

Code No: R42245

**R10**

**Set No. 1**

**IV B.Tech II Semester Supplementary Examinations, July - 2014**

**AUTOMOTIVE AIR CONDITIONING**

**(Automobile Engineering)**

**Time : 3 hours**

**Max. Marks: 75**

**Answer any Five Questions**

**All Questions carry equal marks**

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- 1 a) Explain the importance of air conditioning in an automobile and write its requirements. [7]  
b) What is accumulator? What is its importance in a refrigeration system? Explain its working with a neat sketch [8]
- 2 What are the components of Automotive Air conditioning system? Explain their functioning and importance with neat sketches [15]
- 3 a) Explain how air conditioning system can be protected from the engine heat in an automobile. [8]  
b) With a neat sketch explain the working of any one type of heater systems [7]
- 4 a) What is the importance of Ventilation? Explain about any one type of ventilation system. [8]  
b) Explain how Air conditioning load affect the engine performance. Is it necessary to switch off AC while starting the engine? If so explain why. [7]
- 5 a) Explain about the air distribution system used in automobile air conditioning system [8]  
b) Discuss on the recent advancements in automotive air conditioning design. [7]
- 6 a) Explain how automatic temperature control system works in an automotive air conditioning [8]  
b) What is a refrigerant? Which is the best refrigerant used now a days in automotive air conditioning. Explain its properties. [7]
- 7 a) Explain the working of humidistat and control dampers. [8]  
b) Explain how trouble shooting is done for automotive air conditioning system [7]
- 8 What is meant by charging and evacuation? Explain how charging and evacuation done for automotive air conditioning. [15]