

12. (i) What is a Thread ? Explain its states and methods.
- (ii) What is Constructor ? Explain different types of constructors with examples.
13. (i) What is Operator Overloading ? Explain the importance of operator overloading.
- (ii) Explain the life cycle of an Applet in Java.

**PGDCA-03/MSCCS-03/  
PGDCA-103/MSCCS-103/  
MSCCSC-103/MCA-103/CPCJ**

**December – Examination 2022**

**PGDCA/MSCCS-Previous/  
CPCJ/MCA (I Year) Examination**

**OOPs Programming with C++ and Java**

**Paper : PGDCA-03/MSCCS-03/  
PGDCA-103/MSCCS-103/MSCCSC-103/  
MCA-103/CPCJ**

*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) What do you mean by Virtual Class ?
- (ii) Differentiate between a Class and an Object.
- (iii) Mention the features of Java.
- (iv) What are void pointers ?
- (v) What are the difference between break and continue statement ?
- (vi) Define Encapsulation.
- (vii) What do you mean by identifiers in Java ?
- (viii) Define Inline Function in C++.

**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. Write a C++ program to check whether the given integer is prime or not.
3. What do you mean by Call by value and Call by reference ?
4. What is De-constructor ? Explain with example.

5. What is the use of final keyword ?
6. Define superclass and subclass.
7. What is the difference between C++ and Java ?
8. What is Multithreading ?
9. Write a C++ program to find the factorial of a number.

**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. (i) What is package in Java ? Why is it important ?
- (ii) What are the various types of inheritance in C++ ? Give an example of each.
11. (i) Describe the use of Public, Private and Protected Access specifier.
- (ii) Write a program to reverse a string in C++.