

**BCA-03**  
December - Examination 2018  
**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 × 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) What do you mean by drift current?
- (ii) What is breakdown region for diodes?
- (iii) Define Universal Gate property of logic gates?
- (iv) What is triggering in digital electronics?
- (v) What do you mean by don't care condition in k-maps?
- (vi) What are the statement of KVL and KCL?
- (vii) What do you mean by POS and SOP?
- (viii) Write any four applications of diodes in circuits?
- (ix) Define load line concept of diodes.
- (x) What is the law of Boolean algebra?

**Section - B****4 × 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 functioning of Half Wave Rectifier.
- 3) Draw the common emitter circuit and explain its working.
- 4) Discuss CMOS technique and its applications.
- 5) Describe Superposition theorem.
- 6) Explain the function of Binary to Gray code decoder.
- 7) Describe briefly the working of synchronous counter.
- 8) Describe the generation and recombination of a charges.
- 9) Explain the functionality of universal gates with an example.

**Section - C****2 × 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) Describe the Functioning of Binary Serial and Parallel adder.
- 11) Explain the Hall Effect with neat and clean diagram.
- 12) Explain Ripple counter and decade counter with their functionality.
- 13) Explain functioning of maximum power transfer theorem.