

<b>6<sup>th</sup> Semester</b>	<b>RME6D001</b>	<b>Automotive Air Conditioning Systems</b>	<b>L-T-P 3-0-0</b>	<b>3 Credits</b>
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**MODULE I (09 HOURS)**

**Air Conditioning 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.

**MODULE II (09 HOURS)**

**Air Conditioning – Heating System**

Automotive heaters – Manually controlled air conditioner – Heater system – Ford automatically controlled air conditioner and heater systems – Automatic temperature control – Air conditioning protection – Engine protection.

**MODULE III (08 HOURS)**

**Refrigerants:** Introduction, classification, properties, selection criteria, commonly used refrigerants, eco-friendly refrigerants, global warming and ozone forming potential of refrigerants, containers, handling of refrigerants.

**MODULE IV (08 HOURS)**

**Air Routing & Temperature Control**

Objectives – Evaporator care air flow through the dash re-circulating unit – Automatic temperature control – Duct system – Controlling flow – Vacuum reserve – Testing the air control and handling systems.

**Books:**

- [1] William H Crouse And Donald L Anglin, Automotive Air Conditioning, McGraw Hill Inc, 1990.
- [2] Mitchell Information Services, Inc., Mitchell Automatic Heating And Air Conditioning Systems, Prentice Hall Inc., 1989.
- [3] Paul Weisler, Automotive Air Conditioning, Reston Publishing Co Inc.1990.
- [4] Refrigeration and Air Conditioning by R.C. Arora , PHI Publication
- [5] Basic Refrigeration and Air Conditioning by P. N. Ananthanarayanan, Tata McGraw-Hill Education, 2013