



# AF-3050

B.Sc. (Part-II)  
Term End Examination, 2017-18

## INFORMATION TECHNOLOGY

Paper - I

*Time : Three Hours] [Maximum Marks : 50*

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**Note** : Answer **all** questions. All questions carry equal marks.

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### Unit-I

1. What is Number system ? Explain with example various types of Number system used in Digital system.

***OR***

Perform the following Arithmetics :

- (a)  $1011 - 1000$  (using 1's Complement Method)

## ( 2 )

(b) Simplify using K-Map

$$F(w, x, y, z) = \Sigma(1, 3, 5, 7, 13, 15)$$

(c) 10111.10/11

## Unit-II

2. What are flip-flop ? Explain various types of flip-flop.

*OR*

Explain the following :

(a) Binary Counter  
(b) BCD Adder

## Unit-III

3. What are Multivibrator Circuit ? Explain with example.

*OR*

What are Integrated Circuit ? Explain the different types of IC used in digital system.

## Unit-IV

4. Discuss the function of Program Counter (PC), Stack Pointer (SP) and Status Register.

*OR*

**( 3 )**

Explain Instruction format ? What are the various types of Instruction format ?

**Unit-V**

**5.** What are Memory ? Explain Memory Management Technique.

***OR***

Explain the following :

- (a) Cache Memory
- (b) Virtual Memory

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