

(i) Printed Pages : 3 Roll No.

(ii) Questions : 9 Sub. Code :

4	5	8	1	0
---	---	---	---	---

Exam. Code :

1	2	2	0
---	---	---	---

PGDCA 2nd Semester
(2055)

OBJECT ORIENTED CONCEPTS USING JAVA

Paper : PGD-2101

Time Allowed : Three Hours] [Maximum Marks : 60

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

SECTION—A

1. What are the problems with procedure-oriented programming languages ? How do object-oriented programming languages overcome the problems of procedure oriented languages ? Explain with examples. 12
2. (a) What is an Operator in a programming language ? Explain various types of operators in Java with example programs.
- (b) Differentiate method overloading with method overriding in Java with suitable examples. 6,6

SECTION—B

3. (a) What is an array in Java ? How are arrays declared and initialized ? Explain with examples.

(i) Printed Pages : 3 Roll No.

(ii) Questions : 9 Sub. Code :

4	5	8	1	0
---	---	---	---	---

Exam. Code :

1	2	2	0
---	---	---	---

PGDCA 2nd Semester
(2055)

OBJECT ORIENTED CONCEPTS USING JAVA

Paper : PGD-2101

Time Allowed : Three Hours] [Maximum Marks : 60

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

SECTION—A

1. What are the problems with procedure-oriented programming languages ? How do object-oriented programming languages overcome the problems of procedure oriented languages ? Explain with examples. 12
2. (a) What is an Operator in a programming language ? Explain various types of operators in Java with example programs.
- (b) Differentiate method overloading with method overriding in Java with suitable examples. 6,6

SECTION—B

3. (a) What is an array in Java ? How are arrays declared and initialized ? Explain with examples.

- (b) Write a Java program to check whether the given string is a palindrome or not. 6,6
4. (a) What are constructors in Java ? What is their purpose ? Explain two types of constructors with an example Java program.
- (b) What is inheritance ? Write a Java program to implement multilevel inheritance with three levels of hierarchy. 6,6

SECTION—C

5. (a) Define package in Java. Explain the steps involved in creating a user-defined package with an example.
- (b) What is a Java Interface ? Explain how an interface is used to achieve multiple inheritances in Java. 6,6
6. Define multithreading in Java. What are the two ways to create a thread in Java ? Explain with the Java source code. 12

SECTION—D

7. What is an exception ? What are the methods of handling exception in Java ? Give suitable examples. 12
8. What is the difference between Java Application and Java Applet ? Explain Applet life cycle and write an applet to display "Hello India" message. 12

SECTION—E

(Compulsory Question)

9. (a) What is the role and responsibility of Java Virtual Machine (JVM) in program execution ?
- (b) Explain the uses of 'this' keyword in Java with examples.
- (c) Explain the late binding and early binding in polymorphism with an example Java program.
- (d) How do you pass parameters to a Java Applet ? Explain with an example.

4×3=12