BACHELOR IN COMPUTER APPLICATIONS

Term-End Examination

December, 2007

CC-16 : INTRODUCTION TO C++

Time : 2 hours   *Maximum Marks : 75*

Note : *Question number 1 is **compulsory**. Answer any **three** questions from the rest. Use C++ wherever necessary.*

1. (a)   A company has many departments. An employee of a company is associated with any one of the departments. Each department has a manager. The manager is one of the employees. Create the necessary inheritance hierarchy and classes for the company. You must include the polymorphic function for printing details of the employees. The classes should have constructor/destructor and one additional function in addition to print. Justify your class design.   *15*

    (b)   Define a stack as a template (You need not provide implementation details).   *5*

    (c)   What is the use of static data members and static member functions ? How are they referenced ? Explain with an example.   *5*

   (d)   Write short notes on the following :   **5**

       (i)   Polymorphism

       (ii)   Exception handling

2. (a)   Write a program in C++ that accepts a string as input and outputs the words in the string in the form of a list.   **10**

    (b)   Explain friend function with an example.   **5**

3. (a)   Give an example of an application which is suitable for development using C++. Justify your answer.   **10**

    (b)   What is a reference variable in C++ ? Where is it used ? What is the purpose of **const** keyword along with function argument ? Can **const** be used with a function ? Justify your answer with an example.   **5**

4. (a)   Write a program in C++ that accepts two files as input and concatenates the contents of first file to second file. The program should print the second file as output.   **10**

    (b)   How do you overload a binary operator ? Describe with the help of an example.   **5**

5. Describe the following terms with the help of an example of each :   **15**

       (i)   "this" pointer

       (ii)   Reusability

       (iii)   Abstract class