

Code: 20CS3302, 20IT3303

II B.Tech - I Semester – Regular Examinations - FEBRUARY 2022

**OBJECT ORIENTED PROGRAMMING THROUGH C++
(Common for CSE, IT)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.
2. All parts of Question must be answered in one place.

UNIT – I

1. a) Distinguish between C and C++ with sample examples. 7 M
- b) Explain the concepts of message passing and code reusability used in object oriented paradigm. 7 M

OR

2. a) Illustrate the use of namespace in C++ with an example. 7 M
Also write the syntax to define namespace in C++.
- b) Write a C++ program to define three overloaded functions to swap two integers, swap two floats and to swap two doubles. 7 M

UNIT – II

3. a) What is a static function? What is its use? How a member of class be declared as static? 7 M
- b) Discuss the usage of the keyword ‘operator’ in operator overloading. Explain with an example. 7 M

OR

4. a) Explain about default and parameterized constructors 7 M

with suitable examples.

- b) Write C++ program to add two complex numbers using friend function. 7 M

UNIT-III

5. a) What are different types of inheritance techniques supported by C++? Give example programs for any two. 7 M
- b) Write a C++ program to demonstrate pointers to base and derived classes. 7 M

OR

6. a) How virtual functions can be used to implement runtime polymorphism? Describe. 7 M
- b) Illustrate the following concepts with examples 7 M
- i) void pointer ii) this pointer

UNIT – IV

7. a) Write a program using try block to detect and throw an exception if the condition 'divide-by-zero' occurs. 7 M
- b) Describe the file pointers and manipulators with examples. 7 M

OR

8. a) Write about file opening modes in C++. Also write a C++ program to find the frequency of vowels in a given file. 7 M
- b) Explain how to catch multiple exceptions in C++? Illustrate with an example. 7 M

UNIT – V

9. a) List and explain any five member functions from vector and list class in STL. Explain briefly. 7 M
- b) What is the use of iterator while using containers? Justify with an example. 7 M

OR

10. a) Write a C++ program to insert elements into a list. 4 M
- b) Briefly explain the use of map and iterator in STL. 10 M