

END SEMESTER /RETEST EXAMINATION2020**Semester: Fourth****Subject Code: CO-404****Subject: Advanced C and C++****Full Marks: 70 (Part A =25 + Part B = 45)****Duration: 3 hours****Instructions:**

1. Questions on Part-A are compulsory
2. Answer five questions from Part - B

PART – A**(Marks – 25)****Questions****Marks**

1. Fill in the blanks

1x10=10

- a) The _____ members of a class can be accessed outside the class directly by using object of this class type.
- b) A function that has return type ____ does not return anything.
- c) The ____ store values of different types in a single location
- d) In C++ _____ is achieved by Virtual Function.
- e) Multiple inheritance allows a derived class to have more than one ____ class.
- f) To make a member function virtual, the keyword ____ is used before the function declaration
- g) A/An ____ class can access private members of another class.
- h) A ____ is a variable which is used to hold the address of other variables
- i) The keyword ____ is used to return any value from the function called
- j) The parameters declared in the brackets in function definition are ____.

2 Write true or false

1x10=10

- a) Private data members can accessed only by the functions declared inside the class only
- b) Built-in functions are those which are already made available as part of C library.
- c) Structure of one type cannot be made members of another structure
- d) A class supports OOP feature *data-hiding* by binding data and associated functions together.
- e) A function can return an object.
- f) A destructor must not have any argument



- g) Types of the actual arguments should be compatible with those of the formal arguments.
- h) Every statement in a C program must end with a full stop.
- i) A pointer variable must be preceded by ampersand(&) sign at the time of its declaration
- j) The arithmetic assignment operators cannot be overloaded

3 Choose the correct answer

1x5=5

- a) Which of the following functions need a filename
 - A) fopen B) fclose
 - C) fread D) fwrite
- b) How many types of inheritance are there in C++
 - A) 2 B) 3
 - C) 4 D) 5
- c) How many specifiers are present in access specifiers in class?
 - A) 2 B) 3
 - C) 4 D) 5
- d) A virtual function that has no definition within the base class is called
 - A) Pure virtual function B) Pure static function
 - C) Pure Const function D) Friend function
- e) Which of the following is not a file opening mode
 - A) ios:: trunc B) ios::nocreate
 - C) ios:: ate D) ios:: noreplace

PART – B
(MARKS – 45)

Answer any three questions (from Q.N. 4 to Q.N. 7)

- 4 a) Write a program to enter records of students and display in sorted order 7
- b) What is enumerated data type? Give syntax and example of defining and declaring enumerated data type. 5
- 5 a) Discuss the characteristics of Object Oriented Programming (OOP) technique. 5
- b) Write a program in which a class has three data members: name, rollno, marks of 5 subjects and member function to assign grades on the basis of table given below 7



<u>Average marks</u>	<u>Grade</u>
96% or More	A
91% - 95%	B
86% - 90%	C
81% - 85%	D

76% - 80% E
71% - 75% F

- 6 a) Why virtual function is required? Explain with suitable example 5
b) Give the significance of the pointer operators & and * 4
c) Differentiate between call by value and call by reference 3
- 7 a) Write a program to illustrate functioning of *this* pointer. 7
b) Discuss the similarities and difference between global and local variables in terms of their lifetime and scope. Give example 5

Answer any one question (from Q.N. 8 to Q.N.9)

- 8 a) What is a file? Why do we need the concept of files 2
b) What is the significance of constructor 2
- 9 a) Give the syntax of a derived class with multiple base classes 2
b) What are the operators that cannot be overloaded? 2

Answer any one question (from Q.N. 10 to Q.N. 12)

- 10 What are parameterized constructors? How are they accessed in the main program? 5
- 11 Write a short note on inheritance. 5
- 12 What role is played by file modes in file operations? Describe the various file mode constants and their meanings 5

