A-0885

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MCS-508

Programming in Java

(MCA/MSCIT)

2nd / 4th Semester Examination 2024(Dec.)

Time: 2:00 hrs Max. Marks: 70

Note : This paper is of Seventy (70) marks divided into Two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

P.T.O.

Section-A (Long-Answer-Type Questions)

Note : Section 'A' contains Five (05) long-answer-type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

[2x19=38]

Q.1. Discuss the four fundamental pillars of Object-Oriented Programming (OOP): Encapsulation, Inheritance, Polymorphism, and Abstraction. Provide a detailed explanation and real-world examples of each pillar in Java.

Q.2. Explain the Switch-case control structure in Java with the help of example. When is it preferable over If-else?

Q.3. Explain how exception handling is performed in Java. Briefly discuss the concept of checked exception and unchecked exception, with an example of each.

Q.4. What is String class? How is it different from String Buffer Class? Write a Java program to find the length of a given string.

Q.5. Explain the basics of GUI Development in Java. Discuss in detail the role of AWT and Swing Libraries.

Section-B (Short-Answer-Type Questions)

Note : Section 'B' contains Eight (08) short-answer-type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only.

[4x8=32]

Q.1. Java is a platform independent language. Justify your answer.

Q.2. Explain in detail about the primitive and non primitive data types used in Java.

Q.3. Explain the relationship between Inheritance and Polymorphism. Give example of each.

Q.4. How do we create a package in Java? What are the steps to add Classes and Interfaces in a Package?

P.T.O.

Q.5.   What is Synchronization? Explain how methods are synchronized in Java, with the help of an example.

Q.6.   Write a Java program to create a file name 'UOU-txt' and write "Hello UOU" in it.

Q.7.   Explain the different steps in the life cycle of an Applet.

Q.8.   Write short notes on:

   a.   Jump statements

   b.   Dynamic Binding

   c.   Class and Objects

   d.   DNS

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