

22586

22223

3 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) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) 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) Define Automobile and state it's any two examples.
 - b) State advantages of oil pressure warning system.
 - c) State function of oxygen sensor.
 - d) State the use of GPS in Automobile.
 - e) State the need of Electronic control system diagnostics.
 - f) List four safety system used in vehicle.
 - g) State the need of suspension system.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) State and explain necessity of charging system.
 - b) Enlist any four diagnostics fault codes with meaning.
 - c) Explain the working speed warning system.
 - d) Explain concept and working of Antilock Braking System (ABS) with neat sketch.
- 3. Attempt any THREE of the following:** **12**
- a) Explain the concept of Service Bay Diagnostics tool.
 - b) Explain concept of electronic engine control system.
 - c) Explain the use of knock sensor in Automobile.
 - d) Explain need of cooling system.
 - e) Describe working of cruise control system.
- 4. Attempt any THREE of the following:** **12**
- a) Draw and explain the block diagram of general vehicle layout.
 - b) Explain the concept of Electronic Diesel Control (EDC) unit
 - c) Describe concept of onboard diagnostics (OBD - II)
 - d) Describe working of exhaust gas recirculation Actuator.
 - e) Explain working of brake actuators warning system.
- 5. Attempt any TWO of the following:** **12**
- a) Explain electronic control system used in CRDI system with block diagram.
 - b) Explain construction and working of electronic power steering with block diagram. State its need.
 - c) Explain working of oxygen sensor with neat sketch.

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[3]

Marks

6. Attempt any TWO of the following:

12

- a) Explain the six step approach for component testing.
 - b) Explain the working of Automobile Engine Control Actuator. State its need.
 - c) Explain working of park assist system with block diagram.
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