

259**October 2017**

Time – Three hours
(Maximum Marks: 75)

[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART – A and PART – B.

(2) Answer division (a) or division (b) of each question in PART-C.

(3) Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.]

PART – A

1. What is a semiconductor?
2. Define electric resistance.
3. What is the need of hydrometer test?
4. Mention the types of ignition advance mechanisms.
5. What is the purpose of alternator?
6. Mention the colour codes for wiring.
7. List any two security and warning systems in automobiles.
8. Write short notes on traffic indicators.

PART – B

9. Define (i) RMS value and (ii) Power factor.
10. Compare battery coil ignition system with magneto coil ignition system.
11. Mention the main parts of a generator.
12. What is the function of cut-out relay?
13. List the main components of lighting system.
14. What is zener diode? Draw the symbol.
15. What is a transistor? List the types.
16. Describe the function of a circuit breaker.

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PART - C

17. (a) Explain the importance of earthing in automotive wiring.
(Or)
(b) Explain the Fleming's left hand and right hand rules.
18. (a) Describe the magneto ignition system with a circuit diagram.
(Or)
(b) Explain any two types of battery testing methods.
19. (a) List the causes for troubles and their remedies for regulators.
(Or)
(b) Illustrate the electric starting circuit for two wheelers.
20. (a) Explain the method of head lamp setting and adjustments.
(Or)
(b) Describe the construction and working of a fuel gauge.
21. (a) Explain the following logic gates AND, OR, NOT with truth tables.
(Or)
(b) Write brief notes on: (i) Automotive sensors (ii) On-board diagnosis system.
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