

# 22656

**21222**

**3 Hours / 70 Marks**

Seat No. 

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15 minutes extra for each hour

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- Instructions* – (1) All Questions are *Compulsory*.
- (2) Answer each next main Question on a new page.
- (3) Illustrate your answers with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Assume suitable data, if necessary.
- (6) Mobile Phone, Pager and my other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

- 1. Attempt any FIVE of the following: 10**
- a) Define vehicle layout.
  - b) State functions of clutch in automobile.
  - c) State brake fade.
  - d) Enlist any four requirements of suspension system in automobile.
  - e) Enlist any four electrical components of Automobile.
  - f) State necessity of vehicle registration.
  - g) State factors to be considered while selecting transmission.
- 2. Attempt any THREE of the following: 12**
- a) Classify automobiles.
  - b) Explain working of overdrive with neat sketch.
  - c) Explain working of ABS.

P.T.O.

- d) Describe the working of Mac. Pherson sturt type suspension with neat sketch.
- 3. Attempt any THREE of the following: 12**
- a) Draw and explain vehicle layout of front engine rear wheel drive.
- b) Sketch the layout of air braking system. Explain its working.
- c) Sketch telescopic shock absorber and label main parts.
- d) Draw a labled sketch of indicator light circuit and explain its working.
- 4. Attempt any THREE of the following: 12**
- a) Explain working principle of electric vehicles.
- b) Explain construction and working of bendix drive.
- c) Describe organization structure of motor vehicle department (RTO).
- d) Sketch circuit diagram for magneto ignition system.
- e) Write salient features of motor vehicles Act 1988.
- 5. Attempt any TWO of the following: 12**
- a) Explain constant mesh gearbox with double Declutching.
- b) Draw neat labled sketch of rack and pinion steering gear and explain its working.
- c) Differentiate tubed and tubless tyres.
- 6. Attempt any TWO of the following: 12**
- a) Explain construction and working of syncromesh gearbox.
- b) Explain wire harness and describe colour coding used in automobile wiring system.
- c) Explain passenger comfort and safety.
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