12. (i) Explain the following terms :

(a) Thread Synchronization

(b) Interthread Communication

(c) Deadlock

(d) Time Slicing

(ii) Write a program in C++ to convert uppercase to lowercase.

13. (i) Write a program to declare array of objects. Initialize and display the contents of an array.

(ii) What is Exception ? Explain the concept of Exception Handling with the help of an example.

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

June – Examination 2023

PGDCA/MSCCS (Previous)/ CPCJ/MCA (Ist 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 Abstraction in C++ ?

(ii) How do you declare an array in C++?

(iii) Define Polymorphism.

(iv) Distinguish between While and Do While statements.

(v) What do you mean by Virtual Class ?

(vi) What is finalize method in Java ?

(vii) What do you mean by Dynamic Binding ?

(viii) Explain virtual functions 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. Explain about tokens in C++.

3. Differentiate between a 1D array and 2D array.

4. What are the different states in thread ?

5. Write a C++ program that displays first 10 odd numbers.

6. Explain Pointer in C++.

7. What is the difference between C++ and Java ?

8. What is the use of Final Keyword ?

9. Write a C++ program to check the given integer in prime or not.

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 Friend Function in C++ ? Explain its characteristics with a suitable example.

(ii) What are the features of object oriented programming ?

11. (i) What is Function Overriding ? Explain with program.

(ii) What are the different types of Operators and Data Types in C++ ?

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PGDCA–103 /MSCCS–103/   (3)   *T–413* *Turn Over*
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