

Total No. of Questions :8]

[Total No. of Printed Pages :2

Roll No .....

**ME-704 (GS)**  
**B.E. VII Semester**  
 Examination, December 2017  
**Grading System (GS)**  
**Automobile Engineering**  
*Time : Three Hours*

Maximum Marks : 70

**Note:** i) Answer any five questions. All questions carry equal marks.  
 ii) All parts of each question are to be attempted at one place.  
 iii) Draw neat and clean sketches/diagrams/figures wherever required

1. a) Explain classification of Vehicles along with examples.  
 b) Explain various resistances acting on a vehicle in motion.
2. a) Explain advantages and disadvantages of a passenger car with the engine mounted at the front and rear engine mounting with neat sketch.  
 b) What is driver visibility? Discuss methods to improve it.
3. a) Define:
  - i) Castor
  - ii) Camber
  - iii) Toe in and toe out
 State their effect on steering geometry with neat sketch.  
 b) Write a short note on Power steering.

[2]

4. a) With neat sketch explain construction and working of a single plate clutch.  
 b) Mention the types of manual gear box. Explain the working principle of sliding mesh gear box.
5. a) Designate the tyre with example. Differentiate between tube and tubeless tyre.  
 b) Explain the need of suspension system and state its objective.
6. a) State the function of battery and explain construction of automobile battery with sketch.  
 b) Explain Hotchkiss drive with a neat sketch.
7. a) State about fuel quality standards.  
 b) Give the comparison of following:
  - i) Cross ply-tyres and radial ply tyres
  - ii) Tubeless tyres and conventional tubed tyres.
8. Write short technical notes on following (any two):
  - a) Bleeding of brakes
  - b) Types of wheel rims
  - c) Catalytic converter
  - d) Euro norms

\*\*\*\*\*

377