

CBCS SCHEME

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15AU561

Fifth Semester B.E. Degree Examination, Dec.2018/Jan.2019 Automobile Engineering

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. With a help of PV diagram, explain the construction and working of a four stroke SI engine. (08 Marks)
b. Explain the working of a side valve operating mechanism with a neat sketch. (08 Marks)

OR

- 2 a. Explain in detail combustion chambers used for SI engines. (08 Marks)
b. Discuss the construction and working of thermosyphon cooling system with a help of sketch. (08 Marks)

Module-2

- 3 a. Explain any 05 physical and chemical properties of SI engine fuels and CI engine fuels. (10 Marks)
b. Discuss the A/F mixture requirements at different load and speeds for an IC engine. (06 Marks)

OR

- 4 a. What do you mean by compensating devices in carburetor? Explain any two in detail. (10 Marks)
b. Explain with a neat sketch throttle body injection type of MPFI. (06 Marks)

Module-3

- 5 a. Explain battery ignition system with a neat sketch. (08 Marks)
b. Compare battery and magneto ignition system. (04 Marks)
c. Write a short note on firing order of engines. (04 Marks)

OR

- 6 a. Explain the construction and working of a single plate clutch. (08 Marks)
b. With a neat sketch describe the working of a synchromesh gear box. (08 Marks)

Module-4

- 7 a. Explain the construction and working of semi-floating and fully floating rear axle drive. (08 Marks)
b. What is the purpose of final drive? Explain the different types of final drive. (08 Marks)

OR

- 8 a. Briefly explain the various types of chassis frames. (08 Marks)
b. Explain the following :
i) Worm and sector steering gear ii) Recirculating ball type steering gear. (08 Marks)

Module-5

- 9 a. With a neat sketch explain the construction and working of a telescopic type shock absorber. (08 Marks)
b. Discuss the purpose and operation of ABS. (08 Marks)

OR

- 10 a. What are the constituents of exhaust gas and sources of pollutants from IC engine? (08 Marks)
b. With neat sketch explain the working of catalytic converter. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.