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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

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 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) Brief about positive & negative earth system.
- b) List the vehicles in which 24-volt system is used.
- c) Write note on starting torque and power requirements.
- d) Define distributor.
- e) Write about auxiliary lighting-engine.
- f) Brief about desulphation.
- g) What is roll of compensated voltage regulator?
- h) What are limitations of transistorized ignition system?
- i) List the types of driving motors used in hybrid and electric vehicles.
- j) What is safety mechanism for starting systems?

SECTION-B

- Q2. Draw and explain wiring diagram for typical wiring systems.
- Q3. Illustrate about modern headlight system with improved night vision.
- Q4. Write short notes on :
- a) Starter switches,
 - b) Heaters and defrosters.
- Q5. What are different types of reflectors? Explain any two.
- Q6. Discuss in detail about modern headlight system with improved night vision.

SECTION-C

- Q7. Write in detail about following :
- a) Stop lights,
 - b) Plug fouling,
 - c) Testing of batteries.
- Q8. List drive arrangements in hybrid and lighting vehicles. Explain at least two.
- Q9. What is principle of alternator? Explain its construction and working.