Roll No. ..... 197.

Total Pages : 3

43141

BT-3/D-24

OBJECT ORIENTED PROGRAMMING

Paper–PC-CS-203A

Time : Three Hours] [Maximum Marks : 75

Note : Students are required to attempt *five* questions in all, selecting at least *one* question each from Unit-I to Unit-IV. All questions carry equal marks.

UNIT–I

1. (a) Compare and contrast the structured programming and object oriented programming. Write about the libraries in C++ and how to add standard library in C++?

(b) Explain the structure of C++ Program with an example and define abstraction, encapsulation with syntax. (8+7=15)

2. (a) Discuss the use of public, private and protected access specifiers and their visibility in the class.

(b) How do you control access functions? Differentiate between Structures and class? Give an example.

(8+7=15)

UNIT–II

3. What is dynamic memory allocation and deallocation? Write a C++ program ensuring that your program contains special member functions like constructors, copy constructors and Destructors to create and destroy objects? (15)

4. (a) What is inheritance? How does it enable code reusability, explain with an example?

   (b) Discuss the effect of constructors and destructors of base class in deriving classes. (8+7=15)

UNIT–III

5. (a) Write a program to define virtual, non-virtual functions and determine size of the object.

   (b) Differentiate between static and dynamic binding. (8+7=15)

6. What is Operator overloading? Write a C++ program illustrating overloading NEW and DELETE operators? Give the operator in C++ which cannot be overloaded. Write any *four* rules for operator overloading. (15)

UNIT–IV

7. (a) Explain the role of seekg(), seekp(), tellg(), tellp(), function in the process of random access in a file.

(b) Write a C++ program involving input/output using overloaded operators << and >> and member functions of I/O stream classes. (8+7=15)

8. (a) Compare and contrast error and exception. Explain the following terms : Rethrowing Exception, Catching Exception, Exception Specification.

(b) What are non-type template arguments? Explain the Standard Template Library and discuss its working. (8+7=15)