



V J T I

Veermata Jijabai Technological Institute

(Central Technological Institute, Maharashtra State, INDIA)

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Ref No. VJTI/Maintenance/ 2257/2026

Date: 10 JUL 2026

QUOTATION NOTICE

M/s.
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Subject: - Annual Maintenance Rate Contract for Air Conditioner Units at Institute & Hostel for a period of 24 Months.

Enquiry Issue Date: - 09.07.2026

Last date of Submission: - 15.07.2026 at 3:00 PM

Tender Fees: - Rs. 1000/-

Earnest Money Deposit (EMD): - Rs. 17, 610/-

Dear Sir,

The Institute intends to undertake the work "Annual Maintenance Rate Contract for Air Conditioner Units at Institute & Hostel for a period of 24 Months." for which sealed quotations are invited. You are requested to quote the rates/price/cost in blank BOQ attached herewith.

TERMS & CONDITIONS

1. Quotation submission

- Sealed quotations addressed to The Director, VJTI shall be submitted by post or in person at the Inward Section, First Floor, VJTI, H. R. Mahajani Marg, Matunga, Mumbai - 400019, so as to reach this office on or before the prescribed date and time. The sealed envelope shall be superscribed with the Quotation Reference Number.
- The quotation shall be submitted either on the official letterhead of the firm/company or on the uploaded BOQ with the rates duly filled in. Every page of the quotation, BOQ and supporting documents shall be signed by the authorized signatory and bear the firm's seal.
- The bidder shall submit self-attested copies of PAN Card, GST Registration Certificate, Shop & Establishment Registration Certificate, BOCW Registration Certificate (where applicable) and any other statutory registrations applicable to the work. If BOCW registration is not applicable, an undertaking in the prescribed format shall be submitted.
- The rates quoted shall inclusive of all costs, including labour, materials, transportation, loading, unloading, insurance, taxes, duties, overheads and all incidental charges required for satisfactory execution of the work, except GST if quoted separately.
- The quotation shall remain valid for 90 days from the date of opening of the quotation.
- If the last date of submission happens to be declared a holiday, the quotation shall be received on the next working day at the same time.

- The Institute reserves the right to verify the authenticity of the documents submitted by the bidder. Submission of false information or forged documents shall render the quotation liable for rejection and may attract appropriate legal action.

2. Payment

- Payment shall be released only after satisfactory completion of the work, submission of duly certified service reports, measurement (where applicable), submission of a valid GST Tax Invoice and certification by the Engineer-in-Charge. Payments shall be made only through NEFT/RTGS/Bank Transfer.
- No advance payment shall be made under any circumstances. Statutory deductions such as TDS, GST-TDS, Labour Welfare Cess and any other deductions applicable under the prevailing Government rules shall be deducted from the contractor's bills.
- No interest shall be payable by the Institute on account of any delay in payment arising due to administrative, procedural or statutory reasons.

3. Acceptance of quotation

- The Institute reserves the right to accept or reject any or all quotations, wholly or partly, or to cancel the quotation process at any stage without assigning any reason whatsoever. The Institute also reserves the right to increase, decrease or omit any item or quantity during the currency of the Rate Contract, if required.
- Quotations received after the prescribed date and time shall not be considered.
- Any form of canvassing or attempt to influence the quotation process, directly or indirectly, shall render the quotation liable for rejection.
- The successful bidder shall execute the work strictly in accordance with the terms and conditions of the quotation, the approved Schedule of Rates, Technical Specifications and the directions of the Engineer-in-Charge.
- The Institute reserves the right to impose additional conditions or issue further instructions, if considered necessary, in the interest of the work, and the successful bidder shall be bound to comply with the same.

4. Additional Terms & Conditions

- The bidder shall have successfully completed similar Annual Maintenance/Repair/Rate Contract works for Air Conditioner Units during the last three years. Documentary evidence such as work orders and completion certificates shall be submitted along with the quotation.
- The bidder shall inspect the Institute and Hostel premises on any working day during office hours before submitting the quotation. A duly signed **Site Visit Form** issued by the Maintenance Section shall be enclosed with the quotation.
- The contractor shall deploy a qualified and experienced **Service Engineer/Supervisor (Diploma/Degree in Mechanical/Electrical Engineering or ITI in Refrigeration & Air Conditioning with adequate experience)** for supervision of maintenance and repair works.
- This contract shall be treated as an **Annual Maintenance Rate Contract (Non-Comprehensive)** for servicing, preventive maintenance, breakdown maintenance, repairs, installation, dismantling and replacement of approved spare parts for Window, Split, Cassette and Ductable Air Conditioner Units installed at the Institute and Hostel premises.
- The contract shall remain valid for a period of **24 months** from the date of issue of the Work Order unless terminated earlier by the Institute.

- No minimum quantity or value of work is guaranteed under this Rate Contract. The Institute reserves the right to execute any quantity of work depending upon actual requirements.
- The approved rates shall remain **firm and fixed** throughout the contract period. No escalation on account of labour, material, transportation, fuel or any other charges shall be admissible except statutory variation in GST, if applicable.
- The contractor shall carry out preventive maintenance, breakdown maintenance, repair works and replacement of spare parts strictly in accordance with the approved Schedule of

Rates and Technical Specifications.

- The approved rate list shall be applicable for servicing, installation, dismantling, gas charging, nitrogen testing and replacement of spare parts for all Window, Split, Cassette and Ductable Air Conditioner Units.
- Only the items actually executed, measured and certified by the Engineer-in-Charge shall be considered for payment.
- No repair or replacement of any major component such as compressor, PCB, cooling coil, condenser coil, fan motor or similar items shall be carried out without prior written approval of the Engineer-in-Charge.
- Before carrying out any repair involving replacement of spare parts, the contractor shall submit a defect report along with the applicable approved rates for obtaining approval from the Engineer-in-Charge.
- All spare parts supplied shall be **new, genuine, unused and of approved make/OEM** as specified in the Technical Specifications. Equivalent makes shall be permitted only with prior written approval of the Engineer-in-Charge.
- Preventive maintenance shall include cleaning of filters, evaporator and condenser coils, drain tray and drain line, checking refrigerant pressure, compressor operation, blower assembly, electrical connections, insulation resistance, operating current and overall performance of the unit.
- The contractor shall attend any complaints within 24 hours from receipt of the complaint. Complaints pertaining to critical areas shall be attended within 4 hours, and the fault shall be rectified at the earliest.
- Gas charging shall be carried out only after identifying and rectifying refrigerant leakage. Gas charging without rectification of leakage shall not be considered for payment.
- The contractor shall maintain sufficient trained manpower, tools, testing instruments and transportation to ensure timely execution of maintenance and repair works throughout the contract period.
- The contractor shall maintain a **Complaint Register, Preventive Maintenance Register, Equipment History Card and Service Records** for each Air Conditioner Unit and get it certified by concern Engineer-in-Charge periodically and submit the same whenever called for by the Institute.
- A Service Report, duly signed by the user department and the Engineer-in-Charge, shall be submitted after completion of every preventive maintenance visit or breakdown repair.
- All defective parts removed from the Air Conditioner Units shall remain the property of the Institute and shall be handed over to the Engineer-in-Charge immediately after replacement.
- All replaced spare parts shall carry a minimum **six (06) months warranty** or the manufacturer's warranty, whichever is higher. Any defect occurring during the warranty period shall be rectified or replaced by the contractor at **no additional cost** to the Institute.
- The contractor shall not use refurbished, repaired or second-hand spare parts under any circumstances.
- The contractor shall comply with all applicable labour laws, safety regulations and statutory requirements. All personnel deployed shall wear proper PPE while carrying out maintenance work.

- All replaced spare parts shall carry a minimum **six (06) months warranty** or the manufacturer's warranty, whichever is higher. Any defect occurring during the warranty period shall be rectified or replaced by the contractor at **no additional cost** to the Institute.
- The contractor shall not use refurbished, repaired or second-hand spare parts under any circumstances.
- The contractor shall comply with all applicable labour laws, safety regulations and statutory requirements. All personnel deployed shall wear proper PPE while carrying out maintenance work.
- Any damage caused to the Institute property during execution of the work shall be rectified by the contractor at his own risk and cost.
- The contractor shall maintain proper housekeeping and remove all waste materials, replaced components, packing materials and debris generated during maintenance work from the site immediately after completion of the work.
- Maintenance work shall normally be carried out between **8.00 AM and 6.00 PM** on working days. Any work beyond these hours or on holidays shall be undertaken only with prior permission of the **Dean (ID & M)/Engineer-in-Charge**.
- Payment shall be released only after satisfactory completion of the work, submission of service reports and certification by the Engineer-in-Charge. **No advance payment** shall be made. The quarterly/ monthly RA bills shall be prepared.
- In case of delay in attending complaints, repeated unsatisfactory performance or failure to comply with the contract conditions, the Institute reserves the right to impose a penalty of **₹500 per day per complaint**, recover consequential losses, or terminate the Rate Contract without prejudice to any other rights available under the contract.
- Variation in quantity or execution of any item not included in the approved Schedule of Rates shall be carried out only after obtaining prior approval from the competent authority.
- The decision of the Engineer-in-Charge, Dean (ID & M) and Director, VJTI, regarding interpretation of the contract, technical specifications, quality of work, acceptance of services and settlement of disputes shall be final and binding on the contractor.


 Dean (ID & M)



BOQ

Name of Work: - Annual Maintenance Rate Contract for Air Conditioner Units at Institute & Hostel for a period of 24 Months.

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
1	Window AC Units							
1.1	Inverter Window	1	Repair	PCB / IPM Module	Each			
1.2	Inverter Window	1.5		PCB / IPM Module	Each			
1.3	Inverter Window	2		PCB / IPM Module	Each			
1.4	Inverter Window	1	Replacement	PCB / IPM Module	Each			
1.5	Inverter Window	1.5		PCB / IPM Module	Each			
1.6	Inverter Window	2		PCB / IPM Module	Each			
1.7	Inverter Window	1	Replacement	Compressor	Each			
1.8	Inverter Window	1.5		Compressor	Each			
1.9	Inverter Window	2		Compressor	Each			
1.10	Non-Inverter Window	1	Repair	Compressor	Each			
1.11	Non-Inverter Window	1.5		Compressor	Each			
1.12	Non-Inverter Window	2		Compressor	Each			
1.13	Non-Inverter Window	1	Replacement	Compressor	Each			
1.14	Non-Inverter Window	1.5		Compressor	Each			
1.15	Non-Inverter Window	2		Compressor	Each			
1.16	Both (Inverter & Non-Inverter)	1	Repair	Cooling Coil	Each			
1.17	Both (Inverter & Non-Inverter)	1.5		Cooling Coil	Each			

	Non-Inverter)							
1.18	Both (Inverter & Non-Inverter)	2		Cooling Coil	Each			

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
1.19	Both (Inverter & Non-Inverter)	1	Replacement	Cooling Coil	Each			
1.20	Both (Inverter & Non-Inverter)	1.5		Cooling Coil	Each			
1.21	Both (Inverter & Non-Inverter)	2		Cooling Coil	Each			
1.22	Both (Inverter & Non-Inverter)	1	Repair	Condenser Coil	Each			
1.23	Both (Inverter & Non-Inverter)	1.5		Condenser Coil	Each			
1.24	Both (Inverter & Non-Inverter)	2		Condenser Coil	Each			
1.25	Both (Inverter & Non-Inverter)	1	Replacement	Condenser Coil	Each			
1.26	Both (Inverter & Non-Inverter)	1.5		Condenser Coil	Each			
1.27	Both (Inverter & Non-Inverter)	2		Condenser Coil	Each			
1.28	Both (Inverter & Non-Inverter)	1-2	Replacement	Starting Capacitor	Each			
1.29	Both (Inverter & Non-Inverter)	1-2	Replacement	Running Capacitor	Each			

	Non-Inverter)							
1.30	Both (Inverter & Non-Inverter)	1-2	Replacement	Fan Capacitor	Each			
1.31	Both (Inverter & Non-Inverter)	1-2	Repair	Fan Motor	Each			

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
1.32	Both (Inverter & Non-Inverter)	1-2	Replacement	Fan Motor	Each			
1.33	Both (Inverter & Non-Inverter)	1-2	Replacement	Fan Blade	Each			
1.34	Both (Inverter & Non-Inverter)	1-2	Replacement	Blower	Each			
1.35	Both (Inverter & Non-Inverter)	1-2	Replacement	Gas Charging	Each			
1.36	Both (Inverter & Non-Inverter)	1-2	Replacement	Stainer	Each			
1.37	Both (Inverter & Non-Inverter)	1-2	Replacement	Outer Casing	Each			
1.38	Both (Inverter & Non-Inverter)	1-2	Replacement	Front Grill	Each			
1.39	Both (Inverter & Non-Inverter)	1-2	Replacement	Fan Motor Stand	Each			
1.40	Both (Inverter & Non-Inverter)	1-2	Installation	Window AC Installation	Each			
1.41	Both (Inverter & Non-Inverter)	1-2	Installation	Window AC Dismantling	Each			

	Non-Inverter)							
1.42	Both (Inverter & Non-Inverter)	1-2	Service	General Service	Each			
1.43	Both (Inverter & Non-Inverter)	1-2	Service	Jet Service	Each			

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
2	Split AC Units							
2.1	Inverter Split	1	Repair	PCB / IPM Module	Each			
2.2	Inverter Split	1.5		PCB / IPM Module	Each			
2.3	Inverter Split	2		PCB / IPM Module	Each			
2.4	Inverter Split	1	Replacement	PCB / IPM Module	Each			
2.5	Inverter Split	1.5		PCB / IPM Module	Each			
2.6	Inverter Split	2		PCB / IPM Module	Each			
2.7	Inverter Split	1	Replacement	Compressor	Each			
2.8	Inverter Split	1.5		Compressor	Each			
2.9	Inverter Split	2		Compressor	Each			
2.10	Non-Inverter Split	1	Repair	Compressor	Each			
2.11	Non-Inverter Split	1.5		Compressor	Each			
2.12	Non-Inverter Split	2		Compressor	Each			
2.13	Non-Inverter Split	1	Replacement	Compressor	Each			
2.14	Non-Inverter Split	1.5		Compressor	Each			
2.15	Non-Inverter Split	2		Compressor	Each			

2.16	Both (Inverter & Non-Inverter)	1	Repair	Cooling Coil	Each			
2.17	Both (Inverter & Non-Inverter)	1.5		Cooling Coil	Each			
2.18	Both (Inverter & Non-Inverter)	2		Cooling Coil	Each			

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
2.19	Both (Inverter & Non-Inverter)	1	Replacement	Cooling Coil	Each			
2.20	Both (Inverter & Non-Inverter)	1.5		Cooling Coil	Each			
2.21	Both (Inverter & Non-Inverter)	2		Cooling Coil	Each			
2.22	Both (Inverter & Non-Inverter)	1	Repair	Condenser Coil	Each			
2.23	Both (Inverter & Non-Inverter)	1.5		Condenser Coil	Each			
2.24	Both (Inverter & Non-Inverter)	2		Condenser Coil	Each			
2.25	Both (Inverter & Non-Inverter)	1	Replacement	Condenser Coil	Each			
2.26	Both (Inverter & Non-Inverter)	1.5		Condenser Coil	Each			
2.27	Both (Inverter & Non-Inverter)	2		Condenser Coil	Each			

2.28	Both (Inverter & Non- Inverter)	1-2	Replac ement	Starting Capacitor	Each			
2.29	Both (Inverter & Non- Inverter)	1-2	Replac ement	Running Capacitor	Each			
2.30	Both (Inverter & Non- Inverter)	1-2	Replac ement	Fan Capacitor	Each			
2.31	Both (Inverter & Non- Inverter)	1-2	Repair	Fan Motor	Each			

Sr. No.	AC Type	Tonna ge	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
2.32	Both (Inverter & Non- Inverter)	1-2	Replac ement	Fan Motor	Each			
2.33	Both (Inverter & Non- Inverter)	1-2	Replac ement	Fan Blade	Each			
2.34	Both (Inverter & Non- Inverter)	1-2	Replac ement	Blower	Each			
2.35	Both (Inverter & Non- Inverter)	1-2	Replac ement	Gas Charging	Each			
2.36	Both (Inverter & Non- Inverter)	1-2	Replac ement	Stainer	Each			
2.37	Both (Inverter & Non- Inverter)	1-2	Replac ement	Outer Casing	Each			
2.38	Both (Inverter & Non- Inverter)	1-2	Replac ement	Front Grill	Each			
2.39	Both (Inverter & Non- Inverter)	1-2	Replac ement	Fan Motor Stand	Each			

2.40	Both (Inverter & Non-Inverter)	1-2	Service	General Service	Each			
2.41	Both (Inverter & Non-Inverter)	1-2	Service	Jet Service	Each			
2.42	Both (Inverter & Non-Inverter)	1-2	Installation	Split Installation	Each			
2.43	Both (Inverter & Non-Inverter)	2-3	Installation	Split Installation	Each			
2.44	Both (Inverter & Non-Inverter)	1-2	Installation	Split Dismantling	Each			

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
2.45	Both (Inverter & Non-Inverter)	1-2	Installation	Nitrogen Testing	Each			
2.46	Both (Inverter & Non-Inverter)	1-2	Installation	Nitrogen Testing	Per Feet			
2.47	Both (Inverter & Non-Inverter)	1-2	Installation	4 Core x 2.5 Sqmm Cable	Per Feet			
2.48	Both (Inverter & Non-Inverter)	1-2	Installation	Hard PVC With Insulation	Per Feet			
2.49	Both (Inverter & Non-Inverter)	1-2	Installation	L Bracket	Each			
2.50	Both (Inverter & Non-Inverter)	1-2	Installation	MS Fabrication Stand	Each			

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
3	Cassette AC Units							
3.1	Inverter Cassette	1.5	Repair	PCB / IPM Module	Each			
3.2	Inverter Cassette	2-3		PCB / IPM Module	Each			
3.3	Inverter Cassette	3-4		PCB / IPM Module	Each			
3.4	Inverter Cassette	1.5	Replacement	PCB / IPM Module	Each			
3.5	Inverter Cassette	2-3		PCB / IPM Module	Each			
3.6	Inverter Cassette	3-4		PCB / IPM Module	Each			
3.7	Inverter Cassette	1.5	Replacement	Compressor	Each			
3.8	Inverter Cassette	2-3		Compressor	Each			
3.9	Inverter Cassette	3-4		Compressor	Each			
3.10	Non-Inverter Cassette	1.5	Repair	Compressor	Each			
3.11	Non-Inverter Cassette	2-3		Compressor	Each			

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
3.12	Non-Inverter Cassette	3-4		Compressor	Each			
3.13	Non-Inverter Cassette	1.5	Replacement	Compressor	Each			
3.14	Non-Inverter Cassette	2-3		Compressor	Each			
3.15	Non-Inverter Cassette	3-4		Compressor	Each			
3.16	Both (Inverter & Non-Inverter)	1.5	Repair	Cooling Coil	Each			
3.17	Both (Inverter & Non-Inverter)	2-3		Cooling Coil	Each			

3.18	Both (Inverter & Non- Inverter)	3-4		Cooling Coil	Each			
3.19	Both (Inverter & Non- Inverter)	1.5	Replac ement	Cooling Coil	Each			
3.20	Both (Inverter & Non- Inverter)	2-3		Cooling Coil	Each			
3.21	Both (Inverter & Non- Inverter)	3-4		Cooling Coil	Each			
3.22	Both (Inverter & Non- Inverter)	1.5	Repair	Condenser Coil	Each			
3.23	Both (Inverter & Non- Inverter)	2-3		Condenser Coil	Each			
3.24	Both (Inverter & Non- Inverter)	3-4		Condenser Coil	Each			
3.25	Both (Inverter & Non- Inverter)	1.5	Replac ement	Condenser Coil	Each			

Sr. No.	AC Type	Tonna ge	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
3.26	Both (Inverter & Non- Inverter)	2-3		Condenser Coil	Each			
3.27	Both (Inverter & Non- Inverter)	3-4		Condenser Coil	Each			
3.28	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Starting Capacitor	Each			
3.29	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Running Capacitor	Each			

3.30	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Fan Capacitor	Each			
3.31	Both (Inverter & Non- Inverter)	1.5-4	Repair	Fan Motor	Each			
3.32	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Fan Motor	Each			
3.33	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Fan Blade	Each			
3.34	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Blower	Each			
3.35	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Gas Charging	Each			
3.36	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Stainer	Each			
3.37	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Outer Casing	Each			
3.38	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Front Grill	Each			
3.39	Both (Inverter & Non- Inverter)	1.5-4	Replac ement	Fan Motor Stand	Each			
3.40	Both (Inverter & Non- Inverter)	1.5-4	Service	General Service	Each			
3.41	Both (Inverter & Non- Inverter)	1.5-4	Service	Jet Service	Each			
3.42	Both (Inverter & Non- Inverter)	1.5-4	Installa tion	Cassette Installation	Each			
3.43	Both (Inverter &	1.5-4	Installa tion	Cassette Dismantling	Each			

	Non-Inverter)							
3.44	Both (Inverter & Non-Inverter)	1.5-4	Installation	Nitrogen Testing	Each			
3.45	Both (Inverter & Non-Inverter)	1.5-4	Installation	Copper Piping With Insulation	Per Feet			
3.46	Both (Inverter & Non-Inverter)	1.5-4	Installation	6 Core x 2.5 Sqmm Cable	Per Feet			
3.47	Both (Inverter & Non-Inverter)	1.5-4	Installation	Hard PVC With Insulation	Per Feet			
3.48	Both (Inverter & Non-Inverter)	1.5-4	Installation	L Bracket	Each			
3.49	Both (Inverter & Non-Inverter)	1.5-4	Installation	MS Fabrication Stand	Each			

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
4	Ductable AC Units							
4.1	Inverter Ductable	2	Repair	PCB / IPM Module	Each			
4.2	Inverter Ductable	2-5		PCB / IPM Module	Each			
4.3	Inverter Ductable	5-11		PCB / IPM Module	Each			
4.4	Inverter Ductable	2	Replacement	PCB / IPM Module	Each			
4.5	Inverter Ductable	2-5		PCB / IPM Module	Each			
4.6	Inverter Ductable	5-11		PCB / IPM Module	Each			

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
4.7	Inverter Ductable	2	Replacement	Compressor	Each			
4.8	Inverter Ductable	2-5		Compressor	Each			

4.9	Inverter Ductable	5-11		Compressor	Each			
4.10	Non-Inverter Ductable	2	Repair	Compressor	Each			
4.11	Non-Inverter Ductable	2-5		Compressor	Each			
4.12	Non-Inverter Ductable	5-11		Compressor	Each			
4.13	Non-Inverter Ductable	2	Replacement	Compressor	Each			
4.14	Non-Inverter Ductable	2-5		Compressor	Each			
4.15	Non-Inverter Ductable	5-11		Compressor	Each			
4.16	Both	2	Repair	Cooling Coil	Each			
4.17	Both	2-5		Cooling Coil	Each			
4.18	Both	5-11		Cooling Coil	Each			
4.19	Both	2	Replacement	Cooling Coil	Each			
4.20	Both	2-5		Cooling Coil	Each			
4.21	Both	5-11		Cooling Coil	Each			
4.22	Both	2	Repair	Condenser Coil	Each			
4.23	Both	2-5		Condenser Coil	Each			
4.24	Both	5-11		Condenser Coil	Each			
4.25	Both	2	Replacement	Condenser Coil	Each			
4.26	Both	2-5		Condenser Coil	Each			
4.27	Both	5-11		Condenser Coil	Each			
4.28	Both	2-11	Replacement	Starting Capacitor	Each			
4.29	Both	2-11	Replacement	Running Capacitor	Each			
4.30	Both	2-11	Replacement	Fan Capacitor	Each			
4.31	Both	2-11	Repair	Fan Motor	Each			
4.32	Both	2-11	Replacement	Fan Motor	Each			
4.33	Both	2-11	Replacement	Fan Blade	Each			
4.34	Both	2-11	Replacement	Blower	Each			
4.35	Both	2	Replacement	Gas Charging	Each			
4.36	Both	2-5	Replacement	Gas Charging	Each			

Sr. No.	AC Type	Tonnage	Type of Service	Description	Unit	Rate (₹)	18% GST	Amount (₹)
4.37	Both	5-11	Replacement	Gas Charging	Each			
4.38	Both	2-11	Replacement	Stainer	Each			
4.39	Both	2-11	Replacement	Canves Connection	Each			
4.40	Both	2-11	Replacement	Fan Motor Stand	Each			
4.41	Both	2-11	Service	General Service	Each			
4.42	Both	2-11	Service	Jet Service	Each			
4.43	Both	2	Installation	Ductable Installation	Each			
4.44	Both	2-5	Installation	Ductable Installation	Each			
4.45	Both	5-11	Installation	Ductable Installation	Each			
4.46	Both	2	Installation	Ductable Dismantling	Each			
4.47	Both	2-5	Installation	Ductable Dismantling	Each			
4.48	Both	5-11	Installation	Ductable Dismantling	Each			
4.49	Both	2-11	Installation	Nitrogen Testing	Each			
4.50	Both	2-11	Installation	Copper Piping with Insulation	Per Feet			
4.51	Both	2-11	Installation	6 Core x 2.5 Sqmm Cable	Per Feet			
4.52	Both	2-11	Installation	Hard PVC With Insulation	Per Feet			
4.53	Both	2-11	Installation	MS Fabrication Stand	Each			
4.54	Core Cutting			Carrying out core cutting of size 3" to 5" dia x 15" length in the C.C./rock/stable wall with the help of specialized core cutting machine in proper manner and finishing the site as original.	Each			

Note:

- Please find Annexure-I for Technical Specification and approved make list.

Annexure I

Technical Specifications & Approved Make List

1. Approved Makes / Brands

The contractor shall use only approved makes/brands or equivalent with prior approval from the Engineer-in-Charge. All materials supplied shall be new, genuine, unused, and conforming to relevant IS/ASHRAE/ASTM standards.

Sr. No.	Component / Item	Approved Make / Brand
1	Compressor	Copeland / Emerson / Danfoss / LG / Mitsubishi / Panasonic / Carrier / Daikin
2	Fan Motor	EBM Papst / Crompton / Kirloskar / Marathon / Siemens
3	Capacitors	EPCOS / Tibcon / Ducati / Vishay
4	Contactors / Relay	Schneider / Siemens / L&T / ABB
5	PCB / Controller	Respective OEM only
6	Copper Piping	ASTM B280 standard – Rajco / Mandev / Mehta
7	Drain Pipe (PVC)	Supreme / Finolex / Astral / Prince
8	Insulation	Aeroflex / Armacell / Superlon
9	Refrigerant Gas	As per OEM specification (R22 / R32 / R410A / R134a etc.)
10	Electrical Cable	Polycab / Finolex / RR Kabel / KEI
11	MCB / Isolator	Schneider / Siemens / L&T / ABB / Legrand
12	Bearings	SKF / FAG / NBC
13	Blower Motor	Crompton / Marathon / OEM Approved
14	Thermostat / Sensor	Honeywell / Danfoss / OEM Approved
15	Flexible Hose / Sleeve	KFlex / Aerofoam / Equivalent approved

2. Material & Technical Specifications

2.1 Cooling Coil / Evaporator Coil

- Coil shall be made of seamless inner grooved copper tubes with hydrophilic aluminum fins.
- Fins shall be corrosion resistant and suitable for humid coastal environments.
- Coils shall be pressure tested for leakage before installation.
- Coil thickness and fin spacing shall conform to OEM standards.
- Repair by brazing shall be permitted only after approval from Engineer-in-Charge.

2.2 Condenser Coil

- Condenser coil shall consist of copper tubes with aluminum fins.
- Coils shall be designed for high ambient temperature operation up to 50°C.
- Coil cleaning shall be carried out using non-acidic coil cleaner chemicals only.
- Damaged fins shall be straightened using fin combs.

2.3 Copper Refrigerant Piping

- Copper tubing shall conform to ASTM B280 standards.
- Pipe insulation shall be nitrile rubber insulation with minimum 9 mm thickness.
- Brazing shall be carried out using silver brazing alloy and nitrogen purging.
- Refrigerant leakage testing shall be done using dry nitrogen pressure testing.

2.4 Drain Piping

- Drain pipe shall be heavy duty PVC pipe with proper slope for condensate drainage.
- Drain line insulation shall be provided wherever condensation occurs.
- Proper drain traps shall be maintained for ductable and cassette units.

2.5 Electrical Components

- All electrical wiring shall be FRLS copper conductor cable.
- Loose electrical connections shall be tightened during each service.
- Insulation resistance and voltage shall be checked periodically.
- Burnt terminals, contactors, relays, capacitors, and wiring shall be replaced with approved makes only.

2.6 Refrigerant Gas

- Refrigerant charging shall be carried out strictly as per OEM recommendations.
- Mixing of different refrigerants shall not be permitted.
- Refrigerant recovery procedures shall be followed before repair work.

3. Scope of Preventive Maintenance Services

The AMC contractor shall carry out preventive maintenance services for all Window, Split, Cassette, Tower, and Ductable AC units installed at Institute and Hostel premises.

3.1 Routine / General Service Scope

The following activities shall be included under every routine service visit:

Indoor Unit

- Cleaning of air filters
- Cleaning of outer panel and cabinet
- Checking cooling performance
- Checking thermostat and temperature settings
- Cleaning condensate tray
- Checking abnormal noise and vibration
- Tightening electrical terminals
- Inspection of blower motor and fan assembly

Outdoor Unit

- Checking compressor operation and current
- Checking refrigerant pressure
- Checking condenser fan motor operation
- Cleaning condenser surface using air blower
- Tightening electrical terminals
- Inspection for refrigerant leakage

Electrical Checks

- Voltage and current measurement
- Capacitor testing
- Contactor and relay inspection
- PCB status checking
- Earthing continuity verification

Performance Checks

- Supply and return air temperature measurement
- Compressor ampere reading
- Gas pressure verification
- Airflow checking

3.2 Jet / Wet Service Scope

Wet servicing shall be carried out periodically or as instructed by Engineer-in-Charge.

The scope shall include:

Indoor Unit Wet Service

- Complete dismantling of filters and blower assembly
- High-pressure water jet cleaning of evaporator coil
- Cleaning of blower wheel using chemical solution
- Drain tray cleaning and disinfecting
- Drain pipe flushing using pressure pump
- Cleaning of casing and louvers

Outdoor Unit Wet Service

- High-pressure jet cleaning of condenser coil
- Removal of dust, debris, and oil deposits
- Straightening of condenser fins where required
- Cleaning fan blades and motor housing

Testing After Wet Service

- Refrigerant pressure testing
- Cooling performance testing
- Current and voltage measurement
- Checking air throw and airflow
- Noise and vibration inspection

3.3 Breakdown Maintenance Scope

The AMC contractor shall attend all breakdown complaints during contract period.

Included Activities

- Fault diagnosis
- Minor repairs and adjustments
- Electrical fault rectification
- Replacement of minor consumables
- Gas leakage identification
- Drain choking rectification
- Compressor overload resetting
- PCB troubleshooting

Response Time

- Complaint attendance within 24 hours
- Emergency breakdown attendance within 4–6 hours
- Critical areas shall be attended on priority basis

4. Safety Requirements

The contractor shall comply with all safety regulations during AMC work.

- Power supply shall be isolated before maintenance.
- Proper ladders and insulated tools shall be used.
- Refrigerant handling shall comply with environmental norms.
- No damage shall be caused to Institute property during servicing.

5. Documentation & Reporting

The contractor shall maintain the following records:

- Service reports for each visit
- Gas charging records
- Breakdown complaint register
- Preventive maintenance checklist

- Equipment history card
- Spare replacement details
- Shall keep all photographic records

Service reports shall be signed by the department representative after completion of work.

6. Warranty for Replaced Parts

- All replaced spare parts shall carry minimum 6 months warranty or OEM warranty, whichever is higher.
- Defective replacement during warranty period shall be done free of cost.
- Only genuine OEM spares shall be accepted for critical components like PCB, compressor, and fan motor.

7. Warranty for Repaired AC Units & Replaced Spare Parts

- Minimum 06 months warranty shall be provided for all repaired AC units and replaced spare parts.
- If the same fault reoccurs during the warranty period, the contractor shall repair/replace the defective part without any extra cost to the Institute.
- No labour, service, transportation, or material charges shall be claimed during the warranty period.
- All removed defective spare parts shall be deposited with the Maintenance Section.
- Replacement of major spare parts shall be carried out only after prior approval from the Engineer-in-Charge.
- Only new and approved make/OEM spare parts shall be used.
- Newly replaced spare parts shall be properly marked with date of replacement and warranty expiry date by the contractor.