

PSG POLYTECHNIC COLLEGE, COIMBATORE - 641 004

DIPLOMA EVEN SEMESTER EXAMINATIONS – APR 2014

B12402 AUTOMOBILE ENGINES**MODEL QUESTION PAPER****Time : 3 Hours****Max.Marks: 100****Instructions:**

1. **Group A** and **Group B** questions should be answered in the Main Answer book.
2. Answer any **TEN** questions in **Group A**. Each question carries two marks.
3. Answer **ALL** questions either **(a)** subdivision or **(b)** subdivision in **Group B**. Each question carries 14 marks.

Group – A**Marks: 10 x 3 = 30**

1. State the functions of oil pan.
2. Compare dry liner and wet liner.
3. Write the functions of crankshaft and cam shaft.
4. Define detonation.
5. What is pre-ignition?
6. What is cetane number?
7. State the necessities for cooling of an engine.
8. Mention the advantages of using pressure cap on the radiator filler neck.
9. List the properties needed for lubricating oil.
10. Draw a simple layout for fuel feed system in petrol engine.
11. What are the functions of carburetor?
12. Mention the advantages of port injection in SI engine.
13. What is CRDI? Write its advantages.
14. List the functions of injector.
15. What are the purposes of governors used in diesel engines?

Group– B**Marks: 5 x 14 = 70**

16. a) Describe clearly the functions and constructions of crankshaft and connecting rod with neat sketches.

(OR)

- b) With the help of a neat sketch, explain the constructional features and working of side valve mechanism.
17. a) Describe the features of any two shapes of combustion chambers for petrol engines with the help of neat sketches.

(OR)

- b) Explain the stages of combustion in diesel engine with the help of a neat graph.

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18. a) What is the necessity of using thermostat in the engine? Describe the construction and working of wax type thermostat with the help of simple sketch.

(OR)

b) What are the types of lubricating system? Explain the working of pressure lubrication system with a neat sketch.

19. a) With the help of neat sketch, explain the construction and working of AC Mechanical fuel pump.

(OR)

b) Describe the construction and working of MPFI system with a simple layout and write its advantages.

20. a) Explain the construction and working of inline injection pump with the help of neat sketch.

(OR)

b) Explain the constructional features of different types of nozzles with neat sketches.

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