

Automobile Engineering (New)
(ME-305, Dec. 2005)

Time: 3 Hours

Max. Marks: 60

Note: Question No. 1 is compulsory. Attempt any four questions from section B and two questions from section C.

Section-A

1. (a) What is the main advantage of a four wheel drive vehicle?
(b) What is the function of a ring compressor?
(c) What is the air fuel requirement for maximum power and maximum efficiency?
(d) What are the main requirements of an injector nozzle?
(e) What are primary and secondary filters in lubrication system?
(f) What is the function of a shackle with leaf spring?
(g) What is the function of a coolant pump?
(h) Name the main components of an automatic transmission.
(i) What are primary and secondary breakers?
(j) Differentiate between coil and magnetic ignition system.

Section-B

2. How does an automobile contribute towards pollution of the atmosphere? What is crank case ventilation and how is it achieved?
3. Explain briefly the commonly used oil additives.
4. Describe the construction and operation of a differential with the help of a neat sketch.
5. Discuss in detail the various factors affecting Tyre life.
6. Discuss the construction of a radiator with the help of a neat sketch.

Section-C

7. Describe the battery ignition system used in an automobile with the help of a neat sketch.
8. How gear boxes are classified? Describe the third gear position in a single sliding mesh gear box with the help of a neat sketch.
9. Write short notes on:
 - (a) Wheel alignment
 - (b) Preventive maintenance of vehicle