

Code : 15AT42T

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IV Semester Diploma Examination, Nov./Dec. 2018

AUTOMOBILE ELECTRICAL & ELECTRONICS SYSTEM

[Max. Marks : 100

- (1) Answer any **six** full questions from Part – A and each question carries **five** marks.
- (2) Answer any **seven** full questions from Part – B and each question carries **ten** marks.

PART – A

1. Explain the terms Flux, density and Reluctance. 5
2. Write short notes on Ohm's law. 5
3. Explain the construction of NPN transistor with its symbol. 5
4. List merits and demerits of insulated return system. 5
5. State the differences between Lead Acid Battery and Nickel Iron Battery. 5
6. Illustrate the need of cut-out relay and current regulator. 5
7. Draw the circuit diagram of starting system and state the functions of each part of the circuit. 5
8. State the need of heat range of spark plug and its importance. 5
9. Draw the circuit diagram of pressure gauge and label the parts. 5

PART – B

10. (a) State the function of switch and list types of switches.
(b) State the definition of electrical energy and list its sources.
11. Explain full wave rectifier with a circuit diagram.
12. Explain the construction and working of Nickel Cadmium battery with the chemical reaction during charging and discharging.
13. Explain the construction and working of D.C. generator with a sketch.
14. Explain the construction and working of Standard Bendix drive mechanism with a sketch.
15. Explain the working of High Tension rotating magnet type ignition system with a circuit diagram.
16. Write the detailed specifications of a spark plug and explain the meaning of each specification.
17. Explain the construction and working of Electric Horn with a sketch.
18. Explain the construction and working of double filament Headlight with a sketch.
19. Write short notes on :
(a) Photo diode
(b) Spark plug reach
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