

BCA-03**B.C.A. Examination, June-2015**

Basic Electronics

BCA-03*Time : Three Hours]**[Max. Marks : 100*

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

Section-A

(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. $2 \times 10 = 20$

1. (i) What is Ohm's law?
- (ii) What is drift velocity and drift current?
- (iii) What is Root Mean Square value?
- (iv) Draw the ideal characteristics curve of PN Junction diode.
- (v) What is triggering in flip flops?

(1)

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(vi) What is wiring system?

(vii) What is meant by capacitance?

(viii) What is rectifier?

(ix) What is meant by filter?

(x) What is meant by saturation region in transistors?

Section-B

(Short Answer Questions)

Note: Answer any four questions. Each answer should not exceed 200 words. Each question carries 10 marks.
10×4=40

2. Describe Input and Output Characteristics curves of BJT with their plots.

3. Describe the construction of field effect transistor.

4. Describe transistor as an amplifier with neat sketches.

5. What is the basic principle of earthing?

6. Why are copper wires used as connecting wire in a circuit?

7. Write short note on properties of Boolean algebra.

8. What is De-morgan's theorem in Boolean algebra?

9. What is diffusion?

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Section-C

(Long Answer Questions)

Note: Answer any two questions. You have to delimit your answer maximum upto 500 words. Each question carries 20 marks.
2×20=40

10. Explain PN Junction diode as a Rectifier with its types and related parameters.

11. Explain common collector (CC) configuration with biasing of NPN and PNP transistor with neat sketches of input and output characteristics curves.

12. Explain edge triggered D-type flip flop with helping of symbolic diagram and its operations.

13. Explain 4-bit asynchronous or ripple counter with their timing diagram and operation.

—X—

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