

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN  
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)  
Chromepet, Chennai — 600 044.

M.Sc.(Appl.Maths) - END SEMESTER EXAMINATIONS APRIL - 2023

SEMESTER - I

**20PAMCT1003 - Programming In C++**

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

### **Section B**

Answer any **SIX** questions ( $6 \times 5 = 30$  Marks)

1. What is the difference between a class and an object in C++?
2. List out various applications of Object Oriented programming,
3. Explain the difference between pass by value and pass by reference in C++.
4. Explain Function overloading with appropriate example.
5. Write short notes on Input-output operations.
6. Differentiate Virtual Class and Virtual Function.
7. Explain three type of file modes with example.
8. Examine the role of file pointers in C++. How do they work, and why are they important?

### **Section C**

I - Answer any **TWO** questions ( $2 \times 10 = 20$  Marks)

9. Explain the concept of inheritance in C++, and give an example of how it can be used.
10. Compute the concept of recursion in C++ functions. What is recursion, and how is it used in programming?
11. Compare Unary operator overloading and binary operator overloading with examples.
12. Examine the process of error handling in file operations in C++. What are the common errors that can occur while performing file operations, and how can they be handled?

II - Compulsory question ( $1 \times 10 = 10$  Marks)

13. Explain any three object oriented programming concepts. Apply the differences between public, private, and protected access specifiers in C++ OOP. Provide an example of each.

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