

III B.Tech II Semester Supplementary Examinations, November/December 2005  
**AUTOMOBILE ENGINEERING**  
( Common to Mechanical Engineering, Mechatronics and Production Engineering)

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

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1. Sketch a chassis of any four wheeler and mark various parts on it. Explain the functions of various components of automobile. [6+10]
2. (a) Give the basic components of fuel system in a petrol engine and describe the functions of each. [8+8]  
(b) Explain the working of a A. C. mechanical fuel pump.
3. (a) Explain the working of Dole thermostat. [8+8]  
(b) What are the advantages of water cooling system over air cooling system.
4. (a) Explain the constructional features of any one type of auto transformer. [8+8]  
(b) Sketch & name the parts of a spark plug.
5. (a) What is the necessity for dipper provided in Headlights and how is it accomplished. [8+8]  
(b) What are the various types of head lamps? Give details.
6. (a) What is the purpose of a gearbox? [6+6+4]  
(b) Discuss the common troubles in the functioning of clutches and suggest suitable remedies.  
(c) What are materials used for clutch facings.
7. (a) What are the types of suspension system. [6+10]  
(b) Sketch and explain the construction and working of wishbone type independent front suspension used on any Indian vehicle.
8. (a) Compare disc brakes with drum-type brakes in regard to construction and operation. [10+6]  
(b) Describe the working of master cylinder.

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