

7. Write a program in Java to accept 10 numbers.  
Find how many of these entered numbers are prime ? Explain the prime() method used to check if a number is prime or not.
8. Explain the concept of IDE, forms and controls in C++ using suitable examples.
9. Write a program in Java to find the product of two matrices using the concept of multithreading.

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

**June – 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 : 1½ Hours ]*

*[ Maximum Marks : 80*

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

**Section-A**

**4×4=16**

**(Very Short Answer Type Questions)**

**Note :-** Answer any *four* 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 4 marks.

1. (i) What is the purpose of using pointers in C++ ?
- (ii) Write the functions/methods to show output in C++ and Java.
- (iii) What is the main benefit of using applet in Java ?
- (iv) What is the meaning of 'Virtual' in 'Virtual Functions' ?
- (v) What does Finalize() method do in Java ?
- (vi) How do you reclaim the memory allocated to an object in C++ ?
- (vii) Write a recursive function to find the factorial of a positive integer in C++.
- (viii) What do you mean by delegation event model ?

**Section-B**

**4×16=64**

**(Short Answer Type Questions)**

*Note* :- Answer any *four* questions. Answer should not exceed **200** words. Each question carries 16 marks.

2. Explain the concept of multiple inheritance and interfaces in Java in detail.
3. Write a program in C++ to sort numbers using the concept of template.
4. Explain the concept of file handling in C++ in detail. Give a suitable example.
5. Describe built-in exceptions and user defined exceptions using suitable example in Java.
6. Describe any *four* basic principles of object-oriented programming in detail.