29/05/2019

34003

Roll No. .....

Printed Pages : 2

BT–4 / M–19

OBJECT ORIENTED PROGRAMMING IN C++

Paper–IT–252 E

Time allowed : 3 hours] *[Maximum marks : 100*

Note : *Students will be required to attempt five questions in all; selecting at least one question from each unit. All questions carry equal marks.*

Unit–I

1. (a) With the help of syntax for creating the derived class, explain the visibility of the base class members, for the access specifiers private, protected and public.

(b) What does pointer do ? Explain 'this' pointer using an example. Describe the application of 'this' pointer. 10+10=20

2. (a) Explain the concept of abstract classes, virtual base class, friend classes and friend function with suitable example.

(b) Explain public, private and protected access specifiers and show their visibility when they are inherited as public, private and protected. 10+10=20

Unit–II

3. Explore operator functions as class members and as friend function. Which operators cannot be overloaded ? Write steps to overload + operator so that it can add two complex numbers. 20

4. (a) What is the ambiguity that arises in multiple inheritance ? How it can be overcome ? Explain with example.

   (b) How to use constructor and destructor in derived class ? State an example. 10+10=20

Unit–III

5. (a) What pure virtual functions ? Explain calling a virtual function through a base class reference.

   (b) What is runtime polymorphism ? How virtual functions can be used to implement the runtime polymorphism ? Explain with the help of an example. 10+10=2

6. (a) Explain ignore (), flush (), peek () and putback () functions.

   (b) How to read and update in a sequential access file ? Discuss.

   (c) Write a detailed note on unformatted I/O. 7+7+6=20

Unit–IV

7. What is exception handling ? Write a C++ program to demonstrate the "try", "throw", and "catch" keywords for implementing exception handling. 20

8. What is function template ? Write a program to swap two values using a function template. In your program use two different combinations of data types for the two values you are swapping. 20