

BT-5/D-21**45171****ESSENTIALS OF INFORMATION TECHNOLOGY****Paper-PC-CS-305A****Option-I**

Time Allowed : 3 Hours]

[Maximum Marks : 75

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit.

UNIT-I

1. (a) What is Package ? How do we add a class or an interface to a package ? Discuss the various levels of access protection available for packages and their implementation. 2,3,5
- (b) What is JVM ? Explain various features of JAVA ? 5
2. What is an exception ? Explain how exception handling mechanism can be used for debugging a program. List some of the most common types of exceptions that might occur in Java. Give examples. 15

UNIT-II

3. (a) What is Swing ? What are the advantages of Swing on AWT ? How do we use containers and components through swing ? Illustrate all with a simple program ? 10
- (b) Explain in brief
 - (i) Combo Box
 - (ii) Panel
 - (iii) Scroll Panes
 - (iv) Tabbed Panes. 5
4. How Applets are different from Applications Programs ? Develop an applet that receive one numeric value as input from the user and display factorial of that number on the screen. Write an HTML page and test the applet ? 15

UNIT-III

5. (a) What is Servlet ? What are the advantages of Servlet ? Explain its life cycle. 7
- (b) Explain the following with example :
- (i) Cookies. (ii) Session Tracking. 2×4=8
6. Write the steps to create and run servlet program. Explain with example. 15

UNIT-IV

7. What is JDBC ? Why it is needed ? Write Java code for establishing connection interface using SQL. 15
8. (a) Explain the terms Result Set Object and Result Set Meta data. 8
- (b) What are the steps to connect to database in JAVA ? 7