397 Register No.: [ ]

April 2018

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. Draw the symbol of inductor and capacitor.
2. Define amplitude and time period.
3. Mention the different methods of battery charging.
4. Mention any two characteristics of spark plug.
5. What do you mean by under cutting?
6. What do you mean by first and second contact closing?
7. Differentiate fuses and circuit breakers.
8. What is meant by ECU?

PART – B

9. Explain briefly about the term 1ϕ and 3ϕ power and power factor.
10. Define flux density, field intensity and reluctance.
11. Explain about any one ignition system in engine.
12. Write short notes on vacuum advance mechanism.
13. Explain briefly about the principle of dynamo.
14. Draw the electric starting circuits in two wheelers.
15. Discuss about the troubleshooting in horn circuit.
16. Draw the truth table for NAND, OR and Ex-OR gates.

[Turn over.....

PART – C

17. (a) Discuss about pulsating and pure direct current, sinusoidal and non-sinusoidal alternating current.

(Or)

(b) Discuss about the importance of earthing on chassis in automotive wiring.

18. (a) Discuss about CB point controlled magneto ignition system.

(Or)

(b) Explain about the working of lead acid battery.

19. (a) Explain about the construction of alternator.

(Or)

(b) Explain about the construction and working of starting motor.

20. (a) Explain about the purpose and construction of each lamp holder bulbs.

(Or)

(b) Discuss about the troubleshooting in pneumatic type wind screen wipers.

21. (a) Explain about the operation of full wave rectifier circuit in detail.

(Or)

(b) Discuss about the function of pressure, fuel flow, thermistors, oxygen and speed sensors.
