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MCS-508

PROGRAMMING IN JAVA

(MCA/MSC IT)

Examination, June 2025

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.***

Section–A

Long Answer Type Questions   2×19=38

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.

1. Explain Polymorphism in Java. Discuss Method Overloading and Method Overriding with examples.

2. Write a Java Program to find the largest of three numbers using If-else, Switch, and Ternary operator.

3. Explain in detail the concept of Exception handling in Java. Why is it important ?

4. Explain the concept of Multithreading in Java. Why is Multithreading important for Java Applications ?

5. Explain Layout Managers in Java Swing. Discuss the role of Flow Layout, Border Layout, Grid Layout and Box Layout.

Section–B

Short Answer Type Questions   4×8=32

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.

1. Explain the key features of Java programming language.

2. Define an abstract class in Java and explain its purpose. How does it differ from an interface ?

3. Explain the concept of interfaces in Java. How do interfaces support multiple inheritance in Java ?

4. Explain the concept of constructors in Java. What are the differences between default constructors and parameterized constructors ?

5. Describe the different methods for concatenating strings in Java. Explain the performance implications of using each approach.

6. How do you embed a Java Applet in a Web page ? Discuss the use of the <applet> tag and the HTML <object> tag.

7. Explain the concept of Sockets in Java. How do you use Sockets for Client-Server communication ?

8. Write short notes on :

   (a) Array

   (b) Garbage collection

   (c) Stream Tokenizer

   (d) URL

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