

CBGS SCHEME



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18AU743

Seventh Semester B.E. Degree Examination, Dec.2023/Jan.2024

Two and Three Wheeled Vehicles

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Why scooters are not preferred for long journeys? Also explain layout of scooter with sketch. (10 Marks)
- b. Briefly explain basic systems used for build a two wheeler. (10 Marks)

OR

- 2 a. Explain various factors which affect road-holding characteristics. (08 Marks)
- b. Explain factors affecting vehicle stability. (06 Marks)
- c. Explain the various performance measurements carried out for two wheelers? Explain. (06 Marks)

Module-2

- 3 a. State the limitations of a simple carburetor. Also explain various circuits used in modern carburetors. (10 Marks)
- b. Why dry sump lubrication system is preferred in high performance two wheelers? Explain working of dry sump lubrication system with sketch. (10 Marks)

OR

- 4 a. With neat diagram, explain oil cooling system. (06 Marks)
- b. Explain battery ignition system with neat sketch. (08 Marks)
- c. Explain construction and working of spark plug with neat sketch. (06 Marks)

Module-3

- 5 a. Explain chain-sprocket mechanism as a primary driver. (06 Marks)
- b. Explain construction and working of a multiplate clutch with diagram. (08 Marks)
- c. Describe cam-type clutch release mechanism used for multi-plate clutch. (06 Marks)

OR

- 6 a. Explain mesh gear-box with ball lock type mechanism. (08 Marks)
- b. Explain with neat sketch foot operated gear shifting mechanism. (06 Marks)
- c. Explain construction and working of shaft drive. (06 Marks)

Module-4

- 7 a. With neat sketch, explain various components of a conventional frame. (08 Marks)
- b. Sketch and explain the construction and working of shock absorber. (06 Marks)
- c. Explain with sketch, the front fork and suspension system of 2-wheeler. (06 Marks)

OR

- 8 a. Explain disc wheel and light alloy cast wheel, with neat diagram. (06 Marks)
- b. Explain drum brake system with neat sketch. (06 Marks)
- c. Explain various types of tyre with diagram. (08 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.

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Module-5

- 9 a. Explain the general layout of passenger auto-rickshaw. (08 Marks)
b. Explain the drive train layout for loading auto-rickshaw. (06 Marks)
c. Explain swing arm suspension used in auto-rickshaw. (06 Marks)

OR

- 10 a. List and explain the types of maintenance. Also explain importance of maintenance. (10 Marks)
b. Describe the decarburizing procedure for engine and silencer. (10 Marks)
