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**END SEMESTER REGULAR / RETEST
EXAMINATION, JULY - 2023**

Branch : Computer

Semester : 4th (New)

Subject Code : CQ - 404

ADVANCED C AND C++

Full Marks - 70

Time - Three hours

The figures in the margin indicate full marks for the questions.

Instructions :

- (i) All questions of PART - A are compulsory.
- (ii) Answer any five questions from PART - B

PART - A

Marks - 25

1. Fill in the blanks : 10
 - (a) The size of the Data type Double is _____ bytes.
 - (b) The default return type if it is not specified in function definition _____.

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- (c) Function of the scope resolution operator is _____.
- (d) Example of a unary operator is _____.
- (e) Programming language doesn't support multiple inheritance _____.
- (f) Correct syntax of the try-catch block is _____.
- (g) _____ exception used to check the error in the block.
- (h) _____ header file is required to use file I/O operations.
- (i) By default, all the files are opened in _____ mode.
- (j) Parent class and Child class relationship comes under _____.

2. State True or False: 1×10=10

- (a) C programs are converted into machine language with the help of a program called Editor.
- (b) # define is known as preprocessor compiler directive.

- (c) Structure is collection of dissimilar data types.
- (d) Are the expression *ptr++ and ++*ptr are same.
- (e) An array elements are always stored in Sequential Memory Location.
- (f) When a program is executed, the objects interact by sending a message to one another.
- (g) A procedure-oriented language emphasizes doing things or algorithms. An object-oriented language emphasizes data rather than procedure.
- (h) When the inheritance is private, the private methods in base class are Public in the derived class.
- (i) Class P, Class Q and Class R are derived from Class BASE. This is multiple inheritance.
- (j) The catch statement allows you to define a block of code to be executed if an error occurs in the try block.

3. Write syntaxes for the following : $1 \times 5 = 5$
- (a) For Loop
 - (b) Opening a File
 - (c) Inline Function
 - (d) Recursion
 - (e) To create an object.

PART - B

Marks - 45

4. (a) What are the different types of Control Structure ? Explain. 5
- (b) Write a C Program to find out the factorial of N Number. 4
5. (a) Write a C++ program to find the largest element of a given array of integers 4
- (b) What are the operations that can be carried out on a file? 3
- (c) What is the difference between pointer and string in C++? 2

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6. (a) Write a C++ program to find the largest three elements in an array. 4
- (b) What are the different methods of Parameter Passing? 3
- (c) Define Recursion. Write an advantage of using Recursion. 2
7. (a) Differentiate between Constructor and Destructor. 3
- (b) What are the different types of Operators in C++? 3
- (c) What are the Access modifiers in C++? 3
8. (a) Explain OOPS concept in detail. 5
- (b) Write a C++ program to make a Simple calculator using Switch Statement. 4
9. (a) Explain the different forms of Inheritance. 5
- (b) Differentiate between Unary operator and Binary operator. 2
- (c) Differentiate between Inline and Friend function. 2

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10. (a) What are the different ways to handle Template in C++? 4

(b) Write a detail note on Exception Handling. 5

11. (a) What are the different operations for file handling? 6

(b) Differentiate between Sequential and Random access of Filers. 3