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MCS-206

**POST GRADUATE DIPLOMA IN
COMPUTER APPLICATIONS
(PGDCA) (NEW)**

Term-End Examination

December, 2022

**MCS-206 : OBJECT ORIENTED PROGRAMMING
USING JAVA**

Time : 3 Hours

Maximum Marks : 100

Weightage : 70%

Note : (i) *Question No. 1 is compulsory and carries
40 marks.*

(ii) *Attempt any **three** questions from the
rest.*

1. (a) Write a java program which takes three numbers as input and displays average of these numbers. 5

P. T. O.

- (b) Briefly explain use of the following logical operators with the help of example of each : 6
- (i) <
 - (ii) >
 - (iii) > =
- (c) Explain function overloading with the help of a program. 6
- (d) Explain use of abstract class with the help of a program. Explain why abstract class cannot be instantiated. 6
- (e) What is constructor ? Explain how parameterised constructors are defined in Java. 6
- (f) Explain use of ResultSet interface in JDBC programming with the help of a program. 5
- (g) Write a Java program to display table of a given number between 1 to 20. 6
2. (a) What is inheritance ? Explain advantages of inheritance. Explain how inheritance in Java is implemented with the help of a program. Also explain the advantages of method overriding. 10

- (b) What is multithreading ? Briefly explain how thread is created in Java. Explain use of `isAlive()` method in multithreaded programming with the help of a program. 10
3. (a) Write a Java program which takes a string as input and displays reverse of the input string. 5
- (b) Explain different uses of “final” keyword of Java. 5
- (c) Explain advantages of exception handling. Explain how exceptions are handled in Java, with the help of a program. Also explain use of “throws” clause in Java. 10
4. (a) Explain use of interface in Java with the help of an example program. Also describe difference between abstract class and interface. 10
- (b) Discuss the utility of set and vector classes in Java Programming with the help of a program. 10

5. (a) What is GUI programming in Java ?
Briefly explain the features of “AWT” and
“Swing” in Java. 5
- (b) Write a Java program using appropriate
GUI components, which takes your name
and e-mail id as input and displays them
on click of a button. 7
- (c) What is JDBC ? What is the use of JDBC
driver ? Explain the steps to connect a
database through JDBC. 8