

Roll No. 

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (AE-2011 Batch) (Sem.-4<sup>th</sup>)  
**AUTOMOTIVE ELECTRICAL SYSTEMS**

Subject Code : BTAE-404

Paper ID : [A1164]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTION TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

**SECTION-A****I. Write short notes on :**

- a) What is the function of cells in a battery?
- b) What do you understand by sulphation?
- c) What is the main advantage of third brush control generator?
- d) Name different types of d.c. motors.
- e) Why the ignition coil is hermetically sealed?
- f) What is the function of insulator in a spark plug?
- g) What is a semi conductor?
- h) Name common indicating lights in a car.
- i) What is the function of odometer?
- j) What is meant by hybrid vehicle?

**SECTION-B**

2. Discuss the working of an alternator for automobile charging system.
3. Discuss the common troubles occurring in starting system.
4. Compare the battery and magneto ignition system.
5. Explain the working of engine temperature gauge with a sketch.
6. Write a note on fuel cells.

**SECTION-C**

7. Explain the construction and working of a lead acid battery with the help of a sketch.
8. Explain the battery ignition system with the help of a neat sketch.
9. Discuss the working and construction of a starter motor for an automobile.