



Technology Centre for Godrej

Syllabus

- 1. INTRODUCTION (4 Hours)**
Introduction to Refrigeration and air conditioning-Domestic refrigerator and Air coolers, Air-Conditioner –circuit diagram, types and principle of operation.
Lab session-1 (5 Hours)
Basic refrigeration and air conditioning, Study of refrigeration repairs
- 2. BASICS OF REFRIGERATION (4 Hours)**
Unit of Refrigeration and COP- Ideal cycles- Refrigerants Properties – Classification-ODP and GWP.
Lab session-2 (4 Hours)
Determination of COP of medium and low temperature systems, Determine the capacity and actual COP of a refrigeration unit
- 3. OTHER REFRIGERATION SYSTEM (4 Hours)**
Working principle of Vapour absorption systems and absorption cooling system-Steam jet refrigeration-Eject refrigeration systems-Thermoelectric refrigeration-Air refrigeration
Lab session-3 (5 Hours)
Different type of evaporates used in refrigeration system, Charging refrigerant in the system,
- 4. AIR CONDITIONING SYSTEMS (4 Hours)**
Air-Conditioning-Types of air conditioning systems- Windows, Split, packaged, centralized-installation procedure – selection of A/C systems -Central air conditioning system – Unitary air conditioning systems – classification, remote air conditioning unit system,
Lab session-4 (5 Hours)
To determine efficiency of a fan or blower, To determine the capacity of cooling coil, Study of Window air conditioner.

5. REFRIGERATION AND AIR CONDITIONING APPLICATIONS (5 Hours)

Refrigeration Applications – Domestic refrigeration, commercial refrigeration, Industrial refrigeration, Marine refrigeration and transportation refrigeration.

Air conditioning application in Railways: Location of different air conditioning equipment, types of power system used in axle driven system, engine driven compressor system electro mechanical system.

Lab session-5 (4 Hours)

Refrigeration test rig with provision for AEV, TEV

Air conditioning test rig with provision for cut off

Sources Extracted From:

1. All India Council for Technical Education Nelson Mandela Marg, New Delhi
2. State Board Of Technical Education & Training, Tamilnadu Diploma In Engineering (M-Scheme).