

Roll No.

Total Pages : 02

BT-3/D-22

43217

OBJECT ORIENTED PROGRAMMING
PC-CS-AIDS-203A

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. What is Object-Oriented Programming ? Describe the following in the context of Object-Oriented Programming :
 - (a) Objects and Classes
 - (b) Polymorphism
 - (c) Inheritance.
2. (a) Illustrate the structure of C++ program through an example application of your choice.
(b) Bring out the distinction between abstraction and encapsulation using suitable examples.

Unit II

3. (a) Write a simple and complete C++ program to demonstrate Friend class.

- (b) How constructors are different from a normal member function ? Describe the characteristics and types of constructors.
- 4. Why and when do we use inheritance ? What is public, private and protected inheritance ? Also describe the types of inheritance in C++.

Unit III

- 5. How is compile-time polymorphism achieved in C++ ? Illustrate using suitable examples.
- 6. (a) Describe the use of virtual functions. When is a virtual function called a pure virtual function ?
(b) Describe how fractional numbers can be added using operator overloading.

Unit IV

- 7. What are the advantages of exception handling and how is exception handling built up in C++ ? Give a brief description of standard exceptions.
- 8. Answer the following questions in brief :
 - (a) What are the types of streams in C++ ?
 - (b) What are templates and how do they work ?
 - (c) Can there be more than one argument to templates ? Justify using an example.