

MSCCS-103/PGDCA-107

December - Examination 2025

MSCCS/PGDCA Examination

OOPS PROGRAMING WITH C++ AND JAVA

Paper : MSCCS-103

[Time: 3 Hours]

[Maximum Marks: 80]

Note :- The question paper is divided into three Sections A, B and C. Write answers as per the given instructions.

Section-A

8×2=16

(Very Short Answer Type Questions)

Note :- Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum up to **30** words. Each question carries **2** marks.

1. (i) How many times following loop will get executed in C++ : for (int k = 0; k < 1; ++ k){.....}
- (ii) What will happen if the user creates a method with 'Main' name in Java?
- (iii) What do you mean by control structure in C++?
- (iv) What command do you use to execute a Java program through command prompt?
- (v) Note down any two differences between C++ and Java.
- (vi) What does 'init ()' do in Java applets?
- (vii) What is the meaning of polymorphism?
- (viii) Define inheritance in OOPS programming.

Section-B

4×8=32

(Short Answer Type Questions)

Note :- Answer **any four** questions. Each answer should not exceed **200** words. Each question carries **8** marks.

2. Explain the concept of templates in C++.
3. Write a program in C++ to illustrate the concept of operator overloading.
4. How do you manage memory allocations for objects in C++?
5. Explain the concept of file handling using a suitable example in C++.
6. Write a program in Java to explain the usage of applets.
7. What kind of advantages we get if we use the concept of multi-threading in Java?
8. What kind of inheritance do we use in Java? Explain.
9. Give any four instances when using Java is preferable to C++.

Section-C

2×16=32

(Long Answer Type Questions)

Note :- Answer **any two** questions. You have to delimit your each answer maximum up to **500** words. Each question carries **16** marks.

10. Write a program in C++ to implement virtual functions.
11. Write the code with suitable comments to implement a simple event handling application in Java.
12.
 - (a) Write a function to find the smallest numbers out of given four numbers in C++.
 - (b) Write a function to find the prime numbers in between 10 and 100 in Java.
13. Write short notes on each of the followings -
 - (a) 'Finally' block in Java.
 - (b) Runnable interface.
 - (c) Encapsulation in OOPS programming.
 - (d) Difference between 'while' and 'do-while' constructs.
