

DECEMBER 2021

**P/ID 16301/
PIT1A/PCATA**

Time : Three hours

Maximum : 80 marks

PART A — (10 × 2 = 20 marks)

Answer any TEN questions.

1. Why does the function prototyping be required?
2. List out the Logical operators and Relational operators available in C++.
3. What is String constant?
4. Give the syntax of pure Virtual function.
5. Write the usage of “new” and “delete” operators in C++.
6. Compare – early binding and late binding.
7. Distinguish between Character I/O and Byte I/O.
8. Write the use of flush() function in C++.
9. Define the term - Big-O notation.

10. Write the Postfix form of following expressions :
 - (a) $a^* b + c$
 - (b) $(a^*b)+(c+d)$
11. Write the applications of Queue.
12. What is Collision in hashing? How does the collision be avoided?

PART B — (5 × 6 = 30 marks)

Answer any FIVE questions.

13. What is Inline function? Explain with an example.
14. Write a C++ program to perform addition of two complex numbers.
15. Discuss about Constructors and Destructors.
16. Write a C++ program to copy a file to another file.
17. Discuss about tellp() and tellg() functions.
18. Write an algorithm to insert and delete a node in a Linked list.
19. List out and explain the various types of Graph.

PART C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

20. What is Friend function? Explain with an example.
 21. List out and explain types of Inheritance methods with example.
 22. Discuss about method of Error handling in a file.
 23. Explain the method of a Polynomial addition using Linked List.
 24. Describe the method of converting a Forest into Trees.
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