

**BACHELOR IN COMPUTER  
APPLICATIONS****Term-End Examination****December, 2008****CS-72 : C++ AND OBJECT ORIENTED  
PROGRAMMING***Time : 2 hours**Maximum Marks : 60*

**Note :** Question number 1 is **compulsory**. Attempt any **three** questions from the rest. All examples may be given with reference to C++ programming language.

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1. (a) What are public and private inheritance ? Why do we need different access specifiers for inheritance ? 5
  - (b) What are the applications of use case diagram and interaction diagram ? Give an example of each. 5
  - (c) How are objects created and initialised ? Explain with the help of an example. 5

- (d) Write a program which will accept a string from the user, reverse it and find whether the string is a palindrome or not. 8
- (e) Explain the concepts of operator overloading and function overloading with the help of an example of each. 7
2. (a) What is exception handling ? How is it performed in C++ ? Explain with the help of an example. 6
- (b) Write a C++ template function that accepts two arguments of any numeric type and finds the larger of them. 4
3. (a) How are arrays declared in C++ ? How can pointers manipulate array elements ? Give an example. 5
- (b) Explain the concept of virtual functions with the help of an example. 5
4. (a) Define a friend function. Explain the access rights of a friend function with respect to public and private data members of a class with the help of an example. 5
- (b) What is abstraction in object oriented languages ? Explain its importance with the help of an example. 5

5. Design and represent a queue of integers as a class. Also, illustrate the use of insert and delete operations for the queue. Make any assumptions that are required.

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