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
Paper ID: [A1104]

Time: 3 Hrs. **Max. Marks: 60**

INSTRUCTIONS TO CANDIDATE:

1. ***Section-A is compulsory. Each question carry Two mark.***
2. ***Attempt any five questions from section B and section C with atleast two questions from each section Each question carry Eight marks.***

SECTION-A

Q. 1.

(a) Define diode.

(b) What is function of carbon brushes in DC machines?

(c) Define binary and octal number system.

(d) What is meant by fixed resistor?

(e) Define self inductance.

(f) Define 1's compliment.

(g) Define signed numbers.

(h) Convert 1101011001 binary to decimal.

(i) What are the functions of Digital Multi-meter?

(j) What is FET?

Section-B

Q. 2. A copper wire of diameter 1 cm has a resistance of 0.15Ω. It was drawn under pressure so that its diameter was reduced to 50%. What is the new resistance of the wire?

Q. 3. Discuss the operation of PNP transistor in CE and CB configuration.

Q. 4. Discuss analogy in Electrical and Magnetic circuits.

Q. 5. Describe various logic gates with neat diagram and explain how one type of logic gate can be created by combination of other logic gates.

Section-C

Q. 6. Differentiate between (i) Current and Power (ii) Potential and Potential Difference (iii) Active and Passive components.

Q. 7. The self inductance of a coil of 500 turns is 0.3H. If 75% of the flux is linked with a second coil of 10000 turns, calculate (i) the mutual inductance between the two coils (ii) EMF induced in second coil when current in first coil changes at rate of 100 A/sec.

Q. 8. Discuss working of LVDT and explain it with any one application of LVDT.

Q. 9. Explain the working of the transformer with a neat diagram showing its construction.

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