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Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(AE) (2011 Onwards) (Sem.-4)
AUTOMOTIVE ELECTRICAL SYSTEMS
Subject Code : BTAE-404
M.Code : 54125

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**Q1. Answer briefly :**

- a) What is difference between earth return and insulated return system?
- b) Write note on checking the state of charge.
- c) On what factors battery efficiency depends?
- d) What is difference between a generator and an alternator?
- e) Write about characteristics of series motor.
- f) Write short note on vacuum advance mechanism.
- g) What do you understand by head light leveling devices?
- h) Briefly write about 'Electrical fuel pump'.
- i) What are different drive motors in hybrid vehicles?
- j) Define Thermodynamic Aspects of fuel cells.

SECTION-B

2. What is the function of bridge rectifier?
3. Discuss about battery charging procedure.
4. Describe the construction of starter motor.
5. What are the drive arrangements in electric vehicles? Explain in detail.
6. Describe the modern headlight system with improved night vision.

SECTION-C

7. Write in brief about :
 - a) Motorized rear view mirrors
 - b) Heaters and defrosters
8. What are various components of fuel cell? Explain its working with neat sketch.
9. Explain construction of spark plug. And write about importance of servicing spark plug.

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.