



CBCS SCHEME

17AU561

Fifth Semester B.E. Degree Examination, Dec.2019/Jan.2020 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. Differentiate the spark ignition and compression ignition engines. (10 Marks)
b. With neat diagram, explain the valve timing diagrams of CI and SI engines. (10 Marks)

OR

- 2 a. List out 10 engine components and write their functions. (10 Marks)
b. Briefly explain the 'need of cooling' in engine, what are consequences of temperature over the engine operation? (10 Marks)

Module-2

- 3 a. What are the conventional fuels? Mention their advantages and disadvantages. (10 Marks)
b. Explain any 2 alternative fuels of IC engines. (10 Marks)

OR

- 4 a. Write a neat diagram, explain the working of SU carburetor. (10 Marks)
b. Explain the different types of fuel injection systems. (10 Marks)

Module-3

- 5 a. Explain the working of Magneto ignition system with neat diagram. (10 Marks)
b. Explain Automatic ignition advance system with block diagram. (10 Marks)

OR

- 6 a. Explain the construction and working of "Multiplate Clutch". (10 Marks)
b. Write a short note on "Automatic Transmission". (05 Marks)
c. Write a short note on "Necessity for gear ratios in transmission". (05 Marks)

Module-4

- 7 a. Write neat diagram, explain the different types of drive shafts used in automobiles. (10 Marks)
b. Explain the following :
i) Caster ii) Camber iii) Kingpin inclination iv) Toe - in v) Toe - out. (10 Marks)

OR

- 8 a. With neat diagram, explain the working of hydraulic operated power steering system. (10 Marks)
b. List the different types of chassis frames and explain any two briefly. (10 Marks)

Module-5

- 9 a. Write a short note on 'Independent Suspension System'. (05 Marks)
b. Write a short note on 'Requirements of Suspension System'. (05 Marks)
c. With neat diagram, explain the construction and working of Disk brakes. (10 Marks)

OR

- 10 a. Explain the working of "Catalytic Converter". With neat diagram. (10 Marks)
b. Write a short note on "Emission Standards" (05 Marks)
c. Write a short note on "Positive Crankcase Ventilation". (05 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.