BCA/M-22   **1879**

COMPUTER APPLICATIONS

Advanced Programming using C++
BCA-242

Time : Three Hours]   [Maximum Marks : 80

Note : Attempt *Five* questions in all. Q. No. 1 is compulsory. Attempt *four* questions by selecting *one* question from each Section.

1. (a) Explain virtual destructors.   4

    (b) Define inheritance and its access specifiers.   4

    (c) Explain the role of constructors in Inheritance with example.   4

    (d) Explain need of templates in C++.   4

Section I

2. (a) Explain various types of polymorphism in detail. 8

    (b) What is virtual function ? Explain its need and rules for virtual functions.   8

3. (a) Explain abstract class with examples.   8

    (b) What is a constructor ? Explain its characteristics and types in C++.   8

Section II

4. Explain super-class and sub-class with suitable example. What are the implications of private, public and protected access specifiers ?   16

5. What is protected access specifier ? How do you make protected member inheritable ?   16

Section III

6. What is function template and its need ? Also explain overloading of template functions and function templates with multiple parameters.   16

7. Explain different forms of inheritance with suitable examples.   16

Section IV

8. Explain exception with suitable examples. Explain various ways and mechanism to handle exceptions in C++.   16

9. What is a file and how to declare it ? Explain two methods to open a file with examples. Also explain method of detecting end of file.   16