

Roll No. ....

Total Pages : 03

BT-3/D-19

33160

OBJECT ORIENTED PROGRAMMING  
USING C++

PC-IT-207 A

Time : Three Hours]

[Maximum Marks : 75

Note : All questions in Part-A and Part-B are compulsory. Attempt four questions from Part-C selecting one question from each Unit.

Part-A

1. (i) When do we declare the member of a Class Static ? (3)
- (ii) What do you understand by Inline Function ? What is the difference between Inline Function and Preprocessor Macro ? (3)
- (iii) What do you understand by constructor ? What is a parameterized constructor ? (3)
- (iv) What is the use of this pointer ? (3)
- (v) What is Friend Function ? What is the use of it ? (3)

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Part-B

Unit-I

2. Differentiate between private and public members of a class using suitable examples. 5

Unit-II

3. What is the difference between compile time and run time polymorphism ? Explain using suitable examples. 5

Unit-III

4. What is a virtual destructor ? Discuss the use of virtual destructor using suitable example. 5

Unit-IV

5. What is a function template ? Distinguish between function template and overloaded functions. 5

Part-C

Unit-I

6. What do you understand by Data Abstraction ? What is the difference between data abstraction and procedural abstraction ? What are the advantages of using an object oriented approach to develop the software ? (10)

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7. What do you understand by Visibility Modifiers ? Discuss the access control to the public, private, and protected members of a derived class in case of public derivation, private derivation, and protected derivation. (10)

#### Unit-II

8. What is Operator Overloading ? What are advantages of it ? Write a program in C++ to overload the + operator to find the sum of two matrices. (10)
9. Write a program in C++ to overload the ~ operator to find the trace of a matrix. (10)

#### Unit-III

10. Write an object oriented program in C++ to replace the lowercase characters with uppercase and vice versa. (10)
11. What is the difference between sequential access and random access files ? Write a program in C++ to count the number of letters and digits in a sequential file. (10)

#### Unit-IV

12. Write a function template for finding the minimum value contained in an array. (10)
13. What is an exception ? Discuss the try/throw/catch sequence. Explain the use of Catch-All exception handler using suitable example. (10)