CS-72

BACHELOR OF COMPUTER APPLICATIONS (PRE-REVISED)

Term-End Examination

June, 2014

CS-72 : C++ AND OBJECT ORIENTED PROGRAMMING

Time : 2 hours *Maximum Marks : 60*

Note : *Question No. 1 is **compulsory**. Attempt **any three** questions from the rest.*

1. (a) Write a program in C++, using the inheritance feature to define a base class "Employee" and derive "Manager", "Engineer", "Technical Officer" and a "Clerk" as derived classes. Select meaningful data members and member functions for the respective classes. Write a member functions to display the name of the person, designation, department s/he is working with. **10**

    (b) What are inline functions ? How are they different from member functions ? Explain with the help of an example code segment for each. **10**

    (c) Design a class in C++ that stores a two dimensional matrix. Write a member function that adds two matrices using operator overloading. **10**

2. (a) What is function overloading ? Explain the   5
       concept with the help of an example code
       segment.
   (b) Explain the use of the following operators   5
       in C++ with the help of an example for
       each :
       (i) Scope Resolution Operator
       (ii) Comma Operator

3. (a) Explain five advantages of Object Oriented   5
       Programming.
   (b) Define friend function. Explain it with the   5
       help of an example.

4. (a) Write a program that accepts a string as   5
       input and displays its length. Use
       appropriate classes with data members and
       member-functions.
   (b) Explain the following access specifiers in an   5
       inheritance hierarchy with an example for
       each :
       (i)   Private
       (ii) Public
       (iii) Protected

5. Explain the following with the help of an
   example : $4 \times 2\frac{1}{2} = 10$
   (a) Dynamic Binding
   (b) This Pointer
   (c) Use Case Diagram
   (d) Constructors and Destructors.

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