

QP Code : 5109

(3 Hours)

[Total Marks : 80]

NB.

- Note:
1. Question No. 01 is compulsory.
  2. Attempt any three questions from remaining five questions.
  3. Draw neat and labeled diagram wherever necessary.

- Q.01) Attempt any five questions out of six. [04]
- a) Compare 2WD & 4WD vehicle lay outs. [04]
  - b) Write short note on centrifugal clutch. [04]
  - c) Write short note on CVT. [04]
  - d) Draw neat labeled diagram of rack & pinion steering gear. [04]
  - e) Draw neat labeled diagram of brake valve. [04]
  - f) Compare radial tyre & cross ply tyre. [04]
- Q.02) a) Explain necessity, functional requirements & basic principle of working of clutch. [08]
- b) What is the drawback of sliding mesh gear box? Explain working of constant mesh gear box. [08]
- c) Write short note on Mc-pherson strut suspension. [04]
- Q.03) a) Explain types of gear shifting mechanism. [08]
- b) Explain following terms: [08]
1. Castor, 2. Camber, 3. King Pin Inclination, 4. Combined angle
- c) Write short note on wishbone type suspension. [04]
- Q.04) a) Explain types of wheels & tyre construction. [08]
- b) Explain necessity & working of differential. [08]
- c) Write short note on power steering. [04]
- Q.05) a) Explain hotchkiss drive. Also explain the need of slip joint in it. [08]
- b) Explain different types of brake. [08]
- c) Write short note on multiplate clutch. [04]
- Q.06) a) Explain hydraulic brake system & procedure for brake bleeding. [08]
- b) What are limitations of single plate clutch? Explain working & application of multiplate clutch. [08]
- c) Compare transmission, transaxle & transfer case. [04]