32086 – REFRIGERATION AND AIRCONDITIONING PRACTICAL

DETAILED SYLLABUS

OBJECTIVES

- Identify the various tools used in R & AC
- Demonstrate the construction and working of window air conditioner
- Demonstrate the construction and working of split type air conditioner
- Set parameters for comfortable operation of an air conditioner.
- Determine the C.O.P of air conditioner.
- Determine the capacity of window air conditioner.
- Describe the wiring of refrigerator and coolers.
- Perform servicing on air conditioner.

PART- A

1. BASIC REFRIGERATION WORKSHOP OPERATION
   a) Copper and steel tubing
      - To study the various sizes of copper and steel tubing.
      - To study the various tools used for operations.
      - To become familiar with various operations on copper and steel tubing–Flaring, Swaging.
   b) Soldering methods used in R& A.C
2. TO STUDY THE CONSTRUCTION FEATURES OF THE FOLLOWING:
   a) Domestic refrigerators
   b) Water coolers
   c) Window Air Conditioner
   d) Split Type Air-Conditioner
3. PROPER METHODS OF SETTING AND ADJUSTING OF
   a) Thermostats
   b) Low pressure and high pressure cut-outs
   c) Thermostatic expansion valve
   d) Automatic Expansion Valve

PART-B

TEST PROCEDURES

1. To determine the refrigerating effect, C.O.P and the compressor capacity of a open type system with Thermostatic expansion valve, Capillary tube, Automatic Expansion Valve
2. To determine the C.O.P of sealed system by using electrical measurements To determine the capacity of a window air conditioner. To determine the efficiency of a cooling tower. Wiring of refrigerator, water cooler, desert cooler, room air conditioner –packaged air conditioner, panel board etc.

SERVICE PROCEDURES

1. To change refrigerant into service cylinder from storage cylinder.
2. To evaluate the entire system
3. To Pump down the system
4. To Purge air from the system
5. To locate the leaks in a system.
6. To charge the system
7. To check the oil level in the compressor.
8. Tracing the common faults in R& A.C units and their remedies.