

Bachelor in Information Technology (BIT)

Term-End Examination

December, 2007

CSI-24 : OBJECT ORIENTED PROGRAMMING

Time : 2 Hours

Maximum Marks : 60

Note : There are two sections in this paper. All questions from Section A are **compulsory**.
Answer any **two** questions from Section B.

SECTION A

1. State true or false : 5×1=5
 - (a) LISP is an object-oriented language.
 - (b) By default all the members of the structure are private.
 - (c) Pure virtual function has only declaration and no definition in the class in which it is declared.
 - (d) Abstract class can be instantiated.
 - (e) Using friend keyword, non-member function can access the private member of the class.

2. Explain the following with the help of an example : 3×5=15
 - (a) Encapsulation
 - (b) Polymorphism
 - (c) Class and object

3. Write a program in C++ that strips comments out of a C++ program that is read from cin and removes both // comments and /**/ comments and writes result to cout. 10

SECTION B

Answer any **two** questions from this section.

4. (a) What do you understand by constructor and destructor ? Explain any four differences between constructor function and other member functions of a class. 6
- (b) Write a C++ program to swap two integers without using third variable. 5
- (c) Explain the difference between call by value and call by reference, with an example. 4
5. (a) Write an interactive program in C++ to read two strings, compare them and find the length of a greater string. 10
- (b) How does the access of inherited members depend upon their access specifiers and the visibility modes of the base class ? 5
6. (a) Imagine a publishing company that markets both books and audio-cassette version of its works. Create a class publication that stores the title (a string) and price (type float) of a publication. From this class derive two classes : book, which adds a page count and tape, which adds playing time in minutes. Each of these three classes should have a `getdata()` function to get its data from the user and `putdata()` function to display its data.
- Write a `main()` program to test the book and tape classes by creating instances of them, asking the user to fill in their data with `getdata()` and then displaying the data with `putdata()`. 10
- (b) Explain the difference between method overloading and method overriding with the help of an example. 5