BCA-03

December - 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 Kirchhoff's Voltage Law.

(ii) What is drift current?

(iii) What is transistor?

(iv) What is work of zener diode?

(v) Write about ripple factor.

(vi) What is Boolean algebra?

(vii) Write about logic gates.

(viii) What do you understand by Universal Gate?

(ix) What do you mean by UJT?

(x) What do you understand by latches?

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) Discuss the half wave rectifier using crystal diode.

3) Explain Thevenin's theorem of circuit analysis.

4) Discuss RS flip flop with state table and state diagram.

5) Explain the early effect in transistors.

6) Discuss SOP and POS process of K-MAP briefly.

7) Describe the importance of load line analysis.

8) Describe CMOs, NMOS, and PMOS.

9) Explain the working of CE amplifier.

Section - C

$2 \times 20 = 40$

(Long Answer Questions)

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

10) Explain Intrinsic and Extrinsic semiconductors in details.

11) Explain clipper and clamper applications of diode with examples briefly.

12) Explain construction and characteristics of P-channel MOSFET with neat and clean diagram, also define threshold voltage.

13) Explain 4 bit Asynchronous counter with their timing diagram and operations.

———