

22586

12425

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 cooling system in vehicle.
 - b) State need of warning system.
 - c) State function of throttle position sensor.
 - d) State need of safety system in modern vehicle.
 - e) State application of scan tool.
 - f) List advantages of door lock system.
 - g) Give location of clutch with their function.
- 2. Attempt any THREE of the following:** **12**
- a) State necessity of transmission system in Automobile. List components of it.
 - b) Describe concept of onboard diagnostics.
 - c) Explain speed warning system.
 - d) Explain Traction control system.

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- 3. Attempt any THREE of the following:** **12**
- a) Write application of following measuring instruments:
 - i) Oscilloscope
 - ii) Digital Multimeter
 - b) Describe air pressure warning system.
 - c) Describe pressure sensor.
 - d) Explain electronic control system used in GDI system.
 - e) Describe electronic stability program (EPS).
- 4. Attempt any THREE of the following:** **12**
- a) Explain need of automobile in today's world.
 - b) Illustrate oil pressure warning system.
 - c) Enlist any four diagnostic fault codes with meaning.
 - d) Explain knock sensor used in automobile.
 - e) Explain engine overheat warning system.
- 5. Attempt any TWO of the following:** **12**
- a) Classify automobiles on the basis of any six criteria with examples of each.
 - b) Explain construction and working of electronic power steering with block diagram.
 - c) Explain working of oxygen sensor with neat sketch.
- 6. Attempt any TWO of the following:** **12**
- a) Construct flow chart to explain six step approach for components testing.
 - b) Explain air flow rate sensor with neat sketch.
 - c) Justify "Motion control systems improve safety and comfort level."
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