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MCS-206

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

Term-End Examination

December, 2024

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

Time : 3 Hours

Maximum Marks : 100

Weightage : 70%

Note : (i) *Question No. 1 is compulsory.*

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

1. (a) What is object oriented programming ?

Explain the concept of encapsulation with the help of an example. 5

- (b) What is a variable ? Explain the use of a “final” variable with the help of a Java program. 5

- (c) What is JDBC ? Briefly explain the core components of JDBC. Write and explain necessary steps to create a JDBC application. 10

- (d) What is an object in Java ? Explain how an object is assigned to another object, with the help of Java code. 5

(e) What is Java thread model ? Explain thread life cycle in Java with the help of a diagram. 7

(f) What is a package ? Explain how you can create your own package in Java. What are the different types of packages in Java ? 8

2. (a) What is constructor ? Explain the need of parameterised constructor in Java program with the help of an example. 5

(b) What is an Exception ? What are the different types of Exceptions ? Explain the need of exception handling in Java. Also,

explain how exceptions, which are “checked by compiler”, are handled with the help of an example. 10

- (c) Write a Java program which takes a string as input and displays its reverse. Also, find its length. 5

3. (a) What is collection-API in Java ?

What is Date Class ? Explain the use of *compareTo* and *after* methods of Date class. 5

- (b) What is HashSet class ? Explain its *two* constructors. 5

- (c) What is inheritance ? List and explain the types of inheritances supported by Java.

Write a Java program to illustrate implementation of inheritance. 10

4. (a) Explain the differences between “ByteStream” and “CharacterStream.” 5

- (b) What is AWT ? Explain the differences between AWT and Swing. 5

- (c) What is “ResultSet” in JDBC programming ?

What are the different types of ResultSet ?

Explain ResultSet Holdability with the help of an example. 10

5. Write short notes on the following : $4 \times 5 = 20$

(a) JavaFX

(b) Polymorphism

(c) Java Interface

(d) User-Defined Exceptions

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