

B.E. Mechanical Engineering Eighth Semester
MR8031 - Elective-II : Automobile Engineering

P. Pages : 2

Time : Three Hours



GUG/W/18/2071

Max. Marks : 80

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- Notes :
1. All questions carry marks as indicated.
 2. Answer Q. 1 OR 2, Q. 3 OR 4, Q. 5 OR 6, Q. 7 OR 8, and Q. 9 OR 10.
 3. Use of non-programmable calculators is permitted.

1. a) Define 'an Automobile'. How to classify automobile. Explain the various types of vehicle layout. 8
- b) Give the importance of lubrication system in an I. C. Engine. What are the various lubrication system used in I. C. Engine? Explain dry sump lubrication system with neat sketch. 8
- OR**
2. a) Explain with neat sketch construction and operation of a down draught carter carburetor. 8
- b) With neat sketch explain thermostatic controlled water cooling system. 8
3. a) Illustrate the construction and working of a single plate clutch with neat sketch. 8
- b) Explain with neat sketch gear selector mechanism. 8
- OR**
4. a) What are the drawbacks of a sliding mesh gear box? Explain with neat sketch construction and operation of a constant mesh gear box. Also explain how the clashing of dog clutch can be avoided while gear shifting. 8
- b) Explain 2WD and 4WD? Explain with neat sketch. The construction and working of transfer case gear box. 8
5. a) Explain with neat sketch construction and working of propeller shaft and universal joint? State the purpose of front and rear universal joints. 8
- b) Explain in brief with neat sketches the different types of live rear axles. 8
- OR**
6. a) Explain the necessity of differential in an automobile. Discuss in detail construction and working of a differential. 8
- b) List out the various types of brake system and explain with neat sketch the construction and operation of hydraulic brake system. 8

