L&T (EXORA) / C&S (Win Class)/ Hager (Novello) / Schneider (ACTI-9) / ABB (Elegance) / Siemens / MK(Honeywell) **(Note : MCBs Make shall be same as DBs Make)**
3.	Change Over Switches	L&T / Havells / HPL / Hager / C&S / Socomac / ABB / ASCO
4.	Automatic Transfer Switch (ATS)	Asco (Schneider) / Russel / Socomac / Hager / ABB / Legrand / L&T / Havells
5.	FRLS PVC insulated copper conductor single core cable for wiring. (ISI marked)	Finolex / RR Kabel / KEI /Havells / Polycab / Bonton / Grandlay
6.	Armoured/Unarmoured telephone cable, Coaxial Cable/LAN Cable	Delton / Finolex / RR Kabel / Polycab/Havells / Bonton / Grandlay / KEI
7.	MS Conduit (ISI Marked) with heavy duty MS conduit pipe accessories	BEC / NIC / AKG / RMCON **(Note : The make of accessories will be same that of conduit pipe & will comply to IS / 4768 part 2 2003)**
8.	PVC Conduit (ISI Marked) with heavy duty PVC conduit pipe accessories	AKG / Norpack / BEC / Polycab / Precision / Astral / Finolex / Pressfit
9.	Modular Switch, Socket/Telephone Socket/ Cable TV Socket/ Data outlet Socket / Fan Regulator/ G.I. Boxes Etc.	Legrand (Arteor) / Schneider Electric (Zencelo) / Honeywell- MK (Elements)
10.	Modular MCB	Legrand / Schneider Electric /MK-Honeywell
11.	Selector Switch & Toggle switch	Salzer (Larsen & Toubro) / Siemens / Kaycee / C&S /Schneider
12.	PVC Trunking	Mk (Honeywell)/ Legrand / Schneider
13.	GI pipe (ISI Marked)	Tata / Jindal (Hissar) / SAIL
14.	Paints	Asian / Berger /Dulux
15.	Terminal Blocks and Connectors	Elmax / Wago / Hensel / Connectwell
16.	Phenolic Laminated Sheet / Bakelite Sheet	Hylam / Formica (P-I Grade) / Mylam / Greenlam
17.	Cat-6 /Cat-6A Cable, Wires & Fiber Optic Cable	Amp / Beldon / Legrand / Krone Communication / Molex
18.	Indoor and Outdoor LED fittings /LED Lamp/ LED Tube	Wipro / Philips / Trilux / Regent / Osram / Lighting Technology (LT)
19.	Decorative Indoor/Outdoor LED fitting	Wipro / Philips / Trilux / Regent / Osram / Lighting Technology (LT)/Bajaj/Havells/Crompton
20.	Exhaust Fan/Fresher Fan	Havells / Crompton Greaves / USHA / Almonard / Alstom

21.	BLDC Ceiling Fan	Havells / Crompton Greaves / Atombarg Gorilla / Superfan / Usha
22.	Wall Bracket Fitting	Havells / Wipro / Decon / Jaquar / Philips / Bajaj / Trilux
23.	Geysers	Racold / CG / Havells / Jaquar / AOSmith / Usha / Venus
24.	Air circulator / Wall Fan	Havells / Usha / Almonard / Crompton / Orient
25.	LED Street Lights with inbuilt Solar Panel & Controller	Havells / Crompton / Philips / Wipro / Bajaj
26.	Ornamental Pole (Factory Finish)/ Hot Dipped Galvanized Octagonal Pole /High Mast	Valmont / Philips / Crompton / Wipro / Bajaj / Keselec / Singh profile /Transrail
27.	Hot Dipped Galvanized Octagonal Pole /High Mast	Valmont / Philips / Crompton / Wipro / Bajaj / Keselec / Singh profile /Transrail/Utkarsh
28.	Polycarbonate Junction Box / Enclosure / Pole box	Hensel / Spelsberg / Naptune-Bals / Sintex/Standard
B.	**POWER CABLE**	
1.	XLPE insulated PVC sheathed Alum. / Copper Conductor Armored cable of 1.1 KV grade	Finolex / Polycab / KEI / Havells / Grandlay / RR Kabel /Bonton/LAPP/RPG
C.	**HT Cable**	
1.	H.T. cable (ISI marked)	Finolex / CCI / Polycab / KEI / Havells / RR Kabel / Grandlay / LAPP/RPG
D.	**Sub Station Equipment**	
1.	LT Panel / Meter Panel Board/Outdoor Feeder Pillar / APFC Panels (Above 200 Amp Incomer)	Tricolite Electrical Industries / Control & Switchgears Electrical Ltd. / Sterling & Wilson / Milestone / Adlec Control System Pvt. Ltd. / Advance Panels & Switchgear Pvt. Ltd. Haridwar / BSPL (Bhopal)/ Engineers & Engineers (Electricals) Pvt. Ltd. / Peaton Electrical Co. Ltd. /Dynamic Electropower Pvt. Ltd./ Pristine/ Neptune /Pyrotech India Electronic pvt Ltd.Udaipur
2.	LT Panel / Meter Panel Board/Outdoor Feeder Pillar / APFC Panels (Upto 200 Amp Incomer)	Tricolite Electrical Industries / Control & Switchgears Electrical Ltd. / Sterling & Wilson / Milestone / Adlec Control System Pvt. Ltd. / Advance Panels & Switchgear Pvt. Ltd. Haridwar / BSPL (Bhopal)/ Engineers & Engineers (Electricals) Pvt. Ltd. / Peaton Electrical Co. Ltd. /Dynamic Electropower Pvt. Ltd./ ASPL (Associated Switchgears & Projects Ltd.) / Pristine / Neptune /Allied engineers/ Pyrotech India Electronic pvt Ltd.Udaipur/Johns electric co.pvt Ltd Jaipur
3.	Rising main / Bus Trunking	C&S / L&T / Schneider / Legrand / Godrej
4.	Moulded Case Circuit Breaker (MCCB) Thermal Release / Microprocessor based (Ics=Icu=100%)	Schneider Electric (CVS Series) / Siemens (VL Series) / L&T (D-Sine) / Legrand (DPX3) / C&S (Winbreak 1/2) / ABB (TMax) / Hager
5.	Contactor/Relay /Timer	Schneider Electric / L&T / BCH / Siemens / Legrand / ABB / C&S / Hager/

6.	Potential Transformers / Current Transformer	Automatic Electric / Matrix / Precise / L&T / Kappa /Procom
7.	LED type indicating lamps / Push Button	Schneider Electric / L&T / Siemens / Vaishno
8.	Digital Meters (A/V/PF/Hz/KW/KWH)	Conzerv / Larsen & Toubro / Secure / AE / Socomac / Neptune /Hager
9.	Fasteners / GI Clamps	Hilti / Fisher / Chilli /OBO
10.	D.W. Corrugated HDPE Pipe (ISI marked)	REX / Dura plast / Zenduct / Gemini(Triputi)/ Duraline / Keshav Kripa Polyplast (LLP)
11.	Transformer (Oil / Dry type) **Upto 250 KVA**	Crompton / ABB / Raychem / Schneider / Voltamp / Uttam Bharat / United / Bharat Bijlee/RTS-Jaipur
12.	Transformer (Oil / Dry type) Above **250 KVA**	Crompton / ABB / Schneider / Sterling & Wilson / Raychem / Bharat Bijlee /Voltamp
13.	HT Panel / Ring Main Unit	Siemens / ABB / L&T / Schneider / C&S
14.	HT End Termination / Cable Jointing Kit	Reychem / Denson / Cap Seal / Safekei / 3M
15.	ACBs	Siemens (3WL–ETU45B) / L&T (U-Power-OMEGA MTX 4.0) / ABB (Emax)PR122 / Legrand (DMX^3 MP4) / Schneider (MVS Series) / C&S (Winmaster 2/3)
16.	Rubber Mat (MV / HT)	Jyoti / Deep Jyoti / Premier (duly ISI marked)
17.	Fire Extinguishers	Minimax / Safex / Life Guard / Kanex / Omex / Firequip (ISI Mark)
18.	Capacitors & Reactors / APFC Relay	EPCOS/ L&T / DUCATI / ABB / Siemens / Schneider / Neptune
19.	Cable Glands /lugs .	Baliga lighting / Comet / Cosmos / Dowells / Lapp / Gripwell
20.	Perforated Cable Tray	Pilco / Slotco /RMCON/ BEC / Steelways / OBO
21.	SS Wire mesh cable Tray /Raceways	Legrand / OBO / MK
22.	Programmable Logic Controller (PLC)	Siemens / Woodward / Allen / Bradley/ Legrand / OBO / MK-Honeywell
E.	**DG Set**	
1.	Diesel operated Power Generating Engine Upto 200 KVA	Cummins India / Caterpillar / Ashok Leyland / KOEL
2.	Diesel operated Power Generating Engine Above 200 KVA	Cummins India / Caterpillar / KOEL / Volvo Penta
3.	Alternator	Stamford / Lerroy Sommer / Kirloskar Electric / Caterpillar / Crompton Greaves
4.	DG Set Canopy / Enclosure & AMF Panel	As per OEM / OEA of respective DG Set manufacturer
5.	Alarm Annunciator	Advani Oralikon / Larsen & Toubro / Minilec
F.	**Fire Fighting Equipment**	
1.	MS Pipe/GI Pipe	Tata / Jindal Hisar / SAIL
2.	Forged Steel Fittings / Flanges	Johnson Industries / VS Forge / JK Forging / Trueforge
3.	Pipe Hangers	Chilli / Hilti / OBO / Fisher

4.	Gun Metal / Brass / NRV/ Gate Valve/Check Valve/Foot Valve (ISI marked)	Sant / Leader / Advance / Audco / Zoloto/Honeywell
5.	CI Sluice Valve/ Butterfly Valve/ NRV/ Y - Stainer (ISI marked)	Audco / Advance / Kirloskar / Zoloto/Honeywell/Kartar/Kalpna
6.	Fire pump/Jockey pump	Kirloskar/KSB/Matherplatt(Wilo)/Crompton
7.	Electrical Motor	ABB / Siemens / Kirloskar / Grundfos / Crompton / Bharat Bijli/ Matherplatt(Wilo)
8.	Diesel Engine for Fire Pump	KOEL / Ashok Leyland / Cummins
9.	Couplings (Tyre – Type)	Lovejoy / Fenner
10.	Anti-Vibration Mountings / Neoprene Gasket	Kanwal Industrial Corporation / Dunlop / GERB / Resistoflex
11.	Pressure Switch (ISI marked)	System Sensor / Indfoss / Danfoss / Switzer
12.	Pressure Gauge (ISI marked)	H Guru / Fiebig / Dwyer/ Hebig/Honeywell
13.	Landing Valve/Fire Hose coupling /First Aid Hose Reel and Drum /Shut of Nozzle /Branch Pipe/Fire Brigade inlet / RRL Hose Pipe / Thermoplastic Pipe (ISI marked)	New Age / Safeguard / Lifeguard / Padmini / Omex / Minimax/Safex
14.	Water Flow Switch (FM / UL listed)	System Sensor / Switzer / Rapid Control / Honeywell/ Danfoss
15.	Pipe coat	Pypcoat / Makphalt / Rustech
16.	Level Controller & Indicator (Water) (ISI Marked)	Auto Pump / Cirrus Engineering / Techtrol
17.	Fire Sealent	Promat / Birla / 3M / Hilti
18.	Single Phase Preventer / Water level guard	Schneider Electric / L&T / Siemens / ABB / Minilec
19.	LT Jointing Kit / Termination	Reychem / Denson / Cap Seal / Safekei / 3M
20.	Batteries	Exide / Rocket / HBL / Pulse / Amco / Amaraja
21.	Battery Charger	Statcon / Amarraja / CDC / AE / Expofyn / Thycon India/ Procom/Microtek
22.	Epoxy Paint	Dulux / Berger / Asian / Nerolac
23.	Air Release Valve	Rb / Tbs / Cimbrio / Zoloto
24.	Solenoid Valve / Spray Nozzle	Parker / HD / Tyco / Emersion / Honey Well
25.	Sprinkler Head	HD / Tyco / Viking / Omex / Easy Flex
26.	SS Flexible Drop	HD / Omex / Newage / Tyco / Lifeguard / Easy Flex
27.	Deluge Valve	Tyco / Viking / HD
G.	**Fire Alarm System**	
1.	Addressable Fire alarm control panel / Repeater panel / multi sensing detector / Fault isolator / Strobe light / Hooter / Manual call box / Response indicator	Johnson Control / Notifier / Siemens / Bosch make
2.	Cat-6 /Cat-6A Cable, Wires & Fiber Optic Cable	Amp / Beldon / Legrand / Krone Communication / Molex
3.	HDMI cable	Lightware/AMx/crestron/Extron
4	Fire retardant cable	Finolex / Polycab / KEI / Havells / Grandlay/ RR Kabel //Bonton/RPG/LAPP
5	Amplifire/Speaker	Bosch/Honeywell/Yamaha/JBL/Shure

H.	**Water Supply Pump Sets**	
1.	Mono Submersible/ Submersible pump Set	KSB / CG / Kirloskar / Grundfos / Mather & Platt (Wilo)
2.	DOL / Star Delta Starter	L&T / BCH / Havells / C&S / Siemens / Schneider
3.	Submersible Cable	Finolex / RR kabel / Polycab / Havells / KEI/ Bonton
I.	**EPABX System**	
1.	EPABX System / Master Console Phone/	Siemens / Cisco / Alcatel / Coral / Panasonic / AVAYA/ Matrix
2.	Analog Telephone instrument	Beetal / Tata / Panasonic/ Seimens
3.	18 SWG Sheet (Chrone Box)	Topaz / Coral / Crown
4.	Constant Voltage Transformer	Topaz / Bhurji / Delta / Servokon
J.	**Water Purifier**	
1.	Voltage Stablizer	V Guard / Blue Bird / Voltas / Servocon
2.	RO / Water Purifier	Kent / Aquaguard (Eureka Forbes)
3.	Drinking Water cooler	Voltas / Blue Star / Usha/ Sidwal
K.	**Solar Water Heating System**	
	Solar Water Heating System	Inter solar / Racold / BHEL / Electrotherm / Rashmi/V-guard/Emmvee Solar
L.	**CCTV System**	
1.	IP based Camera (All type) / NVR / Server	Bosch / Pelco / Axis / Sony / Tyco / Honeywell
2.	Conventional Camera/Connect (Dome / PTZ / Bullet / C-mount type)	Bosch / Honeywell / Pelco / Axis / Tyco / Sony
3.	Managed Networking layer Switch	Cisco / DLink / Extreme / Fortinet / Ruckus/HP/Netgear
4.	U Rack	Valrack(Legrand) / EOM Rack / Belchem /Comrack/ Vertiv
M.	**Uninterrupted Power Supply (UPS)**	
1.	Online / Offline UPS	Vertiv / Numeric / Peaguses (Auto Meter)/ Socomac/Eaton/Schneider
2.	SMF Batteries	Exide/Amron/Rocket/HBL/Pulse/Amco/ Amaraja
N.	**Solar Power Generation System**	
1	Solar Power Generation System	REIL / BHEL / BEL / CEL / REC / SOLON / VIKRAM / ABB / Havells
2	Junction Box	VNT / SUN GARNER / OEM of SPV Modules
3	SPV Inverter	Sungrow / Delta / SMA / ABB
4	Module Mounting Structure	As per MNRE / Manufactures Standards
5	XLPE Aluminium / Copper Cable	Finolex / Universal / Nicco / RPG Cables / KEI / Grandlay/LAPP / Polycab
6	Solar Cable XLPO Insulated (DC)	RR Kabel / Polycab / Havells / Finolex / Lapp
O.	**LED TV**	LG / Samsung / Panasonic / Toshiba / Sony
P.	**Air Conditioning System**	
1.	Split Air Conditioner	Hitachi/ Daikin/ O-General/ Mitshubshi / Carrier/

		Bluestar/LG
2.	Window Type Air Conditioner	Hitachi/ Daikin/ O-General/ Mitshubshi / Carrier/ Bluestar/LG
3	VRV/VRF	Hitachi/ Daikin/ O-General/ Mitshubshi / Carrier/ Bluestar/LG
4	Copper Pipe	OEM or Daikin/Total line/Maxflow/ Papriwal/
5	CPVC pipe	Ashirwad/Supreme/Astral/Prayag
6	GSS Sheet (For site fabricated duct)	SAIL/Jindal/Tata
7	Aluminium Sheet	Hindalco/Balco/Nalco/Tata/Aditya Birla
8	Flexible duct/Company fabricated duct	Waves/Zeco/Ductofab/Airflow/Caryaire/ Atco
9	Supply/Return Grill/diffuser	Airflow/Trox/Dynacfaft/ Caryaire/Matejoints
	False Ceiling	Armstrong
	LED Signage Board & associated items	
A	ACP board	ALUDECOR/ALSTRONG/ALUCOBOND
B	MS channel, Angle , GI sheet	SAIL/JINDAL/TATA
C	LED Chips	SAMSUNG/CREE/NICHIA/OSRAM/GE

Note- All the material other than the BoQ and Preferred Makes of Equipment & Materials as in Annexure-VI, are to get approved from the Engineer-In-Charge before using the same in the work.

Central University of Rajasthan

Bill of Quantity

Name of the Work: Design, Supply, Installation, Testing and Commissioning of VRV/VRF Type Air Conditioners in Seminar Hall No-314 and 315 of Academic Building 4A2, Central University of Rajasthan.

Sr. No.	Description of Item	Qty.	Unit	Rate (incl. GST)	Amount (in Rs.)
1.0	Providing of design, drawing and heat load calculation etc. in two sets for Specialized E&M Work of SITC of HVAC System (VRV-VRF based Air-Conditioners) under this contract in 02 nos. Seminar Halls of 4A2 Academic Building, CURaj, complete in all respects, as per standard practice and directions of Engineer-in-Charge. Approximate dimension of each seminar hall (L*W*H): 51*46*12 cb.ft.	1	job	15000	15000
	OUTDOOR UNIT				
2.0	Supplying, Installation, Testing & Commissioning of Modular type Variable Refrigerant Flow/Variable Refrigerant Volume air cooled Outdoor units suitable for cooling/heating having 100% hermetically sealed inverter type twin Rotary/Scroll Compressor(s), minimum two compressors (with individual separate PCB) for above 14HP modules, microprocessor based Controller, top discharge type condensing unit(s), with R-410-A Refrigerant or equivalent, vibration Isolators with suitable foundation etc. complete as required. To have better efficiency condenser fan shall be capable to operate at different speed with respect to load. The unit shall deliver the rated capacity and in confirmation as per IS 18728:2024 and CPWD Specifications and work even at 50°C ambient temperature without tripping. The system shall be able to deliver 100% of the rated capacity upto 39 °C. The unit shall be suitable to work on 400V +/- 10%, 3 Phase, 50Hz AC power supply and BMS compatible. The unit shall be filled with first charge of the refrigerant and ready for use as required. The condenser should be coated with a hydrophilic film to prevent water accumulation on the surface of the heat exchanger, enhance water dispersion, and reduce the risk of degradation, thereby improving overall performance and durability. The Indian Seasonal Energy Efficiency Ratio (ISEER) of the unit shall be as per Energy Conservation and Sustainable Building Code (ECSBC) 2024 as below and complete as per CPWD specification, connections, inter connections etc. as required. (For capacity <40 kWr ISEER 5.4, Capacity > 40 and <70 ISEER 5.5, Capacity > 70 ISEER 5.6 for ECSBC Building) Note: This work also includes charging of additional refrigerant required on site in accordance with the extra				

	inter-connectiong copper pipeline as per OEM Spefications.				
	For Cooling and Heating Both				
2.1	14 HP to 22 HP	80	Per HP	19111	1528880
	INDOOR UNIT				
3.0	Supplying, Installation, Testing and Commissioning of following minimum capacity 4 way Cassette Type Indoor ceiling mounted unit equipped with synthetic washable media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX Copper coil, electronic expansion valve, outer cabinet, drain pump, grill, necessary supports, vibration Isolation, Corded remote control etc., suitable for operation on single phase 230 V ± 10%, 50Hz AC supply, complete, as required. The Indoor units must shut down upon receiving a singal from the BMS System/Fire Singnals. The system shall be capable to adjust air flow as per room requirement in auto mode. The cooling capacity of indoor unit will be at air inlet conditions of 27 0C DB and 19 0C WB temperature. (Make will be same as of Outdoor)				
3.1	2.0 TR	2	each	39734	79468
3.2	4.0-4.1 TR	16	each	45781	732496
4.0	Supplying, Installation, Testing and Commissioning of Y/T/Multi Joints. Joints shall be of same Original Equipment Manufacturer (OEM) make as of ODUs and IDUs.				
4.1	Indoor Units	16	each	4535	72560
4.2	Outdoor Multi Joint	2	each	8098	16196
	COPPER REFRIGERANT PIPING				
5.0	Supplying, Installation, testing and commissioning including vaccumiazation and Nitrogen testing of following nominal sizes of soft/hard drawn copper refrigerant piping for VRV/VRF system, complete with fittings, with suitable adjustable ring type hanger supports, jointing/brazing including accessories, insulated with XPLE Class-O tubular insulation/with Class-O closed cell elastometric nitrile rubber tubular sleeves sections of 19 mm thick insulation as given below for Suction and Liquid lines, all accessories as per specifications etc. as required :				
5.1	9.5 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm	140	meter	346	48440
5.2	12.7 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm	30	meter	487	14610
5.3	15.86 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm	150	meter	615	92250
5.4	19 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm	50	meter	739	36950

5.5	22.2 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm	30	meter	904	27120
5.6	28.58 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm	80	meter	1157	92560
5.7	41.27 mm dia (OD) (Hard drawn) with tube thickness 1.62 mm	50	meter	1368	68400
6.0	Providing & Fixing of IS : 4985 - 2000 Class -4 (10 Kgf / Sqcm) UPVC drain water piping with fittings (IS:7834 & 10Kgf/sqcm) like elbow, socket, Tee, solvent cement jointing, support with MS hanger on ceiling or recessed in wall with chasing & plastering with 6 mm thick closed cell elastomeric nitrile rubber insulation including leakage testing etc. as required of following Nominal sizes. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .				
6.1	32 mm	125	meter	296	37000
7.0	Supplying and drawing of microprocessor based communication copper cable of suitable size & rating as per OEM Specifications of ODU/IDU to interconnect outdoor and indoor units as per standard practice and as per directions of EIC.	200	meter	150	30000
8.0	Profiding & fixing of MS Stand for 14 HP to 22 HP ODU of Air-Conditioner as required, as per standard practice and directions of EIC.	4	each	1500	6000
	ELECTRICAL WORK :				
9.0	Providing & Laying P.V.C. / XLPE insulated & P.V.C. sheathed Armoured Copper cable confirming to IS:1554 P-I / IS :7098 P - I of 1.1 KV with electrolytic grade Copper made of copper rods confirming to IS 613-1964, of purity >99.7 %, round / flat strip armouring, Inner / outer sheath confirming to IS:5831 in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench / Cable tray(with cable tie) including testing etc. as required of following size. OEM must have it's own in house NABL accrediated Laboratory for testing procedure as per IS:10810 For additional technical parameters of product / work refer Annexure 'A' attached with this BSR				
9.1	4 X 16 sq. mm	250	Mtr	1021	255250
9.2	3 X 2.5 sq. mm	100	Mtr	220	22000
10.0	Providing & Laying P.V.C. / XLPE insulated & P.V.C. sheathed Arrmoured Aluminium cable confirming to IS:1554 P-I / IS :7098 P - I of 1.1 KV with H4- Grade electrolytic aluminium conductor confirming to IS 8130 of purity >99.6 %, round / flat strip armouring of cables, Inner / outer sheath confirming to IS:5831 in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench / Cable tray(with cable tie) including testing etc. as required of following size. OEM must have it's own in house NABL accrediated Laboratory for testing procedure as per IS:10810.For additional technical				

	parameters of product / work refer Annexure 'A' attached with this BSR				
10.1	3½ X 95 sq. mm	20	mtr	765	15300
11.0	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
11.1	4 X 16 sq. mm (28mm)	8	each	366	2928
11.2	3½ X 95 sq. mm (45mm)	2	Each	684	1368
12.0	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required . (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
12.1	8 way (4 + 24), Double door	1	each	10724	10724
13.0	Supplying and fixing 63 A rating, 415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
13.1	63 A Triple pole and neutral	6	each	2000	12000
14.0	Providing and fixing following rating and breaking capacity and pole MCCB with thermomagnetic release and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, Ics=100% Icu and Operational making connections, Ics=100% Icu and Operational Voltage 690V etc. as required.				
14.1	250 A,36KA,FPMCCB	1	each	18372	18372
15.0	Supplying and installing following size of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with two numbers GI Suspenders i/c base of suitable size GI angle, GI bolts & nuts, fastner etc as required.				
15.1	150 mm width X 50 mm depth X 1.6 mm thickness	80	mtr	803	64240
15.2	300 mm width X 50 mm depth X 1.6 mm thickness	80	mtr	1062	84960
16.0	Providing & charging of additional R-410-A Refrigerant or equivalent for long copper refrigerant piping for VRV/VRF system as per ODU/IDU OEM Norms as reqd, as per standard practice and directions of EIC.	40	kg	1500	60000
	CIVIL WORK				
17.0	Civil alteration work of existing false ceiling as required on site during fixing of indoor cassate type units and laying of refrigerant & drain piping; alongwith finishing & making the false ceiling as earlier etc. complete, as per standard practice and directions of EIC.	1	job	30000	30000
	Total Amount including GST (in Rs.)				**3475072**

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