

S.B.Roll No.....

AUTOMOBILE ENGINEERING
5th / 6th Exam/Mech./5330/0153/May 15

Time: 3 hrs

M.M. 75

Section – A

Q1. Attempt all questions

a) Fill in the blanks

10

- (i) The term MPFI is used in _____ engine.
- (ii) _____ Joint is used for connecting a propeller shaft.
- (iii) In the cone clutch, there are two cones _____ and _____ cone.
- (iv) Davis steering gear has _____ pairs, whereas Ackermann steering gear has _____ pairs.
- (v) The brake bleeding process removes _____ from the system.
- (vi) Another name for a torsion bar is _____.
- (vii) Shock absorber in an automobile is used to _____ energy.
- (viii) Specific gravity of electrolyte for a fully charged battery at 27°C is _____.
- (ix) The numbers of diodes used in an alternator are _____.
- (x) Coil springs are used in _____ suspension system.

b) State true or false

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- (i) Radiator tubes are generally made of copper.
- (ii) In the semi centrifugal clutch, the centrifugal force is proportional to the speed.
- (iii) In air suspension system, the pressure in the bellows is maintained from 5 to 7 kg/cm².
- (iv) Thermal efficiency of two stroke engine is less than that of a four stroke engine.
- (v) A thermistor is used in an alternator regulator to control maximum current.

Section – B

Q2. Attempt any five Questions

6x5

- i. What is chassis? Explain the layout of the components on the chassis frame.
- ii. Write the comparison of MPFI with carburettor system.
- iii. Define the terms toe-in, toe-out, camber, caster and kingpin inclination.
- iv. Explain the working of Rack and pinion steering gear.
- v. Sketch a master cylinder and explain its working.
- vi. Differentiate between a coil spring and a leaf spring.
- vii. Discuss the effect of temperature on specific gravity of electrolyte.
- viii. Write a short note on Emission norm standards.

Section – C

Attempt any three Questions

10x3

- Q3. Explain the working of sliding and constant mesh gear box.
- Q4. Explain the concept of power steering with neat sketch.
- Q5. What do you understand by Anti-lock braking system? Explain its working.
- Q6. Discuss the constructional details and working principle of an alternator.
- Q7. Explain the working principle of two stroke and four stroke diesel engine.