

1127

Bachelor of Computer Applications

Third Semester

BCA-303: Implementation of Object Oriented Concept through C++

(Old Syllabus 2016-17)

Time allowed: 3 Hours

Max. Marks: 90

NOTE: Attempt five questions in all, including Question No. IX (Unit-V) which is compulsory and selecting one question each from Unit- I-IV.

x-x-x

UNIT – I

- I. a) Describe the basic concepts of object-oriented programming.
b) Differentiate between private and protected class. Elaborate with suitable example. (10,8)
- II. a) What is a friend function? How they are defined? How the friend function to a class can be inline substituted?
b) How-do you define member functions in class? Explain with suitable example. (2x9)

UNIT – II

- III. a) What is operator overloading? Explain the importance of operator overloading with help of example?
b) Differentiate between Pass By Value and Pass By Reference.
c) What are constructors and destructors? Explain how they differ from normal functions. (3x6)
- IV. a) Define scope resolution operator. How it is useful for defining a member of a class.
b) What is function overloading? Illustrate with help of an example?
c) What is constructor? With example distinguish between parameterized constructor and copy constructor? (3x6)

UNIT – III

- V. a) What is multiple inheritance? How it is realized in C++? Give suitable examples
b) Explain the usage of public private and protected visibility modes?
c) Explain nesting of classes with example. (3x6)
- VI. a) Explain the concept of dynamic binding. Implement the concept using virtual functions with help of C++ program.
b) Write notes on the following:-
i) Encapsulation
ii) Polymorphism (10,8)

P.T.O.

(2)

UNIT – IV

- VII. a) Define files. How is a file created in C++? Write and explain different operations that can be performed on files.
- b) Write a program to open an existing file and append data into B? (10,8)
- VIII. a) What are templates? Why are they needed? Explain different types of templates?
- b) What are exceptions? What is the need of exception handling? Write a program to demonstrate catching of exception? (2x9)

UNIT – V

- IX. Attempt the following:-
- a) What is need of multiple catch blocks?
- b) What are various file modes?
- c) Define Data abstraction?
- d) Explain the need of inheritance
- e) List the operators that can be overloaded and that cannot be overloaded.
- f) What is default constructor?
- g) What is class? How is it specified?
- h) 'An object is an instance of a class'. Explain
- i) What is a pointer? (9x2)

x-x-x