

B.E. Mechanical Engineering (Model Curriculum) Semester-VII  
**OEC-4011 - Automobile Engineering**

P. Pages : 2

Time : Three Hours



**GUG/W/23/14268**

Max. Marks : 80

- Notes :
1. All questions carry equal marks.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Assume suitable data wherever necessary.
  4. Illustrate your answers wherever necessary with the help of neat sketches.
  5. Solve: Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, Q.9 or Q.10.

1. a) Define 'an automobile'. Name major components of an automobile. Explain any two of them in brief. 8
- b) How to classify automobile? Name important transport vehicles and describe the salient features of each. 4
- c) Draw and explain the various types of general layout of chassis. 4

**OR**

2. a) What's the main function of the air bag? Material of Airbags? Working of air bag. 8
- b) What is the biggest challenge facing the auto industry? What factors affect the automobile industry? 4
- c) What's the main function of the Traction Control? Working of Traction Control. 4
3. a) What is of the necessity of clutch in automobile? Demonstrate the construction and working single plate clutch with neat sketch. 8
- b) Demonstrate with neat sketch construction and operation of a sliding mesh gear box. 8

**OR**

4. a) Illustrate the construction and working cone clutch with neat sketch. 8
- b) Explain with neat sketch gear selector mechanism. Explain the purpose of interlock device used in manual transmission. 8
5. a) Discuss the common sources of trouble in the propeller shaft and the rear axle. Describe the appropriate remedies in each case. 8
- b) How does a Hotchkiss drive differ from a torque tube drive? Explain with neat sketch torque tube and Hotchkiss drive. 8

**OR**

