

00964

**BACHELOR IN COMPUTER  
APPLICATIONS**

**Term-End Examination**

**December, 2010**

**CS-72 : C++ AND OBJECT ORIENTED  
PROGRAMMING**

*Time : 2 hours*

*Maximum Marks : 60*

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*Note : Question number 1 is compulsory. Attempt any three from the rest. All examples must be in C++ programming language only.*

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1. (a) What is UML ? Why is UML used ? What are Interaction diagrams and why are they used ? Explain types of Interaction diagrams 6
- (b) What is Inheritance ? Explain the two main types of Inheritance giving examples of each. 5
- (c) Explain the utility of 'this' pointer with the help of an example. 4
- (d) What are Macros ? How are they different from in-line functions ? Explain with the help of examples. 5
- (e) Write a menu-driven program in C++ to add, modify and search a student record in a file. 10

2. (a) What are Virtual Functions ? Explain their utility with an example. Explain pure virtual function. 5
- (b) Explain any five disadvantages of the C programming language as compared to C++. 5
3. Explain the following terms with suitable examples. 10
- (a) Size of operator
- (b) && and ||
- (c) ++i and i++
- (d) ::
- (e) Throw exception
4. (a) How can a library of your own functions be created ? Create a library to include the functions power ( $x, n$ ) and swap ( $a, b$ ). 6
- (b) What is Reusability ? Explain any five factors that influence reusability. 4
5. (a) Write a class template using C++ for creating a linked list. 5
- (b) How can objects be passed as arguments to a function ? Using this method, write a program for adding two matrices. 5