BCA/M-16
ADVANCED PROGRAMMING USING C++
PAPER-BBA-242

Time Allowed: 3 Hours Maximum Marks: 80

Note: Attempt five questions in all. Question No. 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. (i) Define Abstract base class.
   (ii) Explain the importance of Inheritance.
   (iii) Describe the working of destructors in Inheritance.
   (iv) What do you mean by Class template instantiation ?
   (v) Explain the syntactic rules for (i) read() (ii) write() function.

Unit-I

2. Distinguish between Virtual function and Pure virtual functions. When do we make virtual function pure? What are the implications of making a function pure virtual function? Explain with example.

3. (a) Can we make a destructor virtual? What purpose a virtual destructor will serve? Explain with example.

   (b) Explain the concept of Function overriding with example
   .

Unit-II

4. What is Type conversion function? How is it created? Write a program in C++ language to convert a class X with class Y using (i) Constructor, and (ii) Type conversion function.

5. What do you understand by visibility modes in class derivations? What are the rules of derivations in these modes? Explain with the help of an example.

Unit-III

6 (a) What do you mean by Multipath inheritance ? Write a program in C++ to implement it.

(b) Discuss the role of Constructor in Inheritance.

7 (a) Explain the concept of Function template. Write a function template to swap two data type integers and floats using a template.

(b) Write a program of your choice to overload a template function.

Unit-IV

8. (a) What is Exception?

(b) Explain the following using example :
(i) Catch all exceptions.
(ii) Rethrowing an exception.

9. (a) Differentiate between Binary and Text files. What are the advantages of binary files over text files?

(b) What do you mean by File pointers? Explain different types of file pointers.