

Roll No.

Total Pages : 2

BT-3/D-21

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OBJECT ORIENTED PROGRAMMING

Paper : PC-CS-AIDS-203A/PC-CS-AIML-205A

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) Give an introduction to C++ with an illustrative C++ program.
(b) List some popular application areas of object-oriented programming.
2. (a) What is the purpose of an abstract class and what are its properties? Give an example of an abstract class.
(b) Distinguish between :
 - (i) Classes and objects.
 - (ii) Inheritance and polymorphism.

UNIT-II

3. (a) Why do we need friend functions? What are the characteristics of friend function? Illustrate the use of friend function class using a suitable example.
(b) Define constructors and destructors as used in C++. What are the types of constructors?

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4. What are the advantages of Inheritance? Explain different types of Inheritance in C++ with examples.

UNIT-III

5. What is a virtual function and a pure virtual function? How is dynamic binding implemented with virtual functions?
6. What is the advantage of operator overloading in C++? What is its syntax and rules? Describe operator overloading with the help of a suitable example.

UNIT-IV

7. What are the advantages of exception handling over traditional error handling? How is exception handling carried out in C++? List the standard exceptions which can be used in C++ programs.
 8. Answer the following question in brief :
 - (a) What are the types of streams in C++?
 - (b) Distinguish between sequential access and random access of files.
 - (c) What are Templates? How are templates used to define classes and functions?
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