

**BCA-03**

December - Examination 2019

**BCA Pt. I Examination****Basic Electronics****Paper - BCA-03****Time : 3 Hours ]****[ Max. Marks :- 70**

**Note:** The question paper is divided into three sections A, B and C. Write answers as per given instructions.

**Section - A****7 × 2 = 14****(Very Short Answer Questions)**

**Note:** Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

1.
  - i. What do you mean by multi-loop circuits?
  - ii. What is resonance circuit?
  - iii. Define Q-factor?
  - iv. What is triggering in digital electronics?
  - v. What do you mean by principal of Earthing?
  - vi. What is mobility?
  - vii. What do you mean by transistor biasing in the active region?

**Section - B** $4 \times 7 = 28$ **(Short Answer Questions)**

**Note:** Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 7 marks.

2. Discuss the functioning of Barkhausen criteria.
3. Define De Morgan's theorem.
4. Discuss multiplexer tree.
5. Describe Superposition theorem.
6. Explain the function of edge triggering flip flops.
7. Describe briefly the working of asynchronous counter.
8. Explain the working of CE amplifier.
9. Discuss the half wave rectifier using crystal diode.

**Section - C** $2 \times 14 = 28$ **(Long Answer Questions)**

**Note:** Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 14 marks.

10. Describe the functioning of single phase induction motor with neat and clean diagram.
11. Explain the Donor and Acceptor Impurities with neat and clean diagram.
12. Explain regulated power supplies with its types.
13. Explain expressions for hybrid parameters of a transistor.

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