

22651

23242

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) State the function of relays.
 - b) List out different types testing of circuit defect.
 - c) Draw a neat sketch of lithium ions battery.
 - d) List out different types of alternator testing.
 - e) Define starting system.
 - f) Define navigation system.
 - g) State the function of OBD-II system.
- 2. Attempt any THREE of the following: 12**
- a) Draw a neat sketch of wind shield wiper and state its function.
 - b) “Wiring colour code is important factor in lighting system” comment.
 - c) “Automotive gauges played the role of preventive maintenance of vehicle”. justify your answer.
 - d) Define -
 - i) Sulphation
 - ii) Battery rating
 - e) “Battery played the important role in charging system” comment.

P.T.O.

- 3. Attempt any THREE of the following: 12**
- a) Draw a layout of starting system and explain it.
 - b) Describe construction and working of overrunning clutch with its neat sketch
 - c) Describe the working of distributorless ignition system.
 - d) “Preventive maintenance is essential in starting system” comment.
- 4. Attempt any THREE of the following: 12**
- a) Define the following navigation system
 - i) GPS
 - ii) GPRS
 - b) Draw a layout of electric two wheeler and explain function of each components.
 - c) Describe the construction and working of door lock system.
 - d) Draw a neat sketch of oxygen sensor and state its function and proper location in vehicle.
- 5. Attempt any TWO of the following: 12**
- a) Draw and explain the wiring diagram of headlight and turn indicators.
 - b) Describe construction and working of lead acid battery with its neat sketch.
 - c) “Alternator testing and charging system are interrelated to each other” justify your answer.
- 6. Attempt any TWO of the following: 12**
- a) “Computer controlled ignition system played the important role in starting system” comment.
 - b) “Due to all sensor used in vehicle increase the efficiency of engine and vehicle life” justify your answer.
 - c) “Electric fuel injection testing is useful tool in electronic diagnostic system” comment.
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