Roll No. ⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚⬚   **Total No. of Pages : 02**

Total No. of Questions : 09

B.Tech.(AE) (2011 Onwards)   (Sem.–7,8)
# AUTOMOTIVE ELECTRONICS SYSTEMS
Subject Code : BTAE-703
M.Code : 71819

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 have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. **Write briefly :**

   a) What are current trends in automobiles related to electronics?

   b) List the types of sensors used in modern automobiles.

   c) Define solenoids.

   d) What is feedback carburetor system?

   e) Write short note on exhaust emission control engineering.

   f) What do you understand by acceleration enrichment control?

   g) Define adaptive cruise control.

   h) What is future automotive electronic systems?

   i) Write short note on Back-up MPU.

   j) Brief about vehicle stabilization system.

SECTION-B

2. What are the components for electronic engine management?

3. What is the difference between sensors and actuators? Give some example to explain.

4. Describe the throttle body injection system.

5. Illustrate the engine cranking and warm up control.

6. Discuss about onboard diagnosis system.

SECTION-C

7. Describe the low tire pressure warning system and speech synthesis.

8. What are different types of solid-state ignition systems and what are their principle of operation?

9. a) With some example illustrate the use of open loop and closed loop system.

    b) Explain distributor less ignition.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.