

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(AE) (2012 to 2017) (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**Answer briefly :**

1. Brief about Earth return and insulation system.
2. What is the principle of lead acid cells?
3. What are shunt generator characteristics?
4. List some electric equipment used in vehicles.
5. What are limitations of conventional ignition systems?
6. Write short note on relative merits.
7. List the components of fuel cell.
8. Brief about bumper Collision warning.
9. What is the scope of maintenance free batteries?
10. Define ballast resistor.

SECTION-B

11. What are thermodynamic aspects of fuel cells of fuel cell? Explain.
12. Discuss about effect of temperature on capacity and voltage of battery.
13. Write short note on :
 - a) Sun/Moon roof
 - b) Distributors.
14. What is principle of starter motor? Explain its working.
15. Illustrate automatic illumination system in detail.

SECTION-C

16. Explain construction and working of magneto ignition system.
17. What types of drive motors used in hybrid vehicles? Explain their construction.
18. Write in detail about following :
 - a) Bridge rectifies
 - b) Engine rpm meter
 - c) Fusing of circuits.

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.