

BCA/M21**1894****ADVANCED PROGRAMMING USING C++****Paper-BCA-242****Time allowed : 3 Hours****Maximum Marks : 80**

Note : Attempt **five** questions in all, selecting **one** question from each unit.
Question No. **1** is compulsory. All questions carry equal marks.

Compulsory Question

1. (i) Explain the concept of pure virtual functions. 4
- (ii) Explain the concept of type conversion in C++. 4
- (iii) Explain role of destructors in Inheritance with example. 4
- (iv) Explain various operations on files in C++. 4

UNIT-I

2. What is Function Overriding? Differentiate between overriding and overloading. Also differentiate between virtual & pure virtual functions in detail. 16
3. (i) What is Virtual Derivation? Explain with examples in detail. 8
- (ii) What is Virtual Destructor? Explain the concept of virtual destructors with example. 8

UNIT-II

4. Define Class & Object. What is the relation between the two? Also explain the purpose of a class specifier with example. 16
5. Explain how classes are declared in C++ program with example. Also Give an example showing nesting of member functions 16

UNIT-III

6. (i) Explain multiple inheritance with examples? What ambiguity arises in it and how can it be resolved? 10
- (ii) What is Inheritance? Differentiate between public and private access specifier. 6
7. (i) Explain the concept of genericity and give advantages and disadvantages of using generic functions in detail. 8
- (ii) Explain various types of templates in detail in C++ . 8

UNIT-IV

8. (i) Explain file pointers and its types in details. Also explain various functions for manipulation of file pointers. 10
- (ii) Differentiate between text and binary files in detail. 6
9. (i) Explain opening and closing of files in C++ with suitable examples. 8
- (ii) Explain class template and its instantiation with example. Give an example of class template with multiple parameters. 8