



Object Oriented Technology (173105 / 223105)

P. Pages : 2

Time : Three Hours

Max. Marks : 80

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any two** sub-questions from each unit.
5. Write syntax or sample code wherever necessary.
6. Answers to the questions must be precise and to the point.

UNIT – I

1. a) Explain basic data types, user-defined data types and variable declarations in C++. **8**
b) What is an expression in C++ ? Explain types of expressions in C++. **8**
c) Write a C++ program to solve the quadratic equation using class and object. **8**

UNIT – II

2. a) Explain copy constructor. Write a C++ program to generate a series of Fibonacci numbers using a copy constructor. **8**
b) What is function overloading ? What are the rules of function overloading ? Write a C++ program to calculate volume of a cube, cylinder and a rectangular box using function overloading. **8**
c) What is operator overloading ? What are the rules for operator overloading ? Write a C++ program to overload unary '-' operator using member function. **8**

UNIT – III

3. a) Explain this pointer in C++. Write a C++ program to use this pointer. 8
- b) Explain two-dimensional arrays in C++. Write a C++ program for matrix addition and subtraction using two-dimensional arrays. 8
- c) Explain in concept of pointer to objects in C++ with the help of a C++ program. 8

UNIT – IV

4. a) Explain multipath inheritance and virtual base classes in C++. Write a C++ program using virtual base class for student record. 8
- b) Explain multiple inheritance in C++ with the help of a C++ program. 8
- c) What is polymorphism ? What are the types of polymorphism ? Explain the concept of static binding and dynamic binding with the help of a C++ program. 8

UNIT – V

5. a) Explain the file opening modes in C++. Also explain the file pointers and functions for manipulation of file pointer. 8
- b) Explain the formatted console I/O operations with the help of ios class functions and flags and manipulators. 8
- c) Explain the need of template. Write a C++ program to define data members of template type. 8
