

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

**B.Tech. (2007-2010 Batches) (Sem.-1,2)**  
**BASIC ELECTRICAL AND ELECTRONICS ENGINEERING**

Subject Code : EE-101

Paper ID : [A0126]

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

**SECTION-A**

**I. Write short notes on :**

- a) Define Ohm's Law.
- b) What is Mutual inductance?
- c) What is Energy meter?
- d) What is Transducer?
- e) What is Flip-Flop?
- f) What are Universal gates?
- g) Define Power Factor.
- h) State what is early effect in transistors?
- i) What are advantages of Electromechanical measuring instruments?
- j) Give phasor representation of AC quantities.

## SECTION-B

2. Explain Kirchhoff's Laws-statement and illustration.
3. What is Hall Effect? Explain with suitable diagrams.
4. Differentiate FET with BJT.
5. Explain moving coil measuring instruments.
6. What is a Zener diode? Explain the working of a Zener diode as a voltage regulator.

## SECTION-C

7. Explain in detail, conversion of star to delta and delta to star with suitable example.
8.
  - a) What is a DC motor? Explain DC motor by giving its principle, construction and working.
  - b) What is Linear Variable Differential Transformer? Explain it with suitable diagram and give its applications.
9. Write Technical notes on the followings :
  - a) Digital IC's
  - b) J-K Flip Flop