

Roll No

BE-104

B.E. I & II Semester

Examination, December 2016

Basic Electrical and Electronics Engineering

Time : Three Hours

Maximum Marks : 70

Note: Attempt any five questions. All questions carry equal marks.

1. a) Explain voltage and current sources.
b) State and explain Thevenins theorem.
2. a) Explain meaning of reactive power and power factor.
b) Explain star and delta transformation.
3. a) What are laws of electromagnetism explain?
b) Explain basic concept of transformer
4. a) Describe constructional details of DC machine.
b) Explain working principle of 3-phase induction motor.
5. a) State and explain De Morgan's theorem.
b) Give the truth table and symbol of AND gate and NOR gate.
6. a) Explain half adder.
b) Discuss decimal, binary and octal numbers.

7. a) Explain the working of semiconductor diode.
b) Describe the working of BJT (Bipolar Junction Transistors)
8. Write short notes on any two of the following :
 - a) Super position theorem
 - b) Analysis of magnetic circuit
 - c) OC and SC test
 - d) OR gate and NAND gate
 - e) R-S flip flop
 - f) V-I characteristic of semiconductor diode
 - g) Modes of operation of BJT
