Enroll No..... **EE-11** B.Tech.–I (Reg./Ex) & II (Ex.) **Examination, March-2021 Basic Electrical & Electronics Engineering** Time: Three Hours Maximum Marks:70 Note: Attempt any five questions. (Each question carries equal Marl Explain voltage and current source. Q.1 bhabhaumwers State and explain the venin's source. Explain meaning of reactive power and power (a) factor. Explain star and delta transformation. (b) What are laws of electromagnetism explain? (a) Explain basic concept of transformation. (b) Describe constructional details of DC machine. Q.4 (a) Explain working principle of 3-phase induction (b) motor. State and explain De Morgan's theorem. Q.5 (a)

[Total No. of Questions: 8]

(b) Give the truth table and symbol AND gate and NOR gate.

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- (2)
- Q.6 (a) Explain half adder.
  - (b) Discuss decimal, binary and octal numbers
- Q.7 (a) Explain the working of semiconductor diode.
  - (b) Describe the working of BJT (Bipolar junction transistors).
- Q.8 Write short notes on any two of the following:
  - (a) Superposition 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 semi conductor mode
  - (g) Mode of operation of BJT
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