

## **AC and Refrigeration Course Syllabus:**

- Basic Electronics - Electricity concepts , Active and Passive Electronic components working and troubleshooting
- Electricity - Single phase , 3 phase concepts , current , voltage and power rating concepts , HP , KW and Current Unit calculations
- Electrical control panel , valves , pressure gauge , circuit breaker , isolator , fuse and switcher , electrical and electronics meters
- Introduction to AC & Refrigeration systems , their usage
- Introduction to Refrigeration cycle , Identification of Refrigeration cycle and components , high medium and low temperature application machine , Refrigeration piping concepts , identification of tubes , pipes , joints , lubricant , refrigerant gas cylinder and its use
- Different elements of a refrigerator - Compressor , condenser , evaporator , Expansion valve , Refrigerant and other related elements
- Function of Condenser , types of condensers and working concepts
- Function of Compressor , Working concepts and types
- Function of Evaporator , working concepts and types
- Thermal insulation and types.
- Working with electrical , electronic and pneumatic controls
- Motors used in refrigeration and air conditioning system, types, construction
- Introduction to domestic and industrial refrigeration and airconditioning.
- Airconditioners - Domestic - Windows & Split , Commercial Airconditioners
- Types of Air Conditioning Systems - Window Air Conditioner , Split Air Conditioner , Packaged Air Conditioner , Packaged Air Conditioners with Air Cooled

## Condensers , & Water Cooled Condenser , Central Air Conditioning Plants

- Different types of Multi type Indoor units and outdoor units in commercial airconditioners , Ceiling Mounted Cassette type , Compact Multiflowtype , Duction Type , Suspended type , floor standing types
- Servicing and maintenance of Windows AC ,Testing the mechanical and electrical system for fault rectification and Installation of Window AC
- Servicing and maintenance of Split AC , Safety Aspects , leak testing , evacuation , gas charging , testing the performance , Installation of Split A/C
- Windows & Split A/C , Advanced troubleshooting procedures , maintenance procedures
- Refrigerator types - Single Door , Multidoor ,Side by side , Bottom freezer type , Digital inverter technology based refrigerators
- Refrigerator Servicing , Troubleshooting and Maintenance - Handling gas cylinders , repair of leaky cylinder , to charge the refrigeration oil and re move oil , Testing evaporator coils for leak , choke & repairing and cleaning of fins , testing condenser coils for leak , choke and repairing , Electrical Wiring of airconditoner and refrigerator systems - compress motor with relays , controls , lights ,faults and remedies system , Refrigerator mechanical and electrical faults and their remedies
- VRV System , Indoor Unit Installation , VRV Outdoor Unit installation , VRV Drain Piping concepts , Maintenance and troubleshooting