

CBCS SCHEME

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15AU561

Fifth Semester B.E. Degree Examination, June/July 2018 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 neat sketches, explain the expansion control methods used in pistons. (08 Marks)
b. Explain with sketches, the different types of combustion chambers used in SI engines. (08 Marks)

OR

- 2 a. Explain, how the valve timing of a two stroke cycle engine differ from that of four stroke engine with suitable diagram (SI engines) (08 Marks)
b. What are the requirements of a good cooling system? Differentiate between air cooling and water cooling. (08 Marks)

Module-2

- 3 a. What is octane number? Explain the methods of finding octane rating of fuels. (08 Marks)
b. Explain with suitable graphs the mixture requirements for SI engines (Air petrol mixture properties). (08 Marks)

OR

- 4 a. With a neat sketch explain the working principle of SU carburetor. (08 Marks)
b. With a block diagram explain the working principle of Multipoint Fuel Injection System (MPFI). (08 Marks)

Module-3

- 5 a. Describe the working principle of Battery ignition system with a circuit diagram. (08 Marks)
b. Differentiate between Battery ignition system and Magneto ignition systems. (08 Marks)

OR

- 6 a. Explain with a neat sketch, working principle of a single plate clutch. (08 Marks)
b. With a neat sketch explain the working principle of synchronizer unit used in synchromesh gearbox. (08 Marks)

Module-4

- 7 a. Describe the construction and working of a differential with neat sketch. (08 Marks)
b. Explain the following : i) Camber ii) Caster
iii) Kingpin inclination iv) Toe-in and Toe-out. (08 Marks)

OR

- 8 a. Explain with a neat sketch, the working of a recirculating ball type steering gear. (08 Marks)
b. Briefly explain the classification of chassis. (08 Marks)

Module-5

- 9 a. What are the good requirements of a suspension system and mention the advantages of independent front suspension. (08 Marks)
b. With a block diagram, explain the operation of antilock – braking system. (08 Marks)

OR

- 10 a. With a neat sketch, explain positive crankcase ventilation. (08 Marks)
b. Explain with a block diagram the catalytic converter package. (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.