

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 2767 Roll No. 1003240015

B.Tech.

(SEM. VII) ODD SEMESTER THEORY
EXAMINATION 2013-14

AUTOMOBILE ENGINEERING

Time : 3 Hours

Total Marks : 100

Note :- Attempt all the questions. All questions carry equal marks.
Use suitable diagram wherever necessary.

1. Write short notes on any **four** parts of the following : (5×4=20)
 - (a) Firing order
 - (b) Over drive
 - (c) Weight transfer in Brake
 - (d) Periodic maintenance
 - (e) Fuel Feed pump
 - (f) Universal joint.
2. Attempt any **two** parts of the following : (10×2=20)
 - (a) Describe different types of Pistons. How does the 2-stroke piston differ from 4-stroke piston of a vehicle ?
 - (b) What types of resistance are offered by a vehicle ? Explain with diagram.
 - (c) Explain the working of constant mesh gear box with neat sketch. What are its advantages and limitations ?

3. Attempt any **two** parts of the following : (10×2=20)
- (a) What are the requirements of good braking system ? Explain Hydraulic brake system and master cylinder used in it with proper diagram.
 - (b) Why suspension system is required in Automobile ? Write different types of suspension system. Explain Telescopic Shock absorber with neat diagram.
 - (c) Draw a layout of a four-wheeler automobile chassis. What design features are to be considered in making a chassis frame ?
4. Attempt any **two** parts of the following : (10×2=20)
- (a) What is the resistor bypass circuit ? Draw the wiring system of a typical passenger car lighting system.
 - (b) Why electronic ignition system is preferred over conventional system ? Make a comparison between transistor assisted ignition system and capacitor discharge ignition system.
 - (c) What is MPFI ? Explain with neat and clean diagram.
5. Attempt any **two** parts of the following : (10×2=20)
- (a) What are the properties of good coolant ? Explain thermosiphon cooling system with diagram.
 - (b) List the properties of lubricating oil. Explain splash and pressure lubricating system with suitable sketch.
 - (c) Write the names of various types of maintenance employed in an automobile. Explain breakdown maintenance in detail.