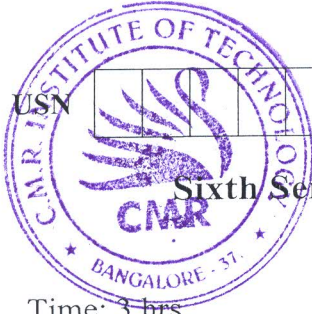


CBCS SCHEME



17ME655

Sixth Semester B.E. Degree Examination, June/July 2023 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. Explain the different types of the cylinder arrangements with the help of a neat sketch. (12 Marks)
- b. With the help of a neat sketch explain the Construction of dry and wet liners. Also differentiate between dry and wet liners. (08 Marks)

OR

- 2 a. Explain the process of pump circulation system with the help of neat sketch. Also mention the advantages of pump circulation system of cooling over Thermosyphon cooling system. (10 Marks)
- b. Mention the requirements of the lubrication system in an automobile engine and explain the process of splash lubrication system with the help of a diagram. (10 Marks)

Module-2

- 3 a. With the help of a neat sketch explain the working mechanism of multi plate clutch system. (10 Marks)
- b. What are the applications of fluid flywheel? Explain its working with the help of a neat sketch. (10 Marks)

OR

- 4 a. Explain the operation of a differential with the help of a neat sketch. (08 Marks)
- b. Mention the requirement of the brake system. (04 Marks)
- c. Explain the working principle of disc brake with the help of the diagram. (08 Marks)

Module-3

- 5 a. Explain the following steering geometry with the help of relevant diagrams. (12 Marks)
a) Camber. b) Castor. c) Toe in and Toe out
- b. How the hydraulic power steering works? Explain with the help of the diagram. (08 Marks)

OR

- 6 a. Explain the working principle of magneto Ignition system, with the help of a diagram. (10 Marks)
- b. How the independent front wheel suspension works? Explain with the help of diagram. Also mention its advantages and disadvantages. (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.

Module-4

- 7 a. Explain the process of supercharging with turbine, with the help of a neat diagram. Also mention its advantages and disadvantages. (10 Marks)
- b. Explain the working principle of Exhaust turbo charging with the help of a neat diagram. Also mention its limitations. (10 Marks)

OR

- 8 a. Write a short note on the different types of alternative fuels. (08 Marks)
- b. With the help of a neat sketch explain the following process of fuel injection system.
- a) Direct injection system.
- b) Port injection system.
- c) Throttle body injection system. (12 Marks)

Module-5

- 9 a. Explain the process of Exhaust gas Recirculation system. With the help of a neat diagram. (10 Marks)
- b. How the process of evaporative control system is used to control the evaporative emission? Explain with the help of a neat diagram. (10 Marks)

OR

- 10 a. Explain the process of positive crank case ventilation for controlling crank case ventilation, with the help of schematic diagram. (12 Marks)
- b. Write a short note on different emission standards followed in India. (08 Marks)
