

CBCS Scheme

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Fourth Semester B.E. Degree Examination, June/July 2018 Automotive Engines

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. What is an Engine? Write the classification of I.C engine with neat sketches. (08 Marks)
b. Explain the construction and working of Four stroke spark ignition engine. (08 Marks)

OR

- 2 a. With the help of a neat sketch, explain the construction and working of Four stroke compression Ignition Engine. (08 Marks)
b. Write the Theoretical and Actual valve timing diagram for a four stroke S-I engine and explain. (08 Marks)

Module-2

- 3 a. Explain with a neat sketch construction and working of a simple carburetor. (08 Marks)
b. Write the Air – fuel ratio requirements of SI Engine. (08 Marks)

OR

- 4 a. With the help of a neat sketch, explain CRDI (Common Rail Diesel Injection) system. (08 Marks)
b. Write a short notes on : i) Types of Nozzles ii) Types of governor (08 Marks)

Module-3

- 5 a. Explain the stages of combustion in C.I engine. (08 Marks)
b. Write the factors affecting Ignition lag in SI engine and explain. (08 Marks)

OR

- 6 a. Explain the stages of combustion in SI engine. (08 Marks)
b. Write the factors affecting Delay period in CI engine and explain. (08 Marks)

Module-4

- 7 a. With a neat sketch explain the Turbocharger with inter cooler. (08 Marks)
b. Explain the working of Forced circulation cooling system with neat sketch. (08 Marks)

OR

- 8 a. Explain with a neat sketch waste gate system used in a turbo-charge. (08 Marks)
b. Write the properties of coolants and explain in brief. (08 Marks)

Module-5

- 9 a. Explain the construction and working of pressure feed lubrication system. (08 Marks)
b. Explain the properties of lubricants. (08 Marks)

OR

- 10 a. Explain with neat sketch splash lubrication. (08 Marks)
b. Explain with neat sketch mist lubrication system. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.