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#### 32183 - AUTOMOBILE AIRCONDITIONING SYSTEM

**DETAILED SYLLABUS** 

#### UNIT- I AIRCONDITIONING FUNDAMENTALS

Basic air-conditioning system –Location of air-conditioning components in a car- Schematic layout of a refrigeration system. Compressor components –Condenser and high pressure service ports. Thermostatic expansion valve-expansion valve calibration – controlling evaporator temperature-evaporator pressure regulator – Evaporator temperature regulator.

## **UNIT- II AIRCONDITIONER HEATING SYSTEM**

Automotive heaters – manually controlled air conditioner-Heater system-ford automatically controlled air conditioner and heating system – Automatic temperature control – Air-condition protection – Engine protection.

#### **UNIT-III REFRIGERANTS**

Refrigerant Classification, Designation, Alternative Refrigerants, Global Warming Potential & Ozone Depleting Potential aspects. Handling of Refrigerants.

### **UNIT-IV AIR ROUTING & TEMPERATURE CONTROL**

Objectives-Evaporator care airflow through the dash board recirculation unit. Automatic temperature control – Duct system – Controlling flow – Vacuum reverse – Testing the air control and handling systems.

#### **UMIT- V TROUBLE SHOOTING AND SERVICE**

Causes of air conditioner failure – Trouble shooting of air controlling system – Air conditioner maintenance and service – Servicing heater system. Removing and replacing components – leak testing Compressor service.

#### **TEXT BOOK**

1. William H Crouse and Donald L Anglin, Automotive air conditioning. McGraw-Hill Inc., 1990.

## **REFERENCE BOOKS**

- 1. Dwiggins, Automotive Air Conditioning, Thomson Asia, 2002
- 2. Mitchell information services, Inc., Mitchel Automatic Heating and air conditioning systems,

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- 3. Paul Weiser, Automotive Airconditioning, Reston Publishing Co Inc., 1978.
- 4. Mac Donald. K.L, Automotive Airconditioning, Theodore Audel Series, 1978.
- 5. Goings. L.F., Automotive air conditioning, American Technical Services, 1974.