PGDCA 2nd Semester

(2053)

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 features of Object Oriented Programming ? Distinguish between Procedure Oriented Programming and Object Oriented Programming.

　　(b) Explain the concept of class and objects with access control to represent real world entities.　　6,6

2.　(a) Describe all the primitive data types supported by Java with appropriate examples. Also specify their storage capacity/ range.

　　(b) What is method overloading in Java ? Explain with an example program.　　6,6

SECTION—B

3. (a) What is inheritance in Java ? Illustrate hierarchical and multilevel inheritance using a sample Java program.

   (b) Describe the use of 'final' keyword in Java with suitable examples. 6,6

4. (a) What is an array in Java ? Write a Java program that adds the N elements of an array.

   (b) What is a constructor ? How are *this ()* and *super ()* used with constructors ? Explain by taking examples. 6,6

SECTION—C

5. (a) What is multithreading ? Explain, how inter thread communication is possible in Java multithreaded environments.

   (b) What is interface in Java ? Explain the need of it. Explain with Java program. 6,6

6. (a) What is import ? Explain the need of importing a package in Java.

   (b) How is *String* class different from *String Buffer* class ? Write a program in Java to find the length of a given string. 6,6

SECTION—D

7. What is an Exception ? List out the keywords for exception handling and write steps to develop user defined exception. Explain an example of exception handling in the case of division by zero.

12

8. What is Applet ? Explain the life cycle of applet, briefly describing all its methods. What is the main difference between reloading and restarting an applet ?   12

SECTION—E
(Compulsory Question)

9. (a) What is JVM ? What are the different program control constructs available in Java ? Explain with examples.

    (b) List the rules for method overriding in Java. Explain with a Java program.

    (c) Distinguish between Abstract class and Interface with examples.

    (d) How do you add Java Applet to an HTML file ? Explain with an example.   4×3=12