CT Inst. of Engg., Mgt. & Technology

MAY 2013

Roll No. [ ] Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (Sem.–1st & 2nd)

BASIC ELECTRICAL AND ELECTRONICS ENGINEERING

Subject Code : BTEE-101 (2011 & 2012 Batch)

Paper ID : [A1104]

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 & C. have FOUR questions each.
3. Attempt any FIVE questions from SECTION B & C carrying EIGHT marks each.
4. Select atleast TWO questions from SECTION - B & C.

SECTION-A

1. **Answer briefly :**

(a) What is the function of Zener diode?

(b) Define Octal and Hexadecimal number systems.

(c) Define mutual inductance.

(d) What is 2's compliment?

(e) What is the basic function of transformer?

(f) What is the theory of shunt ?

(g) What are the various losses that take place in a transformer?

(h) What is difference between a sensor and a transducer?

(i) What is difference between unilateral and bilateral circuit?

(j) Explain the term resistance. On what factors does it depend?

SECTION-B

2. What is concept of Root Mean Square value and Peak value in alternating current?

3. Draw and describe power triangle, explaining Active, reactive and apparent power.

4. Discuss the operation of PNP Transistor in CE and CC configuration.

5. Discuss the advantages and disadvantages of positive and negative feedback.

SECTION-C

6. Discuss various logic gates and explain how one type of logic gate can be created by combination of other logic gates.

7. Differentiate between :

(a) Current and Power

(b) Potential and Potential Difference

(c) Active and Passive components.

8. What is Strain Gauge? Discuss its applications.

9. Explain the working of a DC machine with the help of its neat sketch showing various parts.

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