285

BCA-03

June - Examination 2016

BCA Pt. I Examination

Basic Electronics

Paper - BCA-03

Time : 3 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 $10 \times 2 = 20$

(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) Write the statement of Kirchoff's Current Law.

(ii) What is biasing process in semiconductors?

(iii) What is diffusion?

(iv) What is edge triggering in digital?

(v) What is flip flop in digital?

(vi) What is duality property in digital?

(vii) What is inductance?

(viii) What are the latches in digital?

(ix) Define rectification.

(x) Which kind of device is FET?

Section - B $4 \times 10 = 40$

(Short Answer Questions)

Note: Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 10 marks.

2) Describe the wiring system with suitable diagram.

3) Describe differences between CB CE and CC configuration of BJT.

4) Describe diode as a switch.

5) Explain briefly clipper and clamper applications of diode with any example.

6) Describe T-flip flop with state table and state diagram.

7) Describe Thevenin's theorem of circuit analysis.

8) Describe all possible combinations of Boolean algebra.

9) Explain briefly the Earthing principle.

Section - C

$2 \times 20 = 40$

(Long Answer Questions)

Note: Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 20 marks.

10) What do you mean by Race condition? Explain the working of JK flip flop with the help of symbolic diagram.

11) Explain 4-bit synchronous counter with their timing diagram and operation.

12) What do you mean by rectifiers? Also explain its working.

13) Explain intrinsic and extrinsic semiconductors.