PGDCA 2nd Semester

(2054)

OBJECT ORIENTED CONCEPTS USING JAVA

Paper : PGD-2101

Time Allowed : Three Hours]   [Maximum Marks : 60

Note :— Attempt **five** questions in all, including Question No. 9 in Section-E, which is compulsory and taking **one** each from Section-A to Section-D.

SECTION—A

1. (a) What are the three OOPs principles and define them ?

    (b) What are operators and what are the various types of operators available in Java ? Explain with examples.   6,6

2. (a) With suitable examples, explain the different looping statements used in Java programs.

    (b) Explain the concepts of class, object and method in Java with examples.

                                                                        6,6

SECTION—B

3. What is array in Java ? How do you declare it ? Write a Java program to add the given two matrices. 12

4. (a) What is inheritance ? Explain how you can inherit a class into another class in Java with the help of a program.

   (b) Explain the Access modifiers - public, private, protected in Java with examples. 6,6

SECTION—C

5. (a) What is a string in Java ? Brief about string methods in Java.

   (b) With a simple application, explain how to create and import package in Java. 6,6

6. What is Multithreading ? What is its need ? Give any two examples that show the usefulness of multithreading. What class and interface does Java provide to support Multithreading ? 12

SECTION—D

7. What is Exception handling in Java ? Explain user defined exception handling in Java with suitable example. 12

8. Describe applet life cycle with suitable example. In particular explain the roles of the init, start, stop, paint and destroy methods. Explain why Java Applets have more security issues than Java Applications and what are prohibited for Applets. 12

SECTION—E (Compulsory Question)

9. (a) What is method overloading in Java ? Give example.

    (b) Explain the uses of final keyword in Java with examples.

    (c) With suitable example, differentiate between abstract class and java interface.

    (d) How do you add Java Applet to an HTML file ? Explain with an example.

    $4 \times 3 = 12$