

22586

24225

03 Hours / 70 Marks

Seat No.

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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 any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

1. **Attempt any FIVE of the following:** **10**
  - a) State function of suspension system.
  - b) State the necessity of different warning systems used in automobile.
  - c) List any four sensors used in automobile.
  - d) State importance of seat belt system.
  - e) List any two diagnostic fault codes with meaning.
  - f) List any four safety systems used in vehicle.
  - g) Define automobile and give classification of Automobiles.
  
2. **Attempt any THREE of the following:** **12**
  - a) State function and location of any four major components used in automobile.
  - b) Write on board diagnosis procedure for CRDI system.
  - c) Describe oil pressure warning system.
  - d) Explain with block diagram working of electronic power steering system.

P.T.O.

- 3. Attempt any THREE of the following:** **12**
- a) Write application of following measuring instruments:
    - i) Scan tool
    - ii) Frequency meter
  - b) Explain working of engine overheat warning system.
  - c) Describe working of air flow rate sensor with neat sketch.
  - d) Explain need of cooling and lubrication system used in automobile.
  - e) Describe working of stability control system.
- 4. Attempt any THREE of the following:** **12**
- a) State the necessity function and location of starting and charging system.
  - b) Explain the concept of Electronic Diesel Control (EDC) unit.
  - c) Describe concept of service bay diagnostics tool.
  - d) Explain concept of variable valve timing.
  - e) Explain concept of electronic engine management system.
- 5. Attempt any TWO of the following:** **12**
- a) Sketch neat block diagram of general vehicle layout and label it.
  - b) Explain concept and working of Antilock Braking System (ABS) with neat sketch.
  - c) Explain oxygen sensors working with neat sketch.
- 6. Attempt any TWO of the following:** **12**
- a) Explain six step approach for components testing.
  - b) Explain working of engine speed sensor with neat sketch.
  - c) Explain working of park assist system with block diagram.
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