

## SYLLABUS for Refrigeration and Air Conditioning (RAC)

SL NO	TOPIC
1	Fundamentals & basics of Window AC, Split AC, Centralized AC, ASHRAE guidelines & standards different types of refrigerants, basic refrigeration cycle
2	Vapour compression system, vapour absorption system, basic air conditioning components, centralized air conditioning & its parts
3	Study the function and working of Common Tools, RAC Tools, Cutting Tools, Power Tools, Consumable Tools
4	Learn the specification and types of refrigerator
5	Study about different refrigerant used in refrigerator
6	Study the different types of motors used in refrigerator
7	To study electric controls used in Refrigeration & Air Conditioning
8	To study electrical circuits used in refrigerator and trace the faults in refrigerator electrical controls
9	To study the open circuit, short circuit and earth testing
10	To study the different types of motors used in refrigerator
11	To study the different types of relays, OLP (over load protector), thermostat, heaters, fan, Timer used in refrigerator
12	To measure the current, voltage, resistance, temperature and pressure
13	Function, working, application of Door switch, Defrost heater, timer, Bimetal thermo
14	Study the electrical circuits used in No Frost Double Door refrigerator
15	Trace the electrical controls faults in Frost free Double Door refrigerator
16	Study about the trouble shooting in refrigerator
17	Study the different types of relays, OLP (over load protector), thermostat, fan, Capacitors, oscillating motors in window and split A.C.
18	Study compressor, condenser, capillary tube, drier, and evaporator
19	Study the trouble shooting in Air Conditioners

### Practice:

1. Familiarization of Air conditioning tools, Instruments & Equipment.
2. Tube cutting, bending, flaring, swaging, brazing, welding.
3. Check open circuit, short circuit and earth of three phase motors.

### Practice:

1. Check relay, OLP, thermostat, motors, low pressure and high pressure, Capacitors.
2. Check the wiring circuit of Window and Split Air Conditioner.
3. Identify the trouble and rectification.
4. Flushing Condenser and Evaporator.

### Practice:

1. Leak Testing, Evacuation, Gas Charging in Refrigerator, WAC & SAC
2. Servicing & installation of Refrigerator, WAC & SAC

3. Check the performance of Refrigerator, WAC & SAC