

ME-704 (GS)

B.E. VII Semester

Examination, November 2018

Grading System (GS)

Automobile Engineering

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Explain the various types of chassis construction with the help of suitable diagram.
b) Explain open, semi integral and integral vehicle structure and their structure.
2. a) Define and explain:
 - i) Castor angle
 - ii) King pin inclination
 - iii) Toe-inb) Explain the construction and working of re-circulating ball steering gear box.
3. a) What are the features of a good quality Clutch? Explain the working of a multi plate clutch.
b) What purpose is served by a Gear Box? How are torque and Gear ratio related?

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4. a) Distinguish between the anti lock braking system and conventional braking system.
b) Explain briefly the elements of a suspension system and discuss the bouncing, rolling and pitching suspension movement of cars.
5. Write a brief note on:
 - a) Microprocessor based control system for automobile
 - b) Operation of lead acid battery
 - c) Wheel alignment
6. a) What purpose is served by a Catalytic convertor? Sketch and explain the working of a 3 way catalytic converter.
b) Discuss the Euro norms for pollution control.
7. a) Discuss advantages and disadvantages of front wheel drive vehicles over rear wheel drive vehicles.
b) What is the principle of operation of Hydraulic brakes? Discuss the main parts of hydraulic brakes.
8. Write a short note on the following:
 - a) Battery operated vehicles
 - b) Differential gear box
 - c) Fluid coupling

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