

NOTICE INVITING E-TENDER FOR SUPPLY INSTALLATION TESTING & COMMISSIONING OF 208 HP COLD & HOT VRF/VRV SYSTEM IN REPLACEMENT OF EXISTING DUCTED AIRCONDITIONING SYSTEM AND SUBSEQUENT ANNUAL MAINTENANCE OF THE SAME AT LIBRARY OF IIM, LUCKNOW.

To,	M/S		

SUB.: NOTICE INVITING E-TENDER FOR SUPPLY INSTALLATION TESTING & COMMISSIONING OF 208 HP COLD & HOT VRF/ VRV SYSTEM IN REPLACEMENT OF EXISTING DUCTED AIRCONDITIONING SYSTEM AND SUBSEQUENT ANNUAL MAINTENANCE OF THE SAME AT LIBRARY OF IIM, LUCKNOW.

Dear Sir,

Tenders are invited, on behalf of the Director, Indian Institute of Management, Lucknow for SUPPLY INSTALLATION TESTING & COMMISSIONING OF 208 HP COLD & HOT VRF/ VRV SYSTEM IN REPLACEMENT OF EXISTING DUCTED AIRCONDITIONING SYSTEM AND SUBSEQUENT ANNUAL MAINTENANCE OF THE SAME AT IIM, LUCKNOW, Prabandh Nagar, Lucknow as per BOQ attached. The Institute invites you to participate and to send your offers as per the attached **NOTICE** inviting **E-TENDER**.

E-Tenders are invited under two bid systems (both Technical and Financial) from reputed Companies. The complete Tender document containing General Terms and Conditions, pre-qualification requirements, BOQ, the scope of work, Specifications, etc. are available at http://eprocure.gov.inprocure/app and our website http://eprocure.gov.inprocure/app and our website http://www.iiml.ac.in for reference only.

Reputed Companies may submit their bids in the prescribed format with all the necessary documents online at http://eprocure.gov.inprocure/app on or before bid submission closing Date & Time

Sd/-Chief Administrative Officer For Indian Institute of Management



INSTITUTE OF MANAGEMENT LUCKNOW

NOTICE INVITING E-TENDER NIT NO. IIML/PROJ/TENDER/2024-25/4464 Dated-29/11/2024

NOTICE INVITING E-TENDER FOR SUPPLY INSTALLATION TESTING & COMMISSIONING OF 208 HP COLD & HOT VRF/VRV SYSTEM IN REPLACEMENT OF EXISTING DUCTED AIRCONDITIONING SYSTEM AND SUBSEQUENT ANNUAL MAINTENANCE OF THE SAME AT LIBRARY OF IIM, LUCKNOW.

Dear Sir,

E-Tenders are invited from reputed companies for Supply Installation Testing & Commissioning of cold and Hot 208 HP VRF/ VRV systems in replacement of the existing ducted Air-conditioning System and subsequent annual maintenance of the same at the Library of IIM, Lucknow. To submit their tender, quote your minimum rates on the enclosed bill of quantity. The General terms & conditions of the service contract are also enclosed which are binding to both IIML and the Bidder.

Name of work	:	Supply Installation Testing & Commissioning of cold and Hot 208 HP VRF/ VRV system in replacement of the existing ducted Airconditioning System and subsequent annual maintenance of the same at IIM, Lucknow
Earnest Money	:	Rs. 4,00,000/- (Rupees Four lakh Only)
Total Estimated Cost	:	Rs. 1,97,00,000/- (Inclusive of GST)
Period of Contract	:	1 + 4 years (1 year Warranty + 4 years CAMC)
Date of issue of tender document	:	As mentioned in E-procure portal
Date Pre-Bid Meeting	:	As mentioned in E-procure portal
Late Date for Submission Tender Document	:	As mentioned in E-procure portal
Date of opening of Technical Bid Opening	:	As mentioned in E-procure portal
Date of opening of Financial Bid Opening	:	Will be informed to the Bidders Qualifying the Technical Bid.
Starting of work	:	15 days from the Date of the LOI

Tenderers are advised to visit the site and see the work before submitting the tender. The Technical and Financial bids should be uploaded through the E-tendering process only before the due date & time.

Sd/-

Chief Administrative Officer For Indian Institute of Management Lucknow

TECHNICAL BID

A.SCOPE OF WORK

The work shall comprise of the entire material, equipment, Tools & plant, labor including supervision, and all associated 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 the specification but all incidental sundry components necessary for complete execution and satisfactory performance of installation with all layout charts whether or not those have been mentioned in detail in the tender documents in connection with this contract.

In addition to the supply, installation, testing, and commissioning of the VRF / VRV system including outdoor units, ducted indoor units, and robotic cleaning of the duct the following works shall be deemed to be included with the scope of work to be executed by the tenderer.

I. SITC of the VRF/ VRV System

The work involves the following:

- 1. Understanding, accessing, and calculating the actual Quantities of material required to complete the work.
- 2. The capacity of indoor and outdoor units is not fixed, it can vary as per the OEM near about capacity available
- 3. Supply of the required material at the site.
- 4. Parallel preparation of the site, such as dismantling the equipment's piping, wiring, civil work, etc., and stacking them at the desired location indicated by the Engineer In charge. The sealing of the unit, pipes cutting, etc., should be as per the applicable safety norms.
- 5. Crane/Hydra if required, would be in the scope of the tenderer. (material shifting as per the location provided by IIM or New material shifting on the roof, etc.)
- 6. Robotic cleaning of all ducts. Closing any gap in ducting if found.
- 7. Any ducting joining work required for connection of the machine with the duct, insulation of the duct wherever found damaged, and any repair for damage to part of the existing A.C. system (which will be used for the replaced system also) done during the work/ found damaged etc. are in the scope of contractor's work.
- 8. The contractor should take care to do the least Dismantling of the false ceiling. Only as per the requirement for work, piping, wiring etc. The False ceiling should be dismantled in such a way that there is the least damage of the adjacent existing false ceiling any support etc. required to prevent the damage of the adjacent false ceiling should be taken so that the adjacent false ceiling remains stable and properly fixed.
- 9. The contractor will not use any library furniture in any case for the installation works. Any damage done because of any such activity will be recovered from the contractor.
- 10. Executing the civil, electrical, and other associated works needed for the installation of the A.C. indoor & outdoor units, pipe racks, cable trays, control panels, Electrical panels, switches, sockets, Breakers etc.
- 11. All the wiring, cabling, and piping should be done in a standard manner in proper Cable/ pipe tray/ saddle with complete installation and fixtures for installation on R.C.C. slab etc.
- 12. Installation of all machines and electrical, electro-mechanical equipment's etc.
- 13. Supply and fixing of proper drain pipes which are properly tested for leakage and insulated and properly drain out to the desired location suggested.
- 14. Inspection, testing and commissioning of the complete system.
- 15. Repair and restoration of dismantled area, any damage due to above works.
- 16. Buy back of the dismantled machines as per the rates Quoted in the BOQ.
- 17. Proper disposal of debris/ malwa generated.

- 18. Submission of the required documents.
- 19. The contractor will provide the comprehensive maintenance services mentioned below as the part of Defect liability period (DLP) for 1 year and as part of Annual maintenance works for the next 4 years after the completion of DLP.
- 20. If in case any other civil contractor is engaged for executing any civil work which was either in the scope of the A.C. contractor or found new and decided by the engineer In charge to be executed separately then the A.C. contractor will coordinate and cooperate with the civil contractor for completion of work. No dispute between the contractors will be entertained and if any dispute is not resolved among the contractors then adverse action can be taken against the contractors as per the decision of the Engineer In charge.

II. 5 Years (1+4) Comprehensive Annual Maintenance of the VRF/ VRV system Installed. Routine, Preventive & Breakdown maintenance for (1+4) years from completion and handing over. The scope and nature of services to be provided by the contractor shall include scheduled preventive maintenance services which cover periodic and breakdown servicing, along with replacement of defective spare parts, including compressor and other consumables if required during the contract period. The scope of the work under AMC includes the following:

- 1. 4 (Four) routine services in a year or as mentioned in the maintenance manual of OEM whichever is more.
- 2. Immediate attendance of breakdown, if any.
- 3. Repairing of leakage, refrigerant Gas charging, if necessary.
- 4. Replacement of parts viz. Compressor, fan, Fan Motor, Belts, radiator fins, PCB, Magnetic Switch, Transformer, gas leak, pipe welding, control panel and other electrical parts of AC etc. what soever required to repair and restore the A.C. functioning.
- 5. The setting of the central controller whenever required.
- 6. Cleaning and maintenance of Air Filter, Sheet Metal parts, Evaporator coils, Condenser Coil Circuit Breaker, Front grill assembly / plastic cover/panel, Circuit Breaker (MCB), Remote Handset, and Voltage stabilizer. If any such part requires replacement then the same must be replaced within the timelines specified below.
- 7. Any spare parts, gas, etc. including labor, etc. will be provided by the contractor and will be part of the AMC contract and nothing will be paid extra on this account. The contractor will be responsible for the logistics of any spare part required to be replaced for repair. In case any part needs to be taken to the works shop/ service center of the Contractor then the entire cost of loading, unloading, transportation etc. will have to be borne by the contractor only.
- 8. It shall be the responsibility of the contractor to hand over the awarded VRV/VRF HVAC system to IIM Lucknow in working condition at the expiry of the Contract period.
- 9. The contractor is required to maintain the stock of necessary spares in his local store at Lucknow. So that the complaints can be attended within the time lines.
- 10. During any break down which requires replacement of part which is not on the stock of the contractor and is expected to take more than 24 hours then standby replacement for that pat should be provided and fixed by the contractor within 24 hours.
- 11. Breakdown service will include the replacement of genuine spares.
- 12. Contractor is required to prepare proper service report, get it signed from the user and submit the copy of same at the time of billing.
- 13. The received complaint should be attended within 24 hours by the contractor. Nature of the complaint can be two type minor fault or major fault.

In case of minor fault,

- a. Fail to attend the complaint within 24 hours the penalty of Rs. 2500/- will be imposed plus the work will be carried by other agency at the risk and cost of contractor and amount will be deducted from AMC bill/Performance Security.
- b. Minor complain should be rectified within 24 hours. Fail to do so the penalty of Rs.500 per day till 5 days. After that penalty of 2500/- will be imposed plus the work will be carried by other agency at the risk and cost of contractor and amount will be deducted from AMC bill/Performance Security.

In case of major fault,

- a. For repair/replacement of motor, PCB, Expansion Coil, Cooling coil, Condensing coil etc. should be rectified within 5 days. After that penalty of 2500/- will be imposed plus the work will be carried by other agency at the risk and cost of contractor and amount will be deducted from AMC bill /Performance Security (Except in case of 3 national holidays).
- b. For repair/replacement of compressor, Gas leakage finding, Nitrogen testing, etc should be rectified within 12 days. After that penalty of 5000/- will be imposed plus the work will be carried by other agency at the risk and cost of contractor and amount will be deducted from AMC bill /Performance Security . (Except in case of 3 national holidays).

As per urgency of requirement tenderer has to install or arrange standby. The major or minor fault difference would be at the discretion of the Engineer-Incharge

III. In addition to the above following conditions may also be followed:

- 1. Any damage to the building or any part of the equipment which might result during the operation shall be repaired by the contractor.
- 2. Any damage resulting to the system on account of the negligence or mall- operation shall be made good by the contractor. Nothing extra will be paid for such work.
- 3. The contractor shall arrange to render efficient service as outlined in this specification. However, in case the contractor fails to maintain the service to the satisfaction of the engineer-in-charge of the department any expenditure incurred therein for alternative arrangements by the Engineer-in-charge shall be recovered from the contractor.
- 4. At the time of acceptance of the tender, the contractor shall furnish the details of staff members along with contact details to the corporation that will look after the maintenance work of ACs.
- 5. The contractor or his representative should not remove, disturb, or dislocate the existing equipment and its parts from its positions until and unless it is authorized by the Engineer–in–charge. The entire installation should be intact at any time of inspection as was handed over to him at the time of initial taking over of its maintenance and operation. Care shall also be taken not to damage the installation by improper handling.
- 6. Proper reports of preventive and breakdown maintenance of the VRV/VRF system shall be prepared and shall be signed by the contractor representative and the concerned Engineer.
- 7. Transportation of Air-Conditioner Units from the office buildings to the service provider's workshop, from one building to another, and the service provider's workshop to the office buildings, will be at the cost of the service provider.
- 8. The Service Provider is responsible for the payment of Minimum Wages (under the Central Act) to the personnel deployed by it. The Service Provider is also responsible for compliance with the provisions of all the statutes applicable in its case.

- a. Cancellation of Contract In cases of poor workmanship and non-compliance of tender/agreement or services provided by the contractor is not found to be satisfactory, the contract shall be terminated by the department by giving 10 days' notice even before the expiry of the contract period and the security deposit shall be forfeited without assigning any reason what so ever.
- b. The maintenance during one-year warranty period & subsequent four years shall be as CPWD General Specifications for HVAC work 2017 as amended up to date. A separate supplementary agreement shall be made with the successful tenderer for subhead "AMC i.e. Routine, Preventive & Breakdown Maintenance (for 4 years after one year guarantee period)" of schedule of work.
- c. The payment of maintenance may be made Quarterly.

B. INSTRUCTION TO TENDERER

- (i) The Tenderer shall read the document carefully before filling it.
- (ii) The bidder who submitted the EMD amount of Rs. 4,00,000/- (Rupees four lakhs only) to participate in the tender NIT no. IIML/PROJ/TENDER/2024-25/4454 dated-11/10/2024 (canceled due to technical reasons) **need NOT to submit EMD again**. Such Bidder are requested to provide proof of previous payment details in their technical bid.
- (iii) Bidders are required to deposit an amount of Rs. 4,00,000/- (Rupees four lakhs only) towards Earnest Money Deposit (EMD) to the bank account given below. **Those who are exempted from the deposit of EMD shall upload the valid certificate in this regard**.

Account No.	07231450000294
IFSC Code	HDFC0000723
Name of Bank & Type of Account	HDFC BANK/Saving

- (iv) This is a work contract tender. Bidders registered with **MSME** are **NOT Exempted from EMD**. All bidders are required to deposit/submit EMD. All bidders are required to deposit/submit EMD with their technical Bid.
- (v) Financial bids must be filled and submitted in the prescribed formats given on the CPP portal separately. A sample format of the financial bid has been attached with the Technical bid just for the understanding of the bidders. This is required to be kept blank and just signed and stamped along with the other documents of this Tender. If a quoted financial bid is found along with the Technical bid of this Tender, then the Tender shall be straight away rejected.
- (vi) Tender must be valid for a minimum period of 120 days from the date of opening.
- (vii) Technical offers shall be opened first, if the tenderer fails to submit the EMD then their technical offer will not be Opened/Evaluated. The technical offers will be evaluated by the selection committee based on the technical evaluation criteria of this document. The Financial offers from technically unqualified tenderers as per evaluation criteria will not be opened.
- (viii) Financial offer shall be opened only for those tenders who are technically qualified as per the evaluation criteria of this tender document.
- (ix) The dates for opening financial offer will be communicated to the tenderers and tenderers are requested to be present at the time of opening the tenders. An authority letter is must if any person other than who has signed the tender document attends such event.
- (x) Each page of the tender document must be signed by the authorized signatory of the tenderer.
- (xi) Scanned Copy of Tender document duly signed and filled up should be uploaded.

- (xii) The tender not accompanied by a complete document or duly filled in all respects shall be rejected.
- (xiii) All erasures, cuttings and alterations made must be attested by the authorized person while filling the tender document. Over-writing of figures is not permitted.
- (xiv) Successful tenderers must visit the site and see the means of access to the site and specifications and acquaint themselves fully with the works to be carried out and all other factors governing the works before quoting their rate.
- (xv) The successful tenderer shall submit additional Initial Performance security of 3% of Contract Value in case EMD was submitted. The EMD submitted in this case will also be converted to performance security. In case of the Exemption under MSME for EMD then 5% of the contract value has to be submitted as performance security in the form of DD/FDR/Bank Guarantee in favor of the Director, Indian Institute of Management, Lucknow within 12 days of award of work. A maximum Grace period of 3 Days will be given after the levy of a penalty equal to 1% of performance security value per Day. If in case after 15 days of issue of LOI the Performance security is not deposited unless otherwise any extension had been granted by IIM Lucknow then the Work awarded/ LOI issued will be straightaway considered as Terminated and EMD (if deposited) will be forfeited.

Similarly, an Agreement on Rs 100 stamp paper will be required to be executed within 12 days of the issue of the LOI, and if the contractor fails to get the agreement done within a maximum of 15 days unless otherwise any extension had been granted by IIM Lucknow then the Work awarded/ LOI issued will be straightaway considered as Terminated.

The performance security (3%+2%) shall be released after 60 days of satisfactory completion of SITC work which is 6.5 months (135 days for SITC works + 2 months after satisfactory work completion) years or the extended period of the contract or the completion date of last work awarded till the completion/ extended date whichever is last. EMD of unsuccessful tenderer shall be returned after finalization of the contract. No interest shall be paid on the amount.

- (xvi) This is an item rate Tender. The rate quoted by the Tenderer shall be inclusive of packaging, forwarding, insurance, freight, delivery, installation testing commissioning, any applicable tax/cess, etc. at the site i/c temporary construction storage, risks, overhead charges general liabilities/obligations, and clearance from local authorities. The rate quoted by the tenderer shall be excluding GST, **GST will be paid extra as applicable**. Quantities in the BOQ can vary during the actual execution. The Contractor will have to calculate all the requirements etc. as per design/ as per OEM requirement and then only procure the material. No claim for any excess material purchase but not utilized will be entertained. Further if there any extraordinary variation in any item is expected then the same may be brought to the notice of IIML and IIML can consult its designer/ take internal Approval if it feels so. Under such condition, contractor shall wait for the instructions of IIML for further action.
- (xvii) If any discrepancy/ misprint is noticed in the specification or BOQ, it should be clarified with the Institute before quoting the rate.

- (xviii) Following procedures shall be adopted in case of difference in quoted rates in figures and words and extensions:
 - a. Where there is a difference between rates in figures and the rates quoted in words. The rates quoted in words shall be considered as correct.
 - b. Where the amount of an item is not worked out or it does not correspond to the rate either in figure or in words, the rates quoted in words shall be considered as a correct and necessary extension made.
 - c. Where the rate quoted by the tenderer in figures and in words tally, but the amount is not worked out correctly, the rates quoted by the tenderer shall be considered as correct and the amount shall be corrected accordingly.
- (xix) The Indian Institute of Management, Lucknow does not bind themselves to accept the lowest or any other tender and reserves the right to accept or reject any or all the tenders either in full or in part without assigning any reason.
- (xx) The tender shall be opened & evaluated by the tender committee and the successful tenderer shall be informed.
- (xxi) If any of the documents submitted by the tenderer is found fake, even after the acceptance of tender, the contract will be terminated for which the concerned tenderer will itself be responsible and no compensation, etc., will be paid by the IIM, Lucknow.
- (xxii) The Director, Indian Institute of Management, Lucknow reserves the right to reject one or all the tenders without assigning any reason. No claim, whatsoever, shall be entertained on this account.
- (xxiii) 5% of the payable bill value will be retained from each bill as a defect liability period & shall be released after the successful completion of the defect liability period of 12 months from the date of successful completion of the work and submission of performance security for four years on CAMC works which is 5 % of the quoted AMC value for 4 years. No interest shall be paid on the amount.
- (xxiv) Comprehensive Annual maintenance contract for 4 years will start from the date of completion of the Defect liability period i.e. 12 months from the date of successful completion of the work.
- (xxv) Tenderers are required to execute the agreement in accordance with the approved Proforma on non-judicial Rs. 100 stamp paper of appropriate value within a maximum 15 days (12+3) from the date of receipt of this Letter of Intent else work will be terminated by default. The cost of non-judicial stamp paper is to be borne by the tenderer.
- (xxvi) Successful tenderer's uploaded document can be verified with the original at the time of LOI / Agreement.
- (xxvii) Tender terms & condition also includes GCC which is uploaded on the IIML website and also be part of this contract and its terms and conditions shall be binding to both IIML and the successful Tenderer. So please read it properly. Link https://www.iiml.ac.in/sites/default/files/upload/tender/293037022gcc.pdf

- (xxviii) In case extraordinary variation is found in the **CAMC rate** quoted by the bidder as compared to the rates quoted by other bidders/ market rates for CAMC then the financial bid of that bidder will be Disqualified
- (xxix) Intending parties are required to submit an undertaking that their firms have never been debarred/ blacklisted by any Government/ Public sector Dep't. And there is no criminal case on the Proprietor/ partners/ any of the Directors in any Police station of any court of India. This undertaking is to be given in the following format:
 - i. I/ I/We declare and confirm that:-I/we have never been blacklisted /debarred from any Govt. /Public sector enterprises.
 - ii. There is no Arbitration case/ legal case/ dispute of my firm with Indian Institute of Management Lucknow.
 - iii. There is no criminal case on me/ and my partner/ board of directors is there in any court/Police station of India.
 - iv. All the information and attachments submitted in the tender document/ envelope are true and correct.
 - v. There is no suppression or concealment of information / document with regard to execution of work during the last 05 years
 - vi. I / We are aware that any false information provided herein will result in the rejection of my tender at any stage.
- (xxix) If any discrepancy/misprint is Noticed in specification or BOQ or rates or unit, it should be clarified from the Institute before quoting the rate.

If any discrepancy in between the price bid format of this Tender document and macros enabled excel file of the actual price bid on CPP portal is observed by the Bidder or if any item unit/ rates are found illogical/ impractical then in that case the same has to be brought to the notice of the Institute before the last date of submission. So that the required correction/ corrigendum can be made. If such issue is found at the later stage after award of the work either by the Contractor or by the Institute, then the logical decision based on the standard practice and as per the Institute's internal documentation shall be taken by the Institute and the same decision will be binding to the contractor and no claim whatsoever will be entertained in this regard.

C. TECHNICAL DETAILS OF BIDDER

The technical offer submitted by the bidders will be evaluated based on the below credential criteria.

SNo.	Particulars	Credential Criteria of Firm
1	Name of the firm & Address (Where registered post can be received)	
2	Contact No. and Email-ID	
3	GST Registration No. of the firm/Agency (Enclose copy):	
4	Income Tax Permanent Account No. (Enclose copy)	
5	Experience of the firm in a similar field during the last five years, ending the last day of the month previous to the one in which tenders are invited to submission of tender. (Copy of Completion Certificate to be enclosed).	
6	Average Annual Turnover during Average annual financial turnover during any Three years from the last 5 financial years ending 31st March 2024. (Copy of Annual Audited Accounts Statement for each year or the certificate for the average Turnover of the Tenderer issued by a registered Chartered Accountant). The certificates being submitted by the bidder should carry UDIN.	
7	Either OEM directly or its authorized vendor or a bidder who had been authorized by OEM to participate in this tender. Relevant certificate from the OEM to be submitted and mentioned.	
8	Details of EMD uploaded or MSME registration no. and year	
9.	Address of Lucknow after-sales service provider (for Annual Maintenance, availing warranty, etc.)	
10.	Make of VRV/VRF System	
11.	Year of Establishment of OEM	

Eligibility Criteria

a) ANNUAL TURN OVER:

Average annual financial turnover during any Three years from the last 5 financial years ending 31st March 2024 should be 100 lakhs **This Condition is Mandatory**. The Bidder has to enclose documentary proof indicating Turnover.

b) The Bidder should have experience working with any Government Organization/ PSU/ IIM/ IIT/ NIT/ Any Government Institution/ Pvt Organization (Turnover more than 100 cr.). **This Condition is Mandatory**.

- c) The Bidder should have **Experience in SITC of VRF/ VRV in total for a single work in** Any Government/PSU/ Autonomous Body such as IIM, IIT, etc., or should have executed works in any registered Private Limited Organization having Turnover more than 100 Cr in any of the last 5 financial years. As is published by the company in its Annual Financial Report of 23-24. If the bidder encloses the experience of Pvt. Ltd. Company then documentary proof of annual turnover of that Pvt. Ltd. Company should also be enclosed. **This Condition is Mandatory.**
- **d) EMD**: Earnest Money Deposit as specified in NIT to be furnished in any of the following forms and shall be valid up to 90 days from the last date of submission:
 - ➤ In case needs exemption under MSME criteria then a valid MSME certificate is required to be uploaded on the e-procurement portal.
 - ➤ Can be deposited in the below-mentioned Institute Bank Account and shared the UTR/Transaction number and date of Transaction in the Technical bid and the copy of the transaction receipt must be uploaded online on the portal with other documents. Those bidders, who are exempted from the deposit of Tender Fee & EMD (Earnest Money Deposit) must submit the relevant certificate to claim the exemption and mention 'Exempted' in the Technical Bid where the UTR number has been asked. In case the enclosed certificate is not valid or not acceptable to the Institute, the submitted bid will be treated as a bid without a Tender fee/ EMD and will be rejected.

Bank Account No.	07231450000294
IFSC Code	HDFC0000723
Name of Bank &Type of Account	HDFC/Savings

Exemption of MSME for Tender Fee will be as per the format available on the CPP portal. This Condition is Mandatory

e) **EXPERIENCE**:

- (I) Experience in SITC of VRF/ VRV with any Central or State Government/ Public Sector/ Autonomous Institution/ Registered Private limited having a Turnover of more than 100 Cr (as published by the company in its Annual Financial Report of 22-23/21-22/20-21/19-20/18-19. Registered means: The definition of a Registered private limited company given by the Ministry of Corporate Affairs on its website. The minimum value of the work/ works as mentioned above during the last 5 years ending the last day of the month previous to the one in which tenders are invited (31 October 2024) should be either of the following.
 - i. Three completed contracts of SITC of VRF/ VRV costing not less than Rs 77 Lakhs each.

OR

ii. Two completed contracts of SITC of VRF/VRV costing not less than Rs 118 Lakhs each.

OR

iii. One completed contract of SITC of VRF/VRV costing not less than **Rs 156 Lacs each.** This Condition is Mandatory

Note:

- (1) The work shall be completed as a whole. Partial value/ partial completion is not to be considered.
- (2) The meaning of "Similar Work" for the purpose of the tender has been defined as "SITC of VRF/VRV for a single work".
- **f)** Copy of PAN/ GIR No. Registration certificate issued by Income Tax Authority. This Condition is Mandatory.
- g) Copy of Certificate of GST number. This Condition is Mandatory

- h) Intending parties are required to submit an undertaking that their firms have never been debarred/ blacklisted by any Government/ Public sector department. And there is no criminal case on the Proprietor/ partners/ any of the Directors in any Police station of any court of India as per the format given above in Instructions to Tenderer. This Condition is Mandatory
- i) Either OEM directly or its authorized vendor or a bidder who had been authorized by OEM to participate in this tender. Relevant certificate from The OEM to be submitted and mentioned. This Condition is Mandatory
- j) Declaration/Undertaking for the supply of spare for 15 years from OEM. (Format attached as ANNEXURE-A). This Condition is Mandatory
- k) The OEM must have a service center in Lucknow. This Condition is Mandatory
- 1) The OEM must be established not less than 25 years from the last date of bid submission. Documentary proof must be attached.
- **m)** The manufacturer shall comply with the Public Procurement (Preference to Making In India), Order 2017 (as amended from time to time) issued by the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry.
- **n)** The bidder must fill in technical specifications in the format given in the tender document. It is a part of the technical qualification criteria. The product offered by the bidder shall be around spec. already mentioned in specification format.

o) Undertaking to be furnished by the intending D E C L A R A T I O N

- 1. All the information furnished by me/us here above is correct to the best of my knowledge and belief.
- 2. I/we have no objection if inquiries are made about the work listed by me/us in the accompanying sheets / Annexures.
- 3. I / We agree that the decision of the Indian Institute of Management Lucknow in the selection of contractors will be final and binding to me/us.
- 4. I / We have read the instructions and I/we understand that if any false information is detected later, the tender shall be cancelled at the Company's discretion and liable for any action, as deemed unfit by the Indian Institute of Management Lucknow.
- 5. I / We hereby confirm that my/ our company has never been blacklisted by any State/ Central Government organization.

Signature and Stamp of the Bidder

TENDER Declaration

I/We have read and examined the Notice Inviting tender, Instructions to the tenderer, Specifications applicable, Drawings and designs, General Rules, and Directions, Conditions of Contract, clauses of the contract, General Conditions of Contract, Special conditions, & other documents and rules referred to in the conditions of contract and all other contents in the tender document for the work including GCC attached separately or upload on iiml.ac.in.

I/We have thoroughly read the tender specification and have understood the site/ working condition

I/We hereby tender for the execution of the work specified for IIM, Lucknow within the time specified, viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings, and instructions in writing.

I/ We agree to keep the tendered rates valid till 120 days from the date of opening of the tender and not to make any modifications to its terms and conditions.

A sum of Rs. 4,00,000/- is hereby forwarded in the IIML account through RTGS/NEFT issued by a scheduled bank as earnest money.

OR

I/We had submitted a self-attested copy of a valid certificate as proof of exemption from submission of Earnest money deposit.

In case I/ our company is identified L1 in this Tender and If I/we, fail to furnish the prescribed performance guarantee fail to commence the work within the prescribed period, or fail to execute the agreement within the prescribed period from the date of declaration of L1 I/ we agree that the IIM, Lucknow or its successors in office shall without prejudice to any other right or remedy be at liberty to forfeit the said earnest money absolutely, award the work to other agency as per the discretion of IIM, Lucknow and can debar my/ our company/ firm for further bidding for next Two years. Further, if I/we fail to commence work as specified, I/we agree that IIM, Lucknow or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations/ additional/ extra items as may be ordered as per the provisions in the Contract.

Further, I/We agree that in case of forfeiture of earnest money or both Earnest Money and 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 a back-to-back basis. Further that, if such a violation comes to the notice of the Department, then I/we shall be debarred for tendering in IIM, Lucknow in the future forever. Also, if such a violation comes to the notice of the Department before the 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 therefrom to any person other than a person to whom I/we am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated**	Signature of contractor
	with seal of the agency/ firm

D.DEFINITIONS

In this Contract, the following words and expressions shall have the meanings as stated below:

- (i) **'IIM'** shall mean Indian Institute of Management, IIML Road, Lucknow and shall include their successors and assigns, as well as their authorized representatives.
- (ii) **ENGINEER-IN-CHARGE** shall mean the engineer appointed by the IIML to supervise all activities of the project.
- (iii) **'TENDERER'** shall mean the company/agency who quotes against the tender inquiry for undertaking the work.
- (iv) **'CONTRACTOR'** shall mean the successful tenderer whose tender has been accepted by the IIML and to whom the order is placed by the IIML and shall include his heirs, legal representatives, successors etc.
- (v) **'PERMANENT WORKS'** shall mean all the works included in the schedule of quantities and shall also include additions, alterations, etc. communicated in writing.
- (vi) **'SITE'**, shall mean all places i.e. IIM, Lucknow where the project is to be executed.
- (vii) **'PROJECT'** shall mean the entire work specified in the contract documents inclusive of extra items/extra quantities (if any) executed during the contract period.
- (viii) 'ACCEPTANCE LETTER', shall mean written consent by a letter of IIML to the tenderer intimating him that his tender has been accepted.
- (ix) **'CONTRACT'** shall mean the articles of Contract Agreement. The conditions of the contract, schedule of quantities, and specifications, are attached and duly signed by the IIML and the Contractor.
- (x) **'DATE OF CONTRACT'** shall mean the date on which the IIML has issued an acceptance letter.
- (xi) **'CONTRACT PERIOD'** shall mean the period (including rainy season) specified in the tender documents during which the contract shall be executed.
- (xii) **'COMPLETION CERTIFICATE'** shall mean the certificate issued by the IIML to the contractor after the successful completion of the project. This certificate will be issued on the basis of the consultant's/ User's certificate to IIML about the completion of the job.
- (xiii) **'EXTRA ITEMS'** are those items, which are not appear in the BOQ but are required to be executed during the project period and for which rates are to be derived as per the formula given in the conditions of the contract.
- (xiv) **'EMD'** shall mean Earnest Money Deposit. The Owner takes this amount to check the earnestness/seriousness of the tenderers in case they are selected as winners.

E. GENERAL CONDITIONS OF THE CONTRACT

General conditions of the Contract are available at the IIM, Lucknow website and at the Project Division Office. These conditions shall be part of this contract. The successful Bidder shall be required to submit the signed hard copy of these General Terms and Conditions after the issue of the LOI and before starting of the work.

F. SPECIAL CONDITIONS OF CONTRACT.

1.1 Directive to Contractor

1.1.1 Interpretation of Contract Documents:

- (ii) All the documents (such as NIT, TENDERER DECLARATION, DEFINITIONS & SCOPE OF WORK, TECHNICAL SPECIFICATIONS, General Conditions of Contract, Special conditions of Contract which are available on IIML Web site and FINANCIAL BID) forming part of the contract are to be taken as mutually explanatory, supplementary and complementary to each other. If there is any error, omission, or discrepancy in any of them, it shall be brought to the notice of the IIM. The decision of the IIML shall be final and binding. The contractor shall execute the work accordingly.
- (iii) The contractor shall examine all the contract documents thoroughly including the scope, nature, and magnitude of works he has to execute in accordance with the contract documents.
- (iv) The contractor shall visit the project site so as to study the site conditions, means of access to the site, and other factors governing the works.

1.1.2 Period of Contract:

The time period for **SUPPLY INSTALLATION TESTING & COMMISSIONING OF 208 HP COLD & HOT VRF/VRV SYSTEM IN REPLACEMENT OF EXISTING DUCTED AIRCONDITIONING SYSTEM AT LIBRARY of IIM Lucknow** shall be completed within 135 days from the date of issue of LOI (Letter of Intent). The defect liability period on complete work is 1 year including maintenance, service, and repair.

Comprehensive Annual maintenance contract for 4 years of the same system will start immediately after the completion of 1 year of defect liability.

1.1.3 Authorities

The work shall conform to all provisions of the relevant Government Legislation, Regulations, and by-laws of the Central/Local Authorities and of any Companies to whose system the installation is proposed to be connected. The Contractor shall give all notices required under the said Acts, Regulations and/or by-laws. The Contractor shall be liable for any omissions and commissions in this regard.

1.1.4 Specifications and Schedules

The Specifications and Schedule of Quantities shall be considered as part of this contract and any work or materials shown in Schedule and not called for in the Specifications or vice versa, shall be executed as if specially called for in both.

The work shall be installed as indicated on the drawings. However, any minor changes found essential to coordinate the installation of this work with other trades shall be made without any additional cost. The data given herein is as estimated, but its complete accuracy is not guaranteed. Exact locations, distances, and levels will be governed by the site conditions. Quantities can vary to any extent above or below. No compensation in this regard will be given. Any such kind of request will not be entertained.

If in case some change in Cooling/ heating capacities of indoor/ outdoor VRF units is required because of the limitation of OEM which produces different models of Indoor and outdoor units in specific capacities as per their own standards, the contractor has to take Approval from the designer/ Engineer in charge before procuring such model of indoor/ outdoor unit.

1.1.5 Completeness of tender

All fittings, equipment, units, assemblies and accessories, hardware, bolts, terminal lugs for electrical connections, cable glands, junction box, piping, fittings and items that are useful and necessary for efficient assembly in operation and installation shall be complete in all details whether such details

have been mentioned in the specification or not. Scope of work also include steel requirements for machine beams, bearing plates, buffer supports, and channels as required. All steel items not including but required for the installation work shall be part of the tender document.

1.1.6 Scaffolding

Scaffolding and minor builders work shall be the responsibility of the Contractor.

1.1.7 Certificate

Contractor may be required to submit the manufacturer Test certificates, Internal quality test reports from the factory and Guarantee/ warrantee etc. Further, if required e-way bill may be submitted by the contractor on demand.

1.1.8 Spares

Contractors shall submit the list of recommended spares for 15 years of operation listing items with individual prices. Undertaking from OEM that the Spares will not be ruled out of the Market for the next 15 years.

1.1.9 Documentation

The Contractor shall provide three sets of operation & maintenance manuals with instructions for routine and periodic maintenance. Training records, guarantee/warranty should also be submitted.

1.1.10 Delay in work execution due to reasons beyond contractor control:

Force Majeure:

If the execution of work is delayed due to force majeure, or due to circumstances that were not in the control of the Tenderer then IIML as per the affected period may extend the time period as per the discretion of the Director of the Institute.

1.1.11 Dispute & Arbitration:

- (i) All disputes or differences whatsoever arising between the parties out of or relating to this contract or the specifications, designs and quality of work, quality of materials used for the work, construction, meaning and operation or effect of the work or the breach thereof that cannot be settled by good faith and negotiations between the parties within 60 days of the commencement of the negotiation shall be settle by mutually referring the dispute to a sole Arbitrator and the award passed by him shall be final and binding on the parties. The selection of an arbitrator shall be made by mutual consent. The cost of arbitration shall be divided equally. The proceedings will be governed by the provisions of the Arbitration & Conciliation Act, of 1996 and its latest Amendments. The place of arbitral proceedings will be Lucknow. The language of the arbitral proceedings shall be English
- (ii) By consent of Parties the jurisdiction of all other courts is excluded and the courts at Lucknow alone shall have jurisdiction.
- (iii) "Abandonment/incomplete work", wherein it should be mentioned that apart from the forfeiture of security the incomplete work shall be completed from some other agency, and the costs thereof be recovered from the contractor.
- (iv) The service of notice will be given by e-mail, fax, courier, speed post, or registered post, and the address for service of notice be specified both for IIM, Lucknow and the contractor.

1.1.12 Escalation:

The rates quoted by the contractor in the contract documents shall be final and shall not be subjected to any change due to the increase in labour wages or inflation wages or inflation in the cost of materials or fuel or any other price variations due to any reason during the stipulated time period of the contract or during the extended time period of completion.

1.2 Execution of Work

1.2.1 General:

All the works shall be executed in accordance with the specifications and instructions approved by the IIML as mentioned in the contract document.

1.2.2 Inspection of works:

- (i) The IIML shall have the full authority to inspect the works at any time, at any stage. The contractor shall provide adequate facilities to carry the inspection work. The contractor should present himself or his authorized representative during the inspection so that the IIML can convey the instruction regarding the works.
- (ii) The contractor shall give information to the IIML before covering up the works so that the same can be inspected and measured jointly & correctly to true dimensions.
- (iii) If the contractor fails to get the work inspected before covering it up, then the IIML has full authority to get the work uncovered at the expense of the contractor and if any fault is found then the contractor should rectify the same without claiming any extra payment.

1.2.3 Inadequate / substandard works and materials:

- (i) Material used should be make mention in **BOQ**
- (ii) If any work executed by the contractor is found to be of bad workmanship, then the same is to be dismantled and re-executed by the contractor without claiming any extra payment or extension in time period.

1.2.4 Default of Contractor in Compliance:

If the contractor or his authorized representative fails to follow the instructions given by the IIML regarding any of the works, then the same shall be got executed by engaging other contractors/ persons by IIML at the risk and cost of the contractor.

1.2.5 Discrepancies between instructions:

The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale and special conditions in preference to General Conditions. In the case of discrepancy between the schedule of Quantities, the Specifications and/ or the Drawings, the following order of preference shall be observed: -

- i. Description of Schedule of Quantities.
- ii. Particular Specification and Special Conditions, if any.
- iii. Drawings.
- iv. IIM, LUCKNOW Specifications.
- v. Indian Standard Specifications of B.I.S.
- vi. G.C.C., S.C.C. etc

If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor. Any error in description, quantity or rate in Schedule of Quantities or any omission therefrom shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.

If any discrepancy occurs between the various instructions conveyed to the contractor or his authorized representative or if any misunderstanding arises between the contractor's staff and IIM's staff, the contractor shall report the matter immediately to the IIM. The decisions of IIML shall be final and binding. Moreover, no claims for losses due to discrepancies between instructions, doubts or misunderstandings shall be admissible.

1.2.6 Liabilities for defects and rectifications:

If it shall appear to the IIML that any work has been executed with imperfect or unskilled workman or with materials of any inferior description, or of quality inferior to that contracted for, or otherwise not in accordance with the contract, the contractor shall on demand in writing from the IIML or his representative specifying the work, materials or articles complained of, notwithstanding that the same may have been inadvertently passed, certified and paid for forthwith rectify or remove and reconstruct that work so specified and provide other proper and suitable materials or articles at his own charges and cost, and in the event of failure to do so within a period to be specified by the IIML or his demand aforesaid, the Engineer-in-charge may on expiry of notice period rectify or remove, reexecute the work at the risk of Contractor and the cost shall be recovered from the Contractor. The decision of the IIML as to any question arising under this clause shall be final and conclusive.

1.2.7 Period of warranty:

1 Year comprehensive warranty and subsequent 1-year Comprehensive Annual maintenance. The Guarantee/ warrantee beyond one year for VRF/ VRV system as per the policy of OEM.

The contractor shall perform the maintenance services as agreed to in the contract and in these terms and conditions. In performing the said services, the contractor shall take all reasonable steps to maintain the equipment in proper operating condition. The contractor shall use trained and appropriately supervised personnel to perform the maintenance services shall be conducted during normal working hours, shall be sent at regular intervals and as frequently as the company thinks necessary, having regard to the age, nature, and condition of the VRF/VRV system.

Upon notification by the user of a breakdown or failure in the VRF/VRV system, the contractor shall send his technical team within the time lines mentioned in Scope of work (except beyond their control) to carry out necessary repairs in order to repair the fault. Otherwise, IIM, Lucknow may impose a penalty on the contractor on a per-day basis finalized by the competent authority of the Institute by assessment of loss incurred to the Institute due to delay in the rectification of the defect. Any breakdown that requires a special spare is not available and needs to be brought from the manufacturer factory or from a distant state then such breakdown should be restored within 7 days.

The parts which are replaced shall become the contractor 's property

1.2.8 Suspension of work:

The contractor shall suspend the progress of work on receipt of the written order from the IIML

In case of suspension of work:

- a. The contractor shall during such suspension, properly protect and secure the works and carry out the instructions of the IIM.
- b. IN such case the contractor shall be entitled for an extension of time equal to the period of every such suspension but no compensation for damages etc. shall be admissible on account of suspension of work.

1.2.9 Possession Prior to Completion:

The IIML shall have the authority to take possession of any completed or partially completed works. Such possession shall not be deemed to be acceptance of any work completed in

accordance with the contract. If such prior possession delays the progress of works then the adjustment in the time of completion shall be done accordingly. The decision of the Engineer-in-charge regarding the extent of delay shall be final and binding.

1.2.10 Care of Works:

From the commencement to the completion of works, the contractor shall take full responsibility for the care of all works and in case any damage or loss occurs then the contractor shall repair and make good the same at his own cost so that on completion of the work, the same shall be in good order in every respect in accordance with the contract and to the satisfaction of the IIM.

1.3 Certificate and Payment

1.3.1 Schedule of Rates:

- (i) The payments to be made to the contractor shall be as per the finalized rates in tender documents and the rates of extra items finalized from time to time.
- (ii) The rates finalized in the tender document shall remain firm till the completion of work including extension of time, if any.

1.3.2 Mobilization Advance:

No mobilization advance shall be paid.

1.3.3 Billing:

Payments for SITC of VRF/ VRV system

- a. For payment against the delivery of outdoor and indoor units only the payment will be made as secured advance which will be 50% of the payable value of these two items as per the BOQ. This will be adjusted from the payment made on completion of associated work of respective units.
- b. In total max. 4 running bill payments will be made. First RA bill after the delivery of the material. During execution 2 Runnings bills will be allowed to be submitted, and the fourth will be a full and final bill it will be executed only after completing all work and commissioning in all respects after obtaining user verification.

Payment for Annual maintenance works after 1-year DLP:

- a. Payment will be made quarterly on successful completion of maintenance, and submission of user verification/ service report duly signed by the user. No retention will be deducted from the CAMC bills.
- b. The performance security for CAMC works will be released only after the successful completion of the CAMC period.

1.3.4 Terms of Payment:

- (i) The payment due to the contractor shall be made only in Indian Currency by Crossed Account Payee Cheque or RTGS. In no case, will the IIML be responsible if the cheque is misled or misappropriated by the contractor or his representatives.
- (ii) The IIML reserves the right to carry out post-payment audit and technical examination of the bills and work executed including all supporting vouchers etc. The IIML further reserves the right to enforce recovery of over-payment when detected. Similarly, if any underpayment is discovered, the amount shall be paid to the contractor.

- (iii) Wherever any claim for the payment against the contractor arises as per the contract, the same may be deducted from the bill of the contractor or from his security deposit.
- (iv) 5% of the payable bill value will be retained from each bill as Retention money/ security deposit for SITC works & shall be released on the satisfactory completion of the job after the defect liability period and submission of performance security for 4 years AMC works. No interest shall be paid on the security deposit amount
- (v) **Tax Deduction:** All statuary deductions like Income Tax, Works Contract Tax, E.S.I., P.F., entry tax, labour cess or any other government-imposed liability shall be borne by the contractor (as applicable at the time of execution of the job). Statutory deduction as per the govt. direction shall be deducted from each bill submitted by the contractor.

1.3.5 Provisional Completion Certificate:

When the contractor successfully completes the works as per the contract, he shall be eligible to apply for a provisional completion certificate in respect of the works. The IIML shall issue to the contractor the provisional completion certificate after verifying the completion documents submitted by the Engineer-in-charge and satisfying him/ user Department that the work has been completed in accordance with the contract document. Further, the certification from the designer will be needed that the work had been completed as per the drawing/ design.

The work will not be considered as complete until all the temporary works, labour hutments, etc. are removed and the work site cleared to the satisfaction of the IIM.

If the contractor fails to comply with the requirements of the above on or before the date for the completion of the works, the IIML may, at the expense of the contractor, remove the tools and plants, hutment and surplus materials and dispose off the same and the contractor shall pay the amount of all expenses incurred.

1.4 Labour Laws and Safety Regulations

1.4.1 Labour Laws:

- (i) Labour below the age of 18 years shall not be employed on the work.
- (ii) The contractor shall not pay less than what is specified by the law to labours engaged by him on the work.
- (iii) The contractor shall, at his own expenses, comply with all labour laws and the IIML shall not be responsible for any recovery/penalty imposed by the respective authorities for violating the labour laws.
- (iv) If the contractor is covered under the Contract Labour (Regulation & Abolition) Act, he shall obtain a license from the licensing authority (i.e. the office of labour Commissioner) before starting the work, by payment of the necessary prescribed fee and deposit, if any shall be borne by the Contractor.
- (v) The contractor shall furnish to the IIML, the details of the workers employed on the works.
- (vi) The contractor shall comply with the provisions of the existing rules and regulations relating to labour laws.
- (vii) The IIML shall on a report having been made by an inspecting officer as defined in Contract Labour (Regulation and Abolition) Act, 1980, have the power to deduct from the amount due to the contractor any sum required or estimated to be required for making good the losses suffered by a worker or workers by reason of nonfulfilment of the conditions of the contract for the benefit of the workers, or if

deductions made from his or their wages which are not justified by the terms of contract or non-observance of the said regulations.

1.4.2 Minor/Fatal Accident on Duty:

For cases of minor/Fatal accident on duty not covered under compensation by IIML, the contractor shall have to compensate the affected person/ family. The absence from duty, if takes place, due to such accident shall be considered as special leave and full payment shall have to be made for duration of such absence.

1.5 Safety Code

1.5.1 Safety and Protection:

The contractor shall adhere to safe construction practice and guard against hazardous and unsafe working conditions. While carrying out the work, the contractor should provide for;

- (i) Safety of personnel engaged in the construction.
- (ii) Protection and safety of works and materials during their progress.
- (iii) Sanitary and hygienic conditions of working and living for his workers, as required by the IIM.

1.5.2 Use of Safety Gadgets:

The contractor shall have to ensure the availability and use of all desired safety gadgets like safety belts, helmets, goggles, hand gloves, gumboots, caution tape, barricading, warning signs etc.

1.5.3 First Aid:

The contractor shall provide first aid facilities for his employees and those of his sub-contractors. The requisite first aid box and medicines should always be available at the work site.

1.5.4 Preservation of Peace:

The contractor shall take precautions to prevent any riotous or unlawful behavior by his workers, for the preservation of peace and protection of inhabitants and the security of property in the neighborhood of the work.

1.6 Details of Work Execution

- (i) The work shall be done in such a manner so as to clear workforce availability for other agencies working at the site.
- (ii) The finish of work shall be as per the details given by IIM.
- (iii) In general the complete work is to be done as per Indian Standards and esthetical norms as specified and detailed in the Tender.

1.7 Site

The site is located at IIM, Lucknow, IIM Road, Lucknow. The contractor shall be responsible for the accommodation of the manpower, and the movement of his men, materials and equipment at his own cost.

1.8 Electricity

Electrical power at one point is to be provided by the IIM. The Contractor will be responsible for getting electrical connectivity from the point specified IIML to his work site including supplying of cables, connections, and other required items.

1.9 Contractor's Scope of Supply

All materials required for executing the jobs specified in the Bill of Quantities, inclusive of all tools, tackles, scaffolding, consumables, and testing equipment shall be procured and supplied by the contractor at his own cost except for any items specified as IIML-supplied.

1.10 Liquidated damage charges

0.05% per day of contract value for delays up to 15 days. 0.10% per day of contract value for delay from 15-30 days and for delay beyond 30 days it will be 0.25% of the contract Value per day. The total levy of this Liquidated damage shall not exceed more than 10% of the contract value.

In case the delay continues beyond 2 Months then the tender/ Contract will be automatically canceled. Under These circumstances, the EMD/ Performance Security available with the Institute will be forfeited and the Retention money/ balance 05 % payable value of the work (as the case may be) will not be paid. The Agency will be debarred from Biding with IIM Lucknow and will be blacklisted for 2 Years.

1.11 Recovery from the Contractor

- (i) If the contractor or his employees damage or destroy the property of the IIM, then the same shall be replaced/ refunded by the contractor, otherwise the expenses may be recovered from his bill or security deposit.
- (ii) All compensation and recoveries to be made as per terms of the contract shall be deducted from the contractor's bill or security deposit.
- (iii) Forfeiture of Security Deposit: Whenever any claim against the contractor is to be recovered then the same may be made from the security deposit (performance and retention or any other security available). If the contractor abandons the work or leaves the work incomplete, then the IIML has the right to forfeit the security deposit.
- (iv) The contractor will make a fence around the area given for labour hutment to avoid unauthorized entry.

1.12 Buy Back Clause:

The Machines/ Indoor and outdoor units, Piping, wiring, cables, electric and control panels, fittings, and fixtures dismantled from the old A.C. system shall be taken on Buy back by the contractor @ rates quoted by the contractor in BOQ. Any Debris/unwanted item that is dismantled along with the A.C. system shall be disposed off as per the Instructions.

1.13 Altered/ Additional/ substituted work:

If the altered/additional or substituted work or any additional work required to be executed as per Institute's requirement shall be carried out by the contractor on the same conditions in all respects including a price on which he agreed to do the main work except as hereafter provided for which there are no established rates in the schedule of items and Delhi Schedule of rates, the same shall be payable as per the provision stated hereunder.

- a) If any extra item crops up during the work (Other than that given in the Work Order), the rate for such item shall be computed as per rates of CPWD/DSR-2023 with the same percentage above or below as is quoted by the Contractor in the Price Bid).
- b) Rates for items where rate is not available in DSR-2023 shall be derived from the similar item of nearest DSR. If not available in the nearest DSR then in the nearest District Schedule of Rates issued by the Uttar Pradesh PWD department. If the item is not found in DSR and District Schedule of rates, then the Percentage Rate from nearest available Schedule of rates of any Central/ Uttar Pradesh Government Department Shall be considered with whatever applicable Cost index plus or minus (If any as per relevant Circular from the department) on the schedule of rates considered.
- c) If direct working out is not possible as mentioned in a) & b) above, the contractor shall be paid on the basis of the actual cost of material and labor cost plus 15% towards profit, supervision, overheads establishment, plants, machinery, etc. and applicable taxes as decided by the Competent Authority.
- d) In the case of substituted items (items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following para:
 - (i) If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted), the rate payable to the Contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substitutes item and the agreement item (to be substituted).
 - (ii) If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of the substituted item and the agreement item (to be substituted).

1.14 Service of Notice

All notices, consents, approval or other communication required to be given or served hereunder by either party hereto to the other party shall be in writing, and in English and shall be personally delivered to, left at, sent by registered post, email, courier, speed post or facsimile by either party to the other at the addresses mentioned herein below. Both parties agree that the facsimile transmission will not be used as a sole method for the communication of important notices such as any modification or termination.

- (i) THE DIRECTOR
 INDIAN INSTITUTE OF MANAGEMENT
 PRABANDH NAGAR, IIMLROAD
 LUCKNOW-226013
- (ii) Notice to the Tenderer at the Address mentioned in the Tender Document

APPENDIX-I G. TECHNICAL SPECIFICATION OF VRF/VRV Please fill in the details of the offered product it is the criterion for the Technical Qualification

			12 HP ODU	OFFERED PRODUCT SPECIFICATION
Model		•		
Power Supply		V∼,Hz,Ph	380~415,50/60,3	
	Capacity	kW	33.5	
C 1:	Input	kW	7.69	
Cooling	Current	A	12.30	
	EER	W/W	4.36	
	Capacity	kW	37.5	
***	Input	kW	7.36	
Heating	Current	A	11.77	
	СОР	W/W	3.6 or above	
Max. Current		A	21.10	
Max. Input Consumpti	on	kW	13.20	
Circuit breaker		A	40	
	Quantity		1	
DC Inv. Compressor	Туре		DC Inv.	
	Brand			
	Туре		DC Inv.	
Outdoor Fan Motor	Brand			
	Output Power	W	750	
Air Flow Volume		CFM	7059	
Air Flow Volume		m³/h	12000	
Noise Level		dB(A)	58	
Dimension (M. D. II)	Net	mm		
Dimension(W×D×H)	Packing	mm		
Mai alak	Net	kg		
Weight	Gross	kg		
Refrigerant	Туре		R410a	
type/Quantity	Charged Volume	kg	11	
Design Pressure		MPa	1.4/4.2	
	Liquid Side	mm		
	Gas Side	mm		
Refrigerant Piping	thickness	mm		
	Max. Length	m		
	Max. Height	m		
Ambient Temp (Cooling/Heating)		°C	-5 to +55	
	Power wiring (ODU)	mm ²		
Wiring specification	A.B signal wiring (ODU)	mm²		
	A.B signal wiring (to IDU)	mm²		
Stuffing Quantity	20/40/40H	Unit		

			14 HP ODU	OFFERED PRODUCT SPECIFICATION
Model				
Power Supply		V∼,Hz,Ph	380~415,50/60,3	
	Capacity	kW	40.0	
C 1	Input	kW	9.56	
Cooling	Current	A	15.29	
	EER	W/W	4.18	
	Capacity	kW	45.0	
**	Input	kW	9.40	
Heating	Current	A	15.03	
	СОР	W/W	3.6 or above	
Max. Current		A	29.50	
Max. Input Consumpti	on	kW	18.50	
Circuit breaker		A	50	
	Quantity		1	
DC Inv.Compressor	Туре		DC Inv	
	Brand			
	Туре		DC Inv	
Outdoor Fan Motor	Brand			
	Output Power	W	750	
A : [] 17 -		CFM	7647	
Air Flow Volume		m³/h	13000	
Noise Level		dB(A)	58	
Dimension (Ma.D.,II)	Net	mm		
Dimension(W×D×H)	Packing	mm		
Maialat	Net	kg		
Weight	Gross	kg		
Refrigerant	Туре		R410a	
type/Quantity	Charged Volume	kg	12	
Design Pressure		MPa	1.4/4.2	
	Liquid Side	mm		
	Gas Side	mm		
Refrigerant Piping	thickness	mm		
	Max. Length	m		
	Max. Height	m		
Ambient Temp (Cooling/Heating)		°C	-5 to +55	
	Power wiring (ODU)	mm ²		
Wiring specification	A.B signal wiring (ODU)	mm²		
1	A.B signal wiring (to IDU)	mm ²		
Stuffing Quantity	20/40/40H	Unit		

			16 HP ODU	OFFERED PRODUCT SPECIFICATION
Model				
Power Supply		V∼,Hz,Ph	380~415,50/60,3	
	Capacity	kW	45.0	
C 1:	Input	kW	10.55	
Cooling	Current	A	16.87	
	EER	W/W	4.27	
	Capacity	kW	50.0	
***	Input	kW	10.39	
Heating	Current	A	16.62	
	СОР	W/W	3.6 or above	
Max. Current		A	29.50	
Max. Input Consumpti	on	kW	18.50	
Circuit breaker		A	50	
	Quantity		1	
DC Inv.Compressor	Туре		DC Inv	
	Brand			
	Туре		DC Inv	
Outdoor Fan Motor	Brand			
	Output Power	W	750	
Air Flow Volume		CFM	7647	
Air Flow volume		m³/h	13000	
Noise Level		dB(A)	58	
Dimension (MuDuII)	Net	mm		
Dimension(W×D×H)	Packing	mm		
Mai alat	Net	kg		
Weight	Gross	kg		
Refrigerant	Туре		R410a	
type/Quantity	Charged Volume	kg	14	
Design Pressure		MPa	1.4/4.2	
	Liquid Side	mm		
	Gas Side	mm		
Refrigerant Piping	thickness	mm		
	Max. Length	m		
	Max. Height	m		
Ambient Temp (Cooling/Heating)		℃	-5 to +55	
	Power wiring (ODU)	mm ²		
Wiring specification	A.B signal wiring (ODU)	mm²		
1	A.B signal wiring (to IDU)	mm ²		
Stuffing Quantity	20/40/40H	Unit		

			18 HP ODU	OFFERED PRODUCT SPECIFICATION
Model				
Power Supply		V∼,Hz,Ph	380~415,50/60,3	
	Capacity	kW	50.4	
C II	Input	kW	12.02	
Cooling	Current	A	19.22	
	EER	W/W	4.19	
	Capacity	kW	56	
**	Input	kW	12.03	
Heating	Current	A	19.24	
	СОР	W/W	3.6 or above	
Max. Current		A	36.95	
Max. Input Consumpti	on	kW	23.10	
Circuit breaker		A	63	
	Quantity		1	
DC Inv.Compressor	Туре		DC Inv	
	Brand			
	Туре		DC Inv	
Outdoor Fan Motor	Brand			
	Output Power	W	450x2	
Air Flow Volume		CFM	10000	
Air Flow volume		m³/h	17000	
Noise Level		dB(A)	61	
Dimension (M. D. II)	Net	mm		
Dimension(W×D×H)	Packing	mm		
Maight	Net	kg		
Weight	Gross	kg		
Refrigerant	Туре		R410a	
type/Quantity	Charged Volume	kg	16	
Design Pressure		MPa	1.4/4.2	
	Liquid Side	mm		
	Gas Side	mm		
Refrigerant Piping	thickness	mm		
	Max. Length	m		
	Max. Height	m		
Ambient Temp (Cooling/Heating)		°C	-5 to +55	
	Power wiring (ODU)	mm ²		
Wiring specification	A.B signal wiring (ODU)	mm²		
specification	A.B signal wiring (to IDU)	mm²		
Stuffing Quantity	20/40/40H	Unit		

			20 HP ODU	OFFERED PRODUCT SPECIFICATION
Model		4		
Power Supply		V∼,Hz,Ph	380~415,50/60,3	
	Capacity	kW	61.5	
Q 11	Input	kW	15.42	
Cooling	Current	A	24.66	
	EER	W/W	3.99	
	Capacity	kW	69.0	
**	Input	kW	15.65	
Heating	Current	A	25.03	
	СОР	W/W	3.6 or above	
Max. Current		A	29.50	
Max. Input Consumpti	on	kW	18.50	
Circuit breaker		A	50	
	Quantity		2	
DC Inv.Compressor	Туре		DC Inv	
	Brand			
	Туре		DC Inv	
Outdoor Fan Motor	Brand			
	Output Power	W	450×2	
		CFM	7647	
Air Flow Volume		m³/h	13000	
Noise Level		dB(A)	58	
D:	Net	mm		
Dimension(W×D×H)	Packing	mm		
TAT 1 1 .	Net	kg		
Weight	Gross	kg		
Refrigerant	Туре		R410a	
type/Quantity	Charged Volume	kg	16	
Design Pressure		MPa	1.4/4.2	
	Liquid Side	mm		
	Gas Side	mm		
Refrigerant Piping	thickness	mm		
	Max. Length	m		
	Max. Height	m		
Ambient Temp (Cooling/Heating)		°C	-5 to +55	
	Power wiring (ODU)	mm ²		
Wiring specification	A.B signal wiring (ODU)	mm²		
specification	A.B signal wiring (to IDU)	mm²		
Stuffing Quantity	20/40/40H	Unit		

			24 HP ODU	OFFERED PRODUCT SPECIFICATION
Model				
Power Supply		V∼,Hz,Ph	380~415,50/60,3	
	Capacity	kW	67.0	
Cooling	Input	kW	17.77	
Cooling	Current	A	28.42	
	EER	W/W	3.77	
	Capacity	kW	75.0	
Heating	Input	kW	17.63	
Heating	Current	A	28.20	
	СОР	W/W	3.6 or above	
Max. Current		A	29.50	
Max. Input Consumpti	on	kW	18.50	
Circuit breaker		Α	50	
	Quantity		2	
DC Inv.Compressor	Туре		DC Inv	
	Brand			
	Туре		DC Inv	
Outdoor Fan Motor	Brand			
	Output Power	W	450×2	
Air Flow Volume		CFM	7647	
All Flow volume		m³/h	13000	
Noise Level		dB(A)	58	
Dimension(W×D×H)	Net	mm		
Dimension(W^D^II)	Packing	mm		
Weight	Net	kg		
Weight	Gross	kg		
Refrigerant	Туре		R410a	
type/Quantity	Charged Volume	kg	16	
Design Pressure		MPa	1.4/4.2	
	Liquid Side	mm		
	Gas Side	mm		
Refrigerant Piping	thickness	mm		
	Max. Length	m		
	Max. Height	m		
Ambient Temp (Coolin	0, 0,	°C	-5 to +55	
	Power wiring (ODU)	mm²		
Wiring specification	A.B signal wiring (ODU)	mm²		
Specification	A.B signal wiring (to IDU)	mm ²		
Stuffing Quantity	20/40/40H	Unit		

LIST OF ELECTRICAL ITEMS/MATERIALS AND IT'S MAKE

S.No.	Item	Name of Manufacturer					
1.	Thimbles	Dowell's					
2.	PVC Conduit Pipe	ISI marks					
3.	P.V.C. Copper Wire	Polycab/ Havells/Anchor/Finolex/KEI or					
		Equivalent					
4.	Conduit Accessories like Junction	ISI Mark					
	Boxes etc.						
5.	LT Cable	Polycab/ Havells/Anchor/Finolex/KEI or					
		Equivalent					
6.	MCB, MCCB	Havells/Anchor/Standard/L&T or Equivalent					

Sequence for Work Execution

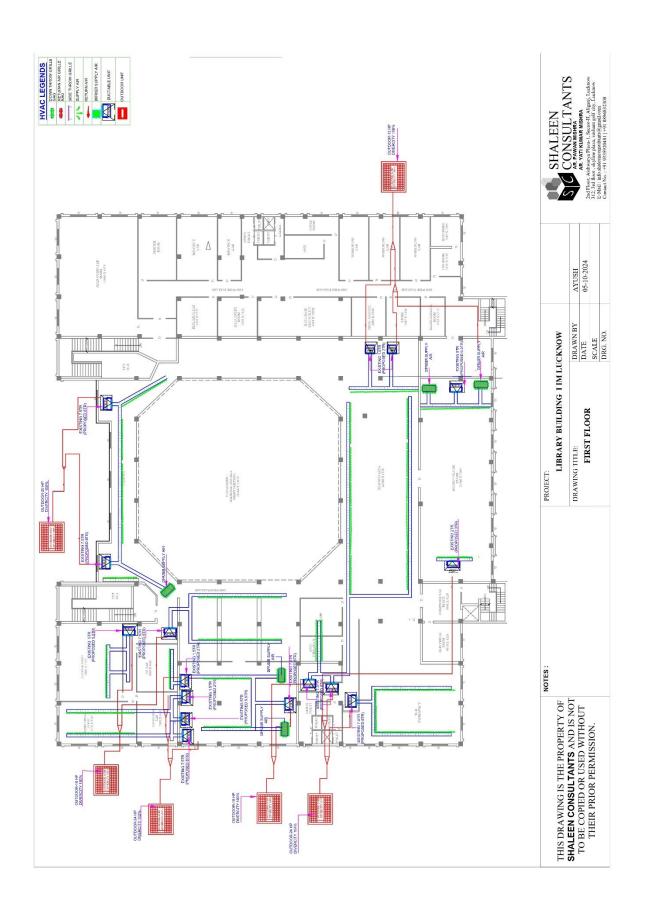
S.no.	Description
1.	Site survey, Agreement execution & Performance Security submission
2.	Dismantling of old AC, Robotic ducting cleaning,
3.	Supply of A.C. machinery and equipment and associated piping, wiring, cables, panels, etc.
4.	Supply and installation of electric panel for VRV/VRF
5.	Cable tray laying for outdoor and wiring & cooper pipe laying tray for indoor
6.	Execution of site works Installation of Indoor and outdoor units, piping, wiring, cabling, drain pipes, control cables, etc. both upside and downside complete
7.	Testing and commissioning of the System
8.	Restoration for repair of damaged false ceiling etc. other civil works
9.	Completion after proper submission of documents, training, user verification, and Test run of 07 days
10.	Defect Liability Period (DLP)
11.	CAMC for the VRF/ VRV system

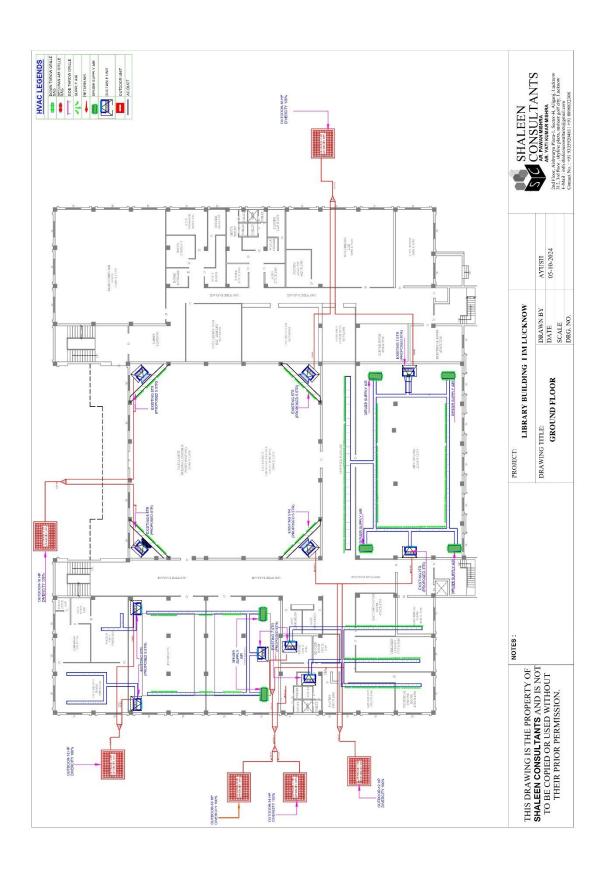
ANNEXURE - A

DECLARATION OF SPARES/ SERVICES SUPPORT: Manufacturer's Authorization

	Date:
To:	
WHEREAS	
We (OEM Name and Address), who are official manufacturer Component Description), having factories at,	do hereby authorize
(Bidder Name) to submit a Bid the purpose of which is to goods, manufactured by us (VRF Component Description M/s (Bidder Name) for Supply Installation Testing & Commissionin VRF/ VRV system in replacement of the existing ducted Airconditioning Systemaintenance of the same at IIM, Lucknow. We hereby confirm our full guarant support of spares & services for a minimum period of 15 to 20 years from open	n). We hereby authorize g of cold and Hot 208 HP em and subsequent annual see & warranty including

Seal & Signature of with Date





FINANCIAL BID

BILL OF QUANTITY

SNo Description		AIR CONDITIONING WORK AT LIBRARY BUILDING, IIM LUCKNOW					
Supply of Modular type outdoor units, with all Scroll Inverter compressors (Copper winding) for cooling and heating application. The unit above 18IIP must run with two no's of Inverter compressors (auto n/off loading) along with the same shall have a minimum COP of 3.6 or above at standard condition. All inverter capacity controlling compressors are suitable for 380~415 volts. All ODU units must be fully charged with R-410A. The Outdoor PCB should have the technology to be cooled by refrigerant/alr-cooled. Outdoor units must have a wide operation range from -5 · Cto 55 · C. 1.1 12 HP (Heating & Cooling) Nos 1 1.2 14 HP (Heating & Cooling) Nos 3 1.5 16 HP (Heating & Cooling) Nos 3 1.6 HP (Heating & Cooling) Nos 1 1.7 14 HP (Heating & Cooling) Nos 1 1.8 10 HP (Heating & Cooling) Nos 1 1.9 24 HP (Heating & Cooling) Nos 1 1.1 22 HP (Heating & Cooling) Nos 2 1.1 10 HP (Heating & Cooling) Nos 1 1.2 1 INDOOR UNIT'S 1.1 10 HP (Heating & Cooling) Nos 2 1.2 1 DIDOOR UNIT'S 1.2 1 DIDOOR UNIT'S 1.3 1 TOO HP (Heating & Cooling) Nos 2 1.4 1 HP (Heating & Cooling) Nos 2 1.5 1 DICTABLE Unit Nos 1 1 1 DICTABLE Unit Nos 1 1 1 DICTABLE Unit Nos 1 2.2 2 TR Duct Nos 3 2.3 3 TR Duct Nos 2 2.4 4 TR Duct Nos 1 2.5 6 TR High Static Duct Nos 1 2.6 8 TR High Static Duct Nos 1 2.7 ACCESSORIES 1 1 DICTABLE Unit Nos 1 2.8 Simple Wired Remote Nos 2 2.9 Yjoint ODU-ODU Nos 5 2.1 Dictable Unit Nos 1 3 1 12 HP (Heating & Cooling) Nos 1 3.1 12 HP (Heating & Cooling) Nos 3 3.1 14 HP (Heating & Cooling) Nos 3 3.3 16 HP (Heating & Cooling) Nos 3 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 3 3.6 24 HP (Heating & Cooling) Nos 3 3.7 1 HP (Heating & Cooling) Nos 3 3.8 1 1 HP (Heating & Cooling) Nos 3 3.9 24 HP (Heating & Cooling) Nos 3 3.1 1 12 HP (Heating & Cooling) Nos 3 3.1 1 12 HP (Heating & Cooling) Nos 3 3.2 2 HP (Heating & Cooling) Nos 3 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 2 HP (Heating & Cooling) Nos 3 3.6 2 HP (Heating & Cooling) Nos 3 3.7 1 H	SNo	Description	Unit.	Qty.	Rate	Amount	
compressors (Copper winding) for cooling and heating application. The unit above 18HP must run with two no's of Inverter compressors (auto on/off loading) along with the same shall have a minimum COP of 3.6 or above at standard condition. All inverter capacity controlling compressors are suitable for 380~415 volts. All ODU units must be fully charged with R-410A. The Outdoor PCB should have the technology to be cooled by refrigerant/air-cooled. Outdoor units must have a wide operation range from -5c to 55c C. 1.1 12 HP (Heating & Cooling) Nos 1 1.2 14 HP (Heating & Cooling) Nos 3 1.5 20 HP (Heating & Cooling) Nos 3 1.5 20 HP (Heating & Cooling) Nos 3 1.6 24 HP (Heating & Cooling) Nos 2 2 NOODE UNITS Supply, of Indoor units equipped with pre-filter, fan section with suitable static fan, multispeed motor, coil section with DX coil, outer cabinet, drain pan, insulation, pipe connections, etc. of various capacities as per specifications. 2.1 Ductable Unit 2.2 2 TR Duct Nos 1 2.5 6 TR High Static Duct Nos 10 2.6 B TR High Static Duct Nos 10 2.7 ACCESSORIES. 2.8 Simple Wired Remote Nos 27 2.9 Y Joint ODU-ODU Nos 5 2.1 12 HP (Heating & Cooling) Nos 3 3.1 12 HP (Heating & Cooling) Nos 3 3.2 14 HP (Heating & Cooling) Nos 3 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 3 3.6 24 HP (Heating & Cooling) Nos 3 3.7 24 HP (Heating & Cooling) Nos 3 3.7 24 HP (Heating & Cooling) Nos 3 3.7 3 HP (Heating & Cooling) Nos 3 3.7 3 HP (Heating & Cooling) Nos 3 3.8 3 HP (Heating & Cooling) Nos 3 3.9 4 HP (Heating & Cooling) Nos 3 3.0 5 4 HP (Heating & Cooling) Nos 3 3.1 6 HP (Heating & Cooling) Nos 3 3.2 6 HP (Heating & Cooling) Nos 3 3.3 7 Duct Not 5 HP (Heating & Cooling) Nos 5 4.4 4 TR Duct Nos 5 HP (Heating & Cooling) Nos 1		OUTDOOR UNIT'S					
1.2	1	compressors (Copper winding) for cooling and heating application. The unit above 18HP must run with two no's of Inverter compressors (auto on/off loading) along with the same shall have a minimum COP of 3.6 or above at standard condition. All inverter capacity controlling compressors are suitable for 380~415 volts. All ODU units must be fully charged with R-410A. The Outdoor PCB should have the technology to be cooled by refrigerant/air-cooled. Outdoor units must have a wide operation					
1.3	1.1	12 HP (Heating & Cooling)	Nos	2			
1.4 18 HP (Heating & Cooling) Nos 3 1.5 20 HP (Heating & Cooling) Nos 1 1.6 24 HP (Heating & Cooling) Nos 2 2 INDOOR UNIT'S INDOOR UNIT'S INDOOR UNIT'S Supply, of Indoor units equipped with pre-filter, fan section with suitable static fan, multispeed motor, coil section with DX coil, outer cabinet, drain pan, insulation, pipe connections, etc. of various capacities as per specifications. INDOOR UNIT INDOOR UNIT 2.1 Ductable Unit Nos 3 INDOOR UNIT IN	1.2	14 HP (Heating & Cooling)	Nos	1			
1.5 20 HP (Heating & Cooling)	1.3	16 HP (Heating & Cooling)	Nos	3			
1.6 24 HP (Heating & Cooling)	1.4	18 HP (Heating & Cooling)	Nos	3			
INDOOR UNIT'S Supply, of Indoor units equipped with pre-filter, fan section with suitable static fan, multispeed motor, coil section with DX coil, outer cabinet, drain pan, insulation, pipe connections, etc. of various capacities as per specifications.	1.5	20 HP (Heating & Cooling)	Nos	1			
Supply, of Indoor units equipped with pre-filter, fan section with suitable static fan, multispeed motor, coil section with DX coil, outer cabinet, drain pan, insulation, pipe connections, etc. of various capacities as per specifications. 2.1 Ductable Unit 2.2 2 TR Duct Nos 3 2.3 3 TR Duct Nos 1 2.5 6 TR High Static Duct Nos 10 2.6 8 TR High Static Duct Nos 11 2.7 ACCESSORIES. Simple Wired Remote Nos 2 2.9 Y Joint ODU-ODU Nos 5 2.10 Centralized Remote Nos 1 3 Installation Testing & Commissioning FOR OUTDOOR UNIT 3.1 12 HP (Heating & Cooling) Nos 1 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 1 3.5 20 HP (Heating & Cooling) Nos 2 Installation Testing & Commissioning FOR INDOOR UNIT 4.1 Ductable Unit 4.2 2 TR Duct Nos 1 Nos 1 Nos 2 4.4 4 TR Duct Nos 1 Nos 1 Nos 3 3 TR Duct Nos 1 Nos 3 Nos 3 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 1 Nos 1 Nos 1 Nos 1 Nos 1 Nos 2 Nos 1 Nos 3 Nos 1 Nos 3 Nos 1 Nos 3 Nos 1 Nos 3 Nos 1 Nos 3 Nos 1 Nos 1 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 1 Nos 3 Nos 1 Nos 3 Nos 1 Nos 3 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 3 Nos 1 Nos 3 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 1 Nos 3 Nos 3 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 3 Nos 3 Nos 1 Nos 3 Nos 1 Nos 3 Nos 1 Nos 3 Nos 1 Nos 1 Nos 1	1.6	24 HP (Heating & Cooling)	Nos	2			
suitable static fan, multispeed motor, coil section with DX coil, outer cabinet, drain pan, insulation, pipe connections, etc. of various capacities as per specifications. 2.1 Ductable Unit 2.2 2 TR Duct Nos 3 3 TR Duct Nos 2 2.4 4 TR Duct Nos 10 2.5 6 TR High Static Duct Nos 10 2.6 8 TR High Static Duct Nos 11 2.7 ACCESSORIES. Simple Wired Remote Nos 27 2.9 Y Joint ODU-ODU Nos 5 2.10 Centralized Remote Nos 1 3 Installation Testing & Commissioning FOR OUTDOOR UNIT 3.1 12 HP (Heating & Cooling) Nos 1 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 1 3.5 20 HP (Heating & Cooling) Nos 1 4 Installation Testing & Commissioning FOR INDOOR UNIT 4.1 Ductable Unit 4.2 2 TR Duct Nos 1 Nos 2 4.4 4 TR Duct Nos 1 Nos 1 Nos 2 4.4 4 TR Duct Nos 1 Nos 1 Nos 1 Nos 1 Nos 2 Nos 3 Nos 3 Nos 3 Nos 3 Nos 3 Nos 1 Nos 2 Nos 1 Nos 1 Nos 2 Nos 3 Nos 1 Nos 1 Nos 3 Nos 1 Nos 1 Nos 3 Nos 1 Nos 1 Nos 1 Nos 3 Nos 1 Nos 1 Nos 3 Nos 1 Nos 1 Nos 1 Nos 3 Nos 1 Nos 1 Nos 3 Nos 1 Nos 3 Nos 1 Nos 1 Nos 3 Nos 1 Nos 3 Nos 3 Nos 3 Nos 1 Nos 1 Nos 3 Nos 3 Nos 1	2	INDOOR UNIT'S					
2.2 2 TR Duct Nos 3 2.3 3 TR Duct Nos 2 2.4 4 TR Duct Nos 1 2.5 6 TR High Static Duct Nos 10 2.6 8 TR High Static Duct Nos 11 2.7 ACCESSORIES. 2.8 Simple Wired Remote Nos 27 2.9 Y Joint ODU-ODU Nos 5 2.10 Centralized Remote Nos 1 3 Installation Testing & Commissioning FOR OUTDOOR UNIT 3.1 12 HP (Heating & Cooling) Nos 2 3.2 14 HP (Heating & Cooling) Nos 3 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT 4 4.1 Ductable Unit Nos 2 4.2 2 TR Duct	2.1	suitable static fan, multispeed motor, coil section with DX coil, outer cabinet, drain pan, insulation, pipe connections, etc. of various capacities as per specifications.					
2.3 3 TR Duct Nos 2 2.4 4 TR Duct Nos 1 2.5 6 TR High Static Duct Nos 10 2.6 8 TR High Static Duct Nos 11 2.7 ACCESSORIES. 2.8 Simple Wired Remote Nos 27 2.9 Y Joint ODU-ODU Nos 5 2.10 Centralized Remote Nos 1 3 Installation Testing & Commissioning FOR OUTDOOR UNIT Nos 1 3.1 12 HP (Heating & Cooling) Nos 1 3.2 14 HP (Heating & Cooling) Nos 1 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT Nos 3 4.3 3 TR Duct Nos 1 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10				2			
2.4 4 TR Duct Nos 1 2.5 6 TR High Static Duct Nos 10 2.6 8 TR High Static Duct Nos 11 2.7 ACCESSORIES. Simple Wired Remote Nos 27 2.9 Y Joint ODU-ODU Nos 5 2.10 Centralized Remote Nos 1 3 Installation Testing & Commissioning FOR OUTDOOR UNIT 3 3.1 12 HP (Heating & Cooling) Nos 2 3.2 14 HP (Heating & Cooling) Nos 3 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT 4.1 Ductable Unit 4.1 Ductable Unit Nos 3 4.2 2 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos							
2.5 6 TR High Static Duct Nos 10 2.6 8 TR High Static Duct Nos 11 2.7 ACCESSORIES. 2.8 Simple Wired Remote Nos 27 2.9 Y Joint ODU-ODU Nos 5 2.10 Centralized Remote Nos 1 3 Installation Testing & Commissioning FOR OUTDOOR UNIT 3.1 12 HP (Heating & Cooling) Nos 2 3.2 14 HP (Heating & Cooling) Nos 3 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT 4.1 Ductable Unit 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 1 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10							
2.6 8 TR High Static Duct Nos 11 2.7 ACCESSORIES. 2.8 Simple Wired Remote Nos 27 2.9 Y Joint ODU-ODU Nos 5 2.10 Centralized Remote Nos 1 3 Installation Testing & Commissioning FOR OUTDOOR UNIT 3.1 12 HP (Heating & Cooling) Nos 2 3.2 14 HP (Heating & Cooling) Nos 3 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT 4.1 4.1 Ductable Unit Nos 3 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 1 4.4 4 TR Duct Nos 10 4.5 6 TR High Static Duct Nos 10							
2.7 ACCESSORIES. 2.8 Simple Wired Remote 2.9 Y Joint ODU-ODU Nos 2.10 Centralized Remote Nos 3 Installation Testing & Commissioning FOR OUTDOOR UNIT 3.1 12 HP (Heating & Cooling) Nos 3.2 14 HP (Heating & Cooling) Nos 3.3 16 HP (Heating & Cooling) Nos 3.4 18 HP (Heating & Cooling) Nos 3.5 20 HP (Heating & Cooling) Nos 3.6 24 HP (Heating & Cooling) Nos 4.1 Ductable Unit Nos 4.2 2 TR Duct Nos 4.3 3 TR Duct Nos 4.4 4 TR Duct Nos 4.5 6 TR High Static Duct Nos							
2.8 Simple Wired Remote Nos 27 2.9 Y Joint ODU-ODU Nos 5 2.10 Centralized Remote Nos 1 3 Installation Testing & Commissioning FOR OUTDOOR UNIT Nos 2 3.1 12 HP (Heating & Cooling) Nos 1 3.2 14 HP (Heating & Cooling) Nos 1 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT Vos 2 4.1 Ductable Unit Nos 3 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 1 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10			NOS	11			
2.9 Y Joint ODU-ODU Nos 5 2.10 Centralized Remote Nos 1 3 Installation Testing & Commissioning FOR OUTDOOR UNIT 3.1 12 HP (Heating & Cooling) Nos 2 3.2 14 HP (Heating & Cooling) Nos 1 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT 4.1 Ductable Unit 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10			Noa	27			
2.10 Centralized Remote Nos 1 3 Installation Testing & Commissioning FOR OUTDOOR UNIT Nos 2 3.1 12 HP (Heating & Cooling) Nos 2 3.2 14 HP (Heating & Cooling) Nos 1 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT Vos 2 4.1 Ductable Unit Nos 3 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10		•					
3 Installation Testing & Commissioning FOR OUTDOOR UNIT		-					
3.1 12 HP (Heating & Cooling) Nos 2 3.2 14 HP (Heating & Cooling) Nos 1 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT Vos 3 4.1 Ductable Unit Nos 3 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10			1103	1			
3.2 14 HP (Heating & Cooling) Nos 1 3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT Volume 1 Volume 1 4.1 Ductable Unit Nos 3 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10			Noc	2			
3.3 16 HP (Heating & Cooling) Nos 3 3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT Vos 2 4.1 Ductable Unit Nos 3 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10							
3.4 18 HP (Heating & Cooling) Nos 3 3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT Vos 3 4.1 Ductable Unit Nos 3 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10							
3.5 20 HP (Heating & Cooling) Nos 1 3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT Installation Testing & Commissioning FOR INDOOR UNIT Installation Testing & Commissioning FOR INDOOR UNIT 4.1 Ductable Unit Nos 3 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10							
3.6 24 HP (Heating & Cooling) Nos 2 4 Installation Testing & Commissioning FOR INDOOR UNIT 4.1 Ductable Unit 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10							
4 Installation Testing & Commissioning FOR INDOOR UNIT 4.1 Ductable Unit 4.2 2 TR Duct 4.3 3 TR Duct 4.4 4 TR Duct 4.5 6 TR High Static Duct Nos 1 Nos 10							
4.1 Ductable Unit 4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10			1103				
4.2 2 TR Duct Nos 3 4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10							
4.3 3 TR Duct Nos 2 4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10			Nos	3			
4.4 4 TR Duct Nos 1 4.5 6 TR High Static Duct Nos 10							
4.5 6 TR High Static Duct Nos 10							
C 4.0 F & FR HISH STATIC DUCT	4.6	8 TR High Static Duct	Nos	11			

5	SITC of Y Branch IDU			
5.1	Y Joint IDU-IDU	Nos	22	
6	Refrigerant Piping for VRV / VRF System			
	Supply & Fixing of COPPER REFRIGERANT PIPING of appropriate			
6.1	size and thickness as recommended by OEM, suction and discharge line complete with fittings, elbow, socket, brazing, flushing, Pressure testing with N2, vacuuming. nitrile rubber insulation of 19 mm thickness for gas line and 19 mm thickness & 13 mm for liquid line. Measurement of pipes individually. (Gas and liquid line) including bend and accessories etc. Copper Pipes Should handle Pressure upto 500 Psi.			
6.2	34.9 mm OD (insulation 19mm)	Mtr.	40	
6.3	28.58 mm OD (insulation 19mm)	Mtr.	205	
6.4	22.2 mm OD (insulation 19mm)	Mtr.	85	
6.5	19.05 mm OD (insulation 19mm)	Mtr.	120	
6.6	15.88 mm OD (insulation 19mm)	Mtr.	115	
	12.7 mm OD (insulation 19mm)	Mtr.	140	
6.7	9.52 mm OD (insulation 13 mm)	Mtr.	280	+
6.8	Supplying and installation of MS Slotted angle for copper Pipes &	IVILI.	200	
7	Communication Cables horizontally & vertically along with threaded rod nut, bolt, saddle, tie etc (The distance between two hangers should be CC 1200mm (max.) or as per the requirement for bens, etc) C section of hanger will be measured in Rmt	Mtr.	220	
8	GI Cable tray, 200 mm x 50 mm threaded Rod 8 mm, Anchor Fastener, Nut Bolt, Washer, Tie for top Covering Cable Tray, etc for ODU Unit along Civil work for Platform (12"x12") on the terrace wherever it required	Mtr	190	
9	Condensate Drain Piping			
	Supplying, installing and testing of hard PVC pipe (heavy duty)			
9.1	with 10 kg thick nitrile rubber insulation (tube insulation) with protective coating as per the approved shop drawings and specifications along with it accessories for hanging			
9.1 9.2	with 10 kg thick nitrile rubber insulation (tube insulation) with protective coating as per the approved shop drawings and	Mtr.	320	
	with 10 kg thick nitrile rubber insulation (tube insulation) with protective coating as per the approved shop drawings and specifications along with it accessories for hanging	Mtr.	320	
9.2	with 10 kg thick nitrile rubber insulation (tube insulation) with protective coating as per the approved shop drawings and specifications along with it accessories for hanging Hard PVC drain Pipe 32 mm, 10 kg with Insulation TRANSMISSION WIRING. Supply, laying, testing, and commissioning of the following size (Shielded) PVC insulated Copper Communication cable in PVC conduit of the following size on surface/recessed i/c clamping completely as required 2 core x 1.5 Sq mm, Un-armored/Shielded copper cable	Mtr.	320	
9.2	with 10 kg thick nitrile rubber insulation (tube insulation) with protective coating as per the approved shop drawings and specifications along with it accessories for hanging Hard PVC drain Pipe 32 mm, 10 kg with Insulation TRANSMISSION WIRING. Supply, laying, testing, and commissioning of the following size (Shielded) PVC insulated Copper Communication cable in PVC conduit of the following size on surface/recessed i/c clamping completely as required 2 core x 1.5 Sq mm, Un-armored/	Mtr.	320	
9.2 10 10.1	with 10 kg thick nitrile rubber insulation (tube insulation) with protective coating as per the approved shop drawings and specifications along with it accessories for hanging Hard PVC drain Pipe 32 mm, 10 kg with Insulation TRANSMISSION WIRING. Supply, laying, testing, and commissioning of the following size (Shielded) PVC insulated Copper Communication cable in PVC conduit of the following size on surface/recessed i/c clamping completely as required 2 core x 1.5 Sq mm, Un-armored/Shielded copper cable 2C x 1.5 Sq mm Unarmoured (For Transmission) Civil work like Wall Opening /wall chasing and closing for Copper pipe and cables. (plastering finishing etc complete for dissmental portion			
9.2 10 10.1 10.2	with 10 kg thick nitrile rubber insulation (tube insulation) with protective coating as per the approved shop drawings and specifications along with it accessories for hanging Hard PVC drain Pipe 32 mm, 10 kg with Insulation TRANSMISSION WIRING. Supply, laying, testing, and commissioning of the following size (Shielded) PVC insulated Copper Communication cable in PVC conduit of the following size on surface/recessed i/c clamping completely as required 2 core x 1.5 Sq mm, Un-armored/Shielded copper cable 2C x 1.5 Sq mm Unarmoured (For Transmission) Civil work like Wall Opening /wall chasing and closing for Copper pipe and cables. (plastering finishing etc complete for dissmental	Mtr.	1290	
9.2 10 10.1 10.2 11	with 10 kg thick nitrile rubber insulation (tube insulation) with protective coating as per the approved shop drawings and specifications along with it accessories for hanging Hard PVC drain Pipe 32 mm , 10 kg with Insulation TRANSMISSION WIRING. Supply, laying, testing, and commissioning of the following size (Shielded) PVC insulated Copper Communication cable in PVC conduit of the following size on surface/recessed i/c clamping completely as required 2 core x 1.5 Sq mm, Un-armored/Shielded copper cable 2C x 1.5 Sq mm Unarmoured (For Transmission) Civil work like Wall Opening /wall chasing and closing for Copper pipe and cables. (plastering finishing etc complete for dissmental portion GP Sheet Rectangular Duct modification work at the mouth of indoor unit as per new machine and connected to the old existing	Mtr.	1290	
9.2 10 10.1 10.2 11	with 10 kg thick nitrile rubber insulation (tube insulation) with protective coating as per the approved shop drawings and specifications along with it accessories for hanging Hard PVC drain Pipe 32 mm , 10 kg with Insulation TRANSMISSION WIRING. Supply, laying, testing, and commissioning of the following size (Shielded) PVC insulated Copper Communication cable in PVC conduit of the following size on surface/recessed i/c clamping completely as required 2 core x 1.5 Sq mm, Un-armored/Shielded copper cable 2C x 1.5 Sq mm Unarmoured (For Transmission) Civil work like Wall Opening /wall chasing and closing for Copper pipe and cables. (plastering finishing etc complete for dissmental portion GP Sheet Rectangular Duct modification work at the mouth of indoor unit as per new machine and connected to the old existing duct. GP Sheet Rectangular Duct at the time of cleaning ,dismantling if damaged including insulation/Nitrile Rubber Sheet/XLP / SR 505	Mtr. Lot	1290 1	

16	Supply & Fixing of 19 mm thickness duly laminated aluminum foil of mat finish closed cell Nitrile rubber (Class O) insulation on the existing duct after applying suitable adhesive for Nitrile Rubber.	Sqm	60	
17	Supply and fixing of Flexible Canvas in accordance with and compatible with indoor unit to duct. (as per the capacity of mentioned in 2.0 of BOQ) as per the OEM recommendation.	Nos.	27	
18	Supplying and fitting the following size of perforated Galvanized Iron Cable Tray (150mm x 50mm) including bends and tee with perforation, in convenient sections, Anchor Fastener Thread Rod Nut bolt Washer joined with connectors, suspended from the ceiling with M.S. suspenders for Indoor Unit Power Supply.	Rmt	150	
19	Supply and fixing 3C x 2.5 sq. mm. Copper Multi Stand Wire cable for Indoor Unit Power Supply. (Or as per the OEM recommendation to take the proper load)	Rmt	395	
20	Supply & Return Aluminium Grill Cleaning & Robotic Duct inside Cleaning of existing Duct to remove dust, bacteria, mold spores, and other foreign bodies by using HEPA-filtered vacuum unit Area Library.	Lot	1	
21	Design, fabrication, supply, installation, testing, and commissioning of LT Panel / Sub-distribution panels fabricated out of 2mm thick for structural members and 1.6mm thick for door and covers CRCA sheet in cubicle compartmentalize free standing floor mounted, dust and vermin proof Cable gland plates shall be provided on top as well as at the bottom of the panels. Panels shall be treated with all anticorrosive process before painting as per specifications 2 Nos. earthing terminals shall be provided for all distribution panels. Panels shall be suitable for 415V, 3-phase, 4-wire, 50Hz supply system and lifting hooks shall also be provided in case of large panels. Degree of ingress protection of IP-55. Suitable size of Incomer with 400A, 50 KA breaking capacity 4-pole, Metering & indication item like digital ampere meter, CT, digital voltmeter, Digital multifunction meter and RYB indicators, Suitable size of TPN Aluminium busbar with color coded, Suitable size of MCCB/RCCB/ELCB Outgoings with 4 Pole 40 A 6 nos & 63 A 6 nos for 12 Outdoor Unit & for Indoor Unit MCB single pole 6 A 5 nos,10 A 1 nos, 16 A 10 nos, 20 A 11 nos.	Set	1	
22	Supply and laying, effecting proper connections, testing & commissioning of the following sizes of 1.1 KV armoured/unarmoured XLPE insulated PVC sheathed aluminium/copper conductor cables conforming to IS: 7098 Part 1 with latest amendments laid over MS supports in existing RCC ducts/laid in ground/laid on Cable Trays 200 mm x 50 mm including clamping the cables to supports in an approved manner as required complete with all accessories. 4C x 10/16/25 sq.mm. Copper Armoured cable for ODU Unit.			
22.1	Supplying and fitting following size of perforated Galvanized Iron Cable Tray (200 mm x 50mm) including bends and tee with perforation, in convenient sections, Anchor Fastener Thread Rod Nut bolt Washer joined with connectors, suspended from the ceiling with M.S. suspenders for Outdoor Unit Power Supply.	Rmt	160	

					1
22.2	4C x 10/16/25 sq. mm. Copper Multi Stand cable + 1.5 sq mm. for earth for outdoor Unit Power Supply and fixing from Electrical Panel to Outdoor Unit (Or as per the OEM recommendation to take the proper load)	Rmt	310		
23	Providing and fixing 25 mm X 5 mm G.l. strip on the surface or in recess for connections etc. as required.	Rmt	155		
24	Providing and fixing 6 SWG dia G.l. wire on the surface or in recess for loop earthing as required.	Rmt	555		
25	Supply and Installation of Earth Pit with G.l. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with a cover plate having to lock arrangement and watering pipe of 2.7 meters long etc. with charcoal coke and salt as required (As per CPWD norms)	Nos.	2		
26	Supply and installation of Small size panel box with MCCB/RCCB/ELCB Outgoings with -4 Pole 40 A 6 nos & 63 A 6 nos for 12 Outdoor Units for Outdoor unit maintenance/operation. The panel should be suitable for outdoor installation (sufficiently water resistant).	Nos.	12		
27	Supply and installation of MS Outdoor unit stand with two coats paint, Outdoor stand mounted on Terrance area of library Including Rubber Pad.	Nos.	12		
28	POP/Gypsum Ceiling Work Dismantling as per the requirement for any kind of installation	SqMt	400		
29	Providing and fixing Gypsum board Ceiling to match with the exiting design/ patten to match with proper jointing with existing with TAPO adhesives etc & Paint POP	SqMt	500		
30	VRF Gas Supply and gas Charging of Complete system.	HP	208		
31	CAMC of the complete VRF/VRV system (after DLP)				
31.1	First Year	Per TR	208		
31.2	Second Year	Per TR	208		
31.3	Third Year	Per TR	208		
31.4	Fourth Year	Per TR	208		
32	Buyback				
32.1	Less cost of Buyback of removed ducted air-conditioning system along with panel copper pipe cable etc	lot	1		
Basic Total Amount Installation					

Note:

- a. The contractor is advised to survey the actual site for assessment of critical applications if any & accordingly quote the rates.
- b. In case extraordinary variation is found in the **CAMC rate** quoted by the bidder as compared to the rates quoted by other bidders/ market rates for CAMC then the financial bid of that bidder will be Disqualified

Signature with the seal of the Contractor