

22651

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) State meaning of SPST and SPDT on switches.
 - b) State the function of Relay and write its application.
 - c) Write different types of batteries used in automobiles.
 - d) State the meaning of excitation in charging system.
 - e) Give the types of starter drive.
 - f) State the meaning of GPS and GPRS.
 - g) State the purpose of scan tool.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Draw a labelled sketch of horn circuit.
 - b) Explain with sketch working of fuel gauge.
 - c) Justify use of turn indicators in vehicle. Draw circuit diagram of it (2-wheeler).
 - d) Draw a labelled sketch of lead acid battery.
 - e) Explain with sketch computer regulation circuit.
- 3. Attempt any THREE of the following:** **12**
- a) Draw a labelled sketch of Bendix drive.
 - b) Explain with sketch construction and working of distributor less ignition system.
 - c) Enlist methods of triggering primary circuit. Explain any one of them with sketch.
 - d) Draw circuit diagram of starting system and describe its working.
- 4. Attempt any THREE of the following:** **12**
- a) Draw a block diagram of GPS and label it and explain it.
 - b) Explain with block diagram working of automatic head light dimming.
 - c) Explain with sketch charging system of electric two wheeler.
 - d) Describe the procedure for sound test in the testing of electronic fuel injector.

- 5. Attempt any TWO of the following:** **12**
- a) Explain voltage drop test for the testing of circuit defect with sketch.
 - b) Explain with sketch specific gravity test of battery.
 - c) Explain factors affecting the battery life.
- 6. Attempt any TWO of the following:** **12**
- a) Describe testing procedure of starting system for given parameters
 - i) Quick test
 - ii) Current draw test
 - b) Describe testing procedure for oxygen sensor with sketch.
 - c) Justify the given DTC code P0301 with its meaning.
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