



CBGS SCHEME

18ME752

Seventh Semester B.E. Degree Examination, Jan./Feb. 2023 Automotive Engineering

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Compare Wet and Dry Liners with the help of diagrams. (10 Marks)
b. Sketch and explain any two types of combustion chambers of S.I Engine. (10 Marks)

OR

- 2 a. Why cooling of Engine is necessary? Sketch and explain Thermosiphon cooling system. (10 Marks)
b. Explain Dry sump lubrication system with the help of figure. (10 Marks)

Module-2

- 3 a. Explain the principle of Friction clutches and draw the diagram of cone clutch. (10 Marks)
b. Sketch and explain Hotchkiss Drive and Torque Tube Drive. (10 Marks)

OR

- 4 a. Sketch and explain Disc brake and Drum brake. (10 Marks)
b. Describe the Hydraulic Braking system with figure. (10 Marks)

Module-3

- 5 a. Define the following with figure
i) Camber ii) Caster iii) King pin inclination iv) Toe – In and Toe-out (10 Marks)
b. With the help of sketches, explain the working of leaf spring and coil springs. (10 Marks)

OR

- 6 a. Describe Battery Ignition system. (10 Marks)
b. Sketch and explain the Electronic Ignition system. (10 Marks)

Module-4

- 7 a. Distinguish between super charger and turbo charger and explain the working of centrifugal type of super charger with figure. (10 Marks)
b. Explain the Fuel mixture requirements for S.I Engines. Mention the limitations of simple carburetors. (10 Marks)

OR

- 8 a. Explain the normal and abnormal combustion in S.I. Engine with the help of pressure Vs crank angle diagram. (10 Marks)
b. Sketch and explain Common Rail Direct Injection System. (10 Marks)

Module-5

- 9 a. List the various pollutants and explain the measures to be taken to reduce pollution. Mention the effects of the pollution on human health. (10 Marks)
b. Sketch and explain closed crank case ventilation. (10 Marks)

OR

- 10 Write short notes on :
i) Catalytic converter ii) Emission standards iii) Exhaust Gas Recirculation
iv) Motor Vehicle Act Concerning to INSURANCE AGAINST THIRD PARTY RISKS. (20 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.