

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter 2019–20 Examination

Semester: 5
Subject Code: 03102303
Subject Name: Automobile Electrical system

Date: 09/ 12 /2019
Time: 10:30am to 1:00pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Objective Type Questions**(15)**

1. Write function of Relay used in electrical system.
2. Write function of Fuse used in electrical system.
3. What is the diameter of high tension cable?
4. What is generator humming?
5. Define: motor locked torque.
6. Which colour code is given for Battery circuit?
7. How much amount of voltage required to generate spark in spark plug?
8. What is electrolyte in a lead acid battery?
9. What is the specific gravity of electrolyte of fully charged condition of battery?
10. What is function of condenser?
11. Define: Dwell angle.
12. What purpose does Circuit Breaker serve?
13. Bendix drive working on principle of.....
(a) Electromagnetic induction (b) Inertia (c) Momentum (d) Force
14. Magneto is used in
a. Scooter b. Truck c. Bus d. Tractor
15. The condition of a fully charged lead acid battery can be ascertained by
a. Voltage b. Specific Gravity c. Gassing d. All of the above

Q.2 Answer the following questions. (Attempt any three)**(15)**

- A) Explain the working of windscreen wiper.
- B) Explain different types of cables used in automobile electrical system.
- C) Explain centrifugal spark advance mechanism.
- D) Explain about Bendix drive used in starting system.

Q.3 A) Explain principle, construction and working of alternator with neat sketch and compare with DC generator.**(07)**

- B) Discuss about head lamp, tail lamp, parking lamp and break lamp.

(08)

OR

- B) What are the types of Ignition system used in SI engine and Explain any one in details.

(08)**Q.4 A) Name different types of accessories used in vehicle. Explain with neat sketch: (1) oil pressure gauge (2) fuel level gauge.****(07)**

OR

- A) Explain working principle of starting motor used in automobile with sketch.

(07)

- B) Explain construction and working of lead acid battery and also write down the chemical reaction while battery is charging and discharging.

(08)