



# 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)

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535\_BSP\_(3)

*(Turn Over)*

( 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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