

# 22656

**12425**

**3 Hours / 70 Marks**

Seat No. 

--	--	--	--	--	--	--	--

- Instructions* –
- (1) All Questions are *Compulsory*.
  - (2) Answer each next main Question on a new page.
  - (3) Illustrate your answer with neat sketches wherever necessary.
  - (4) Figures to the right indicate full marks.
  - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.
  - (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

- 1. Attempt any FIVE of the following: 10**
- a) Compare front engine front wheel drive (FEFWD) with rear engine rear wheel drive (RERWD) (Any four points)
  - b) State function of gearbox in automobile.
  - c) Enlist requirement of brake.
  - d) State different types of Rims.
  - e) State the function of sensor in automobile.
  - f) Define:
    - i) Public Service Vehicle
    - ii) Transport Vehicle.
  - g) State working principle of clutch.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Differentiate frame and frameless vehicle.
  - b) List various parts of synchromesh gear box with role of each component.
  - c) Explain working of Pneumatic braking system with neat sketch.
  - d) Describe working of wishbone type suspension system with neat sketch.
- 3. Attempt any THREE of the following:** **12**
- a) State any four advantages and disadvantages of electric vehicles.
  - b) Explain working of rack and pinion type gearbox with neat sketch.
  - c) Sketch telescopic shock absorber and label main parts.
  - d) Explain working of starting system of a vehicle with neat sketch.
- 4. Attempt any THREE of the following:** **12**
- a) Explain the importance of aerodynamic shape of car body.
  - b) Explain construction and working of bendix drive.
  - c) Describe role and responsibilities of service supervisor in service station.
  - d) Enlist any four gauges and sensors with their functions.
  - e) State the factors considered for site selection to set-up your own garage.
- 5. Attempt any TWO of the following:** **12**
- a) Explain construction and working of differential with neat sketch.
  - b) Describe working of master-cylinder with neat sketch.
  - c) Explain procedure of wheel balancing and wheel alignment.

**6. Attempt any TWO of the following:****12**

- a) Write the difference between live and dead axle. Describe semifloating axle with sketch.
  - b) Explain wire harness and describe colour coding used in automobile wiring system.
  - c) Draw labelled layout of a modern service station used in automobile workshop.
-