MCS-024

MASTER OF COMPUTER APPLICATIONS/ BACHELOR OF COMPUTER APPLICATIONS

[MCA (REVISED)/BCA (REVISED)]

Term-End Examination

December, 2023

MCS–024 : OBJECT ORIENTED TECHNOLOGIES AND JAVA PROGRAMMING

Time : 3 Hours *Maximum Marks : 100*

Weightage : 75%

Note : *Question No.* **1** *is compulsory. Attempt any* **three** *questions from the rest.*

1. (a) What is a class ? How does it accomplish data hiding ? Explain with an example. 5

   (b) Differentiate between AWT and Swing components. Give suitable example for each. 5

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(c) Explain the relationship between inheritance and polymorphism. Give example of each.   5

(d) What is Java Bean ? Briefly discuss the features of Java Bean.   5

(e) Explain why main( ) method is not included in writing a Java applet program using an applet coding.   5

(f) Compare structured programming and object oriented programming.   5

(g) Discuss the utility of final and finalize keywords in Java. Give example code for each.   5

(h) How does datagram socket differ from stream socket ?   5

2. (a) Write a Java applet to display. "Java is an object oriented programming language" in red color. Support your code with suitable comments.   5

(b) What is a layout manager ? Explain the flow layout and border layout. Also explain how a layout is set.   8

(c) What are packages in Java ? How do we create a package in Java ? What are the steps to add Classes and Interfaces in a package ?   7

3. (a) Differentiate between thread and process. Explain Java thread model using thread life cycle.   7

(b) Compare Applet and Servlet. Write the steps to incorporate applet in a webpage. 8

(c) Explain method overriding in Java using a program in Java.   5

4. (a) Write a Java program for writing files in "C:\javafiles\" location. Support your program with suitable comments.   7

(b) Write the steps of JDBC in establishing a connection for creating dynamic website for INSERT/UPDATE the attendance record for students of a college.   7

(c) What is synchronization ? Explain how methods are synchronized in Java with the help of an example.   6

5. Write short notes on the following :   4×5=20

(a) Object serialization

(b) Liberals and its types

(c) Servlet life cycle

(d) Garbage collection

(e) Role of cookies in session handling

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