

Roll No.

Total Pages : 3

BT-4/M-22

44222

OBJECT-ORIENTED PROGRAMMING SYSTEM

Paper-ES-CS-CYS-204A

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *five* questions in all, selecting at least *one* question from each unit. All questions carry equal marks.

UNIT-I

1. (a) What is object and class? Explain with the help of a C++ program. 8
- (b) Identify the roles of accessifier. Explain with the help of a C++ program. 7
2. (a) Why is it necessary to use the header files while designing object-oriented programming system? Explain with the help of real time examples. 8
- (b) Explain the role of class scope and class member in C++. 7

UNIT-II

3. (a) What is role of 'This Pointer' in designing object-oriented programming system? Explain with the help of a C++ program. Also mention its limitations. 8
- (b) Identify the role of using inheritance. Design a class for multilevel inheritance using public, private and protected derivation. 7

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4. (a) What are the roles of using constructors and destructors in object-oriented programming system? Explain copy constructor with the help of a C++ program. 8
- (b) Explain friend class with the help of a C++ program. Also mention its limitations. 7

UNIT-III

5. (a) Identify the basic purpose of polymorphism. Explain virtual function and pure virtual function with the help of a C++ program. 8
- (b) Give the general syntax of operator and functional overloading. List the operation which cannot be overloaded. 7
6. (a) Justify the concepts of prefix and postfix unary increment operators to be overloaded with the help of a C++ program. 8
- (b) What is binding? Differentiate between static and dynamic binding. Write a program in C++ to illustrate these concepts. 7

UNIT-IV

7. (a) Why the text streams and binary streams are used in object-oriented programming system. Write a C++ program to illustrate the same. 8

- (b) What are templates? How do templates work? With the help of C++ program, explain function template to implement bubble sort and class template to implement binary tree. 7
8. (a) Discuss the concept of stream manipulation with the help of a C++ program. 8
- (b) What do you mean by exception? Discuss various exception handling mechanisms which are available in C++. Write a suitable C++ program to show exception handling. 7

