Roll No. ....   Total Pages : 2

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