

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B. Tech. (AE) (Sem.-5)
AUTOMOTIVE ELECTRICAL AND SYSTEMS
Subject Code : AE-305
Paper ID : [A0715]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY.
2. Attempt any FOUR questions from SECTION-B.
3. Attempt any TWO questions from SECTION-C.

SECTION-A

(10 × 2 = 20 Marks)

1. (a) Name three types of storage batteries.
(b) How do you define the capacity of a storage battery?
(c) What is the function of alternator in automobile?
(d) What are the requirements of starting motor?
(e) Where is the contact breaker located in the engine?
(f) How does the current flow across the junction of a diode?
(g) What type of reflector is used for automotive head lights?
(h) What are fuel cells?
(i) Where are the defroster nozzles placed in a car?
(j) What is an odometer?

SECTION-B

(4 × 5 = 20 Marks)

2. What are different type of troubles that may occur in a charging system ? Discuss.
3. Discuss the principle and construction of starter motor.

4. Discuss various components of fuel cell.
5. Draw a simplified wiring circuit for the lighting system of a car.
6. Explain a distributorless ignition system. Discuss the advantages of the system also.

SECTION-C

(2 × 10 = 20 Marks)

7. With the help of suitable sketch, explain the construction and working of lead acid battery.
8. Compare and contrast the battery and magneto ignition system.
9. Using simple diagram, discuss the construction and working of electrical fuel pump.