

CBCS SCHEME

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18AU651

Sixth Semester B.E. Degree Examination, Dec.2023/Jan.2024 Automobile Engineering

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. With a neat sketch, explain the working of a Compression Ignition Engines. (12 Marks)
b. Give the detailed comparison between SI engines and CI engines. (08 Marks)

OR

- 2 a. With a neat sketch, explain the valve timing diagram for a SI engine. (12 Marks)
b. What are the various cooling requirements? (08 Marks)

Module-2

- 3 a. With a neat sketch, explain the fuel mixture requirements for SI engines. (10 Marks)
b. Discuss with neat sketch the construction and working of simple carburetor. (10 Marks)

OR

- 4 a. With a neat sketch, explain single point fuel injection systems. (10 Marks)
b. Discuss the working of a fuel injector with suitable figure. (10 Marks)

Module-3

- 5 a. Discuss with neat sketch, the concept of Battery ignition systems. (10 Marks)
b. Discuss with neat sketch the working of electronic ignition system. (10 Marks)

OR

- 6 a. With a neat sketch, explain the constructional features of a single plate clutch. (10 Marks)
b. With suitable figure discuss the working of synchromesh gear box. (10 Marks)

Module-4

- 7 a. Discuss the working principle of differential of an automobile with relevant figure. (10 Marks)
b. Discuss any two types of rear axle with relevant sketch. (10 Marks)

OR

- 8 a. Discuss with neat sketch, any two types of chassis frame. (10 Marks)
b. Define the terms ; (i) King pin inclination (ii) Toe in and Toe out
(iii) Castor (iv) Camber
(v) Included angle (10 Marks)

Module-5

- 9 a. Discuss the operation of Antilock-braking system with suitable figure. (10 Marks)
b. Explain with neat sketch the working of independent suspension for front wheel. (10 Marks)

OR

- 10 a. Explain the concept of Exhaust Gas Recirculation with suitable figure. (10 Marks)
b. Explain the principle of Catalytic converter with relevant figure. (10 Marks)

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.