

Roll No. 2021218213

Total Pages : 03

BT-5/D-23

45171

ESSENTIAL OF INFORMATION  
TECHNOLOGY  
PC-CS-305A

Time : Three Hours]

[Maximum Marks : 75

**Note :** Attempt *Five* questions by selecting at least one question from each Unit.

**Unit I**

1. (a) Why multiple inheritance is not supported in Java ?  
How multiple inheritance is achieved in JAVA ?  
Explain with example. 8
- (b) Why are String objects immutable ? Write a program to create an immutable class ? Explain four methods of String and StringBuffer class. 7
2. (a) What are Constructors ? Explain various types of Constructors used in JAVA. 7
- (b) How do you deal with different exceptions in Java ?  
How do you create your own exception ? Explain with example. 8

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## Unit II

3. (a) What is Swing ? What are the advantages of swing on AWT ? 8
- (b) How do we use containers and components through swing ? Illustrate all with a simple program. 7
4. (a) Explain in brief : 10
- (i) CheckBox
  - (ii) Trees
  - (iii) Scroll Panes
  - (iv) Tabbed Panes
  - (v) Tables
- (b) How applets are different from applications programs ? Draw a flow chart for life-cycle of Applet. 5

## Unit III

5. Explain Servlet life-cycle. Write the steps to create and run servlet program. Explain with example. 15
6. (a) Explain GET and POST method for servlets with suitable example. 5
- (b) Explain the following with example : 10
- (i) Cookies
  - (ii) Session Tracking



## Unit IV

7. Define JDBC and mention the steps involved in JDBC connectivity. Explain various types of connection interface with example for data connectivity in JDBC. 15
8. Explain the following : 5×3=15
- (a) ArrayList
  - (b) Hashmap
  - (c) Set