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18AU651

Sixth Semester B.E. Degree Examination, July/August 2022
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 types of Combustion chambers for S.I. Engine and C.I. Engine, with neat diagrams. (10 Marks)
b. Describe the types of cylinder arrangements for IC engines. (10 Marks)

OR

- 2 a. Distinguish between S.I. Engine and C.I. Engine based on any 4 major parameters. (08 Marks)
b. Define Compression Ratio. Mention the compression ratios for SI and CI Engines. (04 Marks)
c. Discuss the types of cooling systems to cool the Engine. Explain the principle of Forced Circulation Cooling System. (08 Marks)

Module-2

- 3 a. Define Cetane number and Octane number. (04 Marks)
b. Discuss the Fuel mixture requirements for SI Engines, with the help of required graphs. (10 Marks)
c. Write a note on Alternative fuels. (06 Marks)

OR

- 4 a. Explain the various types of Fuel Injection Systems, with neat sketches. (10 Marks)
b. Explain the working and construction of S.U. Carburetor. (10 Marks)

Module-3

- 5 a. Explain Magneto Ignition System, with neat sketch. (10 Marks)
b. Explain the constructional details of Single Plate Clutch, with a neat sketch. (10 Marks)

OR

- 6 a. Explain Electronic and Automatic Ignition System. (10 Marks)
b. Explain Planetary Gear System, with a neat sketch. (10 Marks)

Module-4

- 7 a. Explain the terms : i) Camber ii) Castor iii) Toe in iv) Toe out v) King pin Inclination. (10 Marks)
b. Explain the types of Propeller shaft, with neat sketches. (10 Marks)

OR

- 8 a. Explain : i) Power Steering ii) Universal joints. (10 Marks)
b. Explain the types of Chassis frames. (10 Marks)

Module-5

- 9 a. Explain any two types of Independent Suspension for rear wheels. (10 Marks)
b. Explain Mechanical and Hydraulic Braking Systems. (10 Marks)

OR

- 10 a. Explain Exhaust Gas Recirculation and list its advantages. (10 Marks)
b. What is a Catalytic Converter? Explain with neat diagram. (10 Marks)

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