

B. TECH (CSE/IT) &amp; B. TECH (CSE) + MBA

THIRD SEMESTER END TERM EXAMINATION

NOVEMBER, 2011

## OBJECT ORIENTED PROGRAMMING

## USING C++

Time : 3 Hrs.

Maximum Marks : 70

*Note: Attempt questions from all sections as directed.*

## SECTION - A (20 Marks)

*Attempt any 3 questions.**Each question carries 6 marks.*

1. How do we use default parameters? Explain with example.
2. What do you mean by copy constructor? Create a class, which keeps track of the number of its instances. Use static data member, constructors and destructors to maintain updated information about active objects.
3. Explain the concept of exceptional handling. Explain its parts showing the direction of execution.

4. Write a program to increase salary of employee by 10% using ++operator overloading.
5. Differentiate call by value and call by reference. Write a program to swap two numbers to explain the Methods.
6. What are the differences between a C++ struct and C++ class in terms of encapsulation and inheritance?

## SECTION - B (20 Marks)

*Attempt any two questions.*

*Each question carries 10 marks.*

7. (a) Why do we need friend function? WAP to add two objects of class Time by using friend function. (6)
- (b) Explain the problems we face if we don't have static members. (4)
8. (a) What do you know about inheritance? Explain its types with syntax. (4)
- (b) What do you mean by virtual function? Write a program to explain virtual function. (6)

9. (a) What is a file mode? Describe the various file mode options available. (5)
- (b) Write explanatory note on runtime memory management. (5)

## SECTION - C (20 Marks)

*(Compulsory)*

10. (a) Explain why we need file handling. List the types of Input/Output method in file.
- (b) Write a program to count total number of opening and closing ({}).
- (c) Write a program to declare classes X, Y, Z. Each class contains one character array as a data member. Concatenate strings of classes X and Y and store it in Z. Show all the strings.