



प्रशीतन एवं वातानुकूलन प्रयोगशाला

Refrigeration and Air Conditioning Lab

Major Equipments:

- Air water heat pump
- Mechanical heat pump
- Refrigeration test rig
- Cold storage test rig
- Evaporative cooling tower
- Air conditioning test rig
- Vapour absorption refrigeration system
- Vapour compression refrigeration trainer
- Cold storage trainer
- Air conditioning test rig
- Cut suction various transmission



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प्रशीतन एवं वातानुकूलन प्रयोगशाला Refrigeration & Air conditioning

SAFETY AND SECURITY RULES TO BE FOLLOWED IN LABORATORY:

1. Always wear shoes before entering in the lab.
2. Do not touch anything without the permission of instructor/ lab assistant.
3. Read carefully the lab manual before performing experiments.
4. Do not tamper measuring instruments.
5. Do not open the casing of the equipment.
6. Switch off the power supply to the experimental setup on completion of the experiment.
7. Maintain clean and orderly laboratories and work area.
8. Be aware of the various experiment controls (start button, stop button, speed control) for each experiments.
9. Do not leave experiments running unattended.
10. Any injuries should be reported immediately for proper care.

GENERAL INSTRUCTIONS

1. Enter lab with closed footwear.
2. Boys should tuck in the shirts.
3. Long hair should be protected, let it not be loose specially near rotating machineries.
4. Any other machines/ equipments should not be operated other than the prescribed one for that day.
5. Power supply to your test table should be obtained only through the lab technician/ instructor.
6. Read carefully the lab manual before performing experiments.
7. Do not lean and do not be close to the rotating components.
8. Tools, apparatus and gauge sets are to be returned before leaving the laboratory.
9. Headings and detail should be neatly written:
 - (i) Aim of the Experiment.
 - (ii) Apparatus/Tools/Instruments Required.
 - (iii) Procedure / Theory / Algorithm/ Program.
 - (iv) Model Calculations.
 - (v) Neat Diagram/ Flowcharts.
 - (vi) Specification / Design Details.
 - (vii) Tabulation.
 - (viii) Graph.
 - (ix) Result / Discussions.
10. Before doing the experiment, the student should get the circuit/ program approval by the faculty in charge.
11. Experiment date should be written in the appropriate place.
12. After completing the experiments the answer to the viva voice questions should be neatly written in the workbook.



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(BMEL/BAUL-702)

List of Experiment:

1. Demonstration of fundamental study of Absorption Refrigeration System.
2. Performance of Ice-Candy unit.
3. Demonstration of C.O.P. and Performance of Air-Conditioner.
4. Demonstration of fundamental study of Vapour Compression cycle
5. Determination of C.O.P. in Vapour compression Refrigeration system.
6. Demonstration of Electrolux Refrigerator.
7. Equipment and controls of Refrigeration System.
8. Equipment and controls of Air Conditioning System.
9. Demonstration of C.O.P. and other performance parameters for Mech. Heat Pump.
10. Demonstration of C.O.P. and other performance parameters for Air water Heat Pump.