

Third Semester MCA Degree Examination, December 2010 **Object Oriented Programming with C++**

Max. Marks:100 Time: 3 hrs.

Note: Answer any FIVE full questions.

1	a. b. c.	Differentiate between the volatile and constant qualifiers. State the difference between C++ structure and class. Write a C++ program that structure with data member name & member function to display name and assign	(10 Marks) (04 Marks) defines a n value to (06 Marks)
2	a. b.	What is the function overloading? Explain the benefits using a programming example	(10 Marks) ple. (10 Marks)
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- Explain the following with example: (10 Marks) ii) Friend class. i) Friend function b. Explain the static data members, static member functions and their use. (10 Marks)
- Write a C++ program to sort an array of students objects based on the average field. Assume following data members atleast name, rollno, marks in 3 subjects (to be accepted). Average to be computed using marks field. Use member function to compute average marks for each (12 Marks)
 - (04 Marks) Explain new and delete operators, with examples.
 - What is an inline function? Explain its general syntax, merits and demerits. (04 Marks)
- Explain the following with example: 5 a.
 - ii) Local classes and restrictions during its use. (10 Marks) i) Anonymous unions
 - b. Explain the use of scope resolution operator, with an example. (05 Marks)
 - c. Write a C++ program that display the contents of employee object, using the pointer to object concept. Assume at the minimum following data members in an employee class: (05 Marks) Name, rollno, employee id and salary.
- What will be the visibility of private, public and protected data members when inherited by 6 (05 Marks) derived class? Explain with examples.
 - When do you make a virtual function pure? What are the implications of making a virtual b. (07 Marks) function pure virtual function?
 - Describe the rules to be followed while overloading the operators. (08 Marks)
- Explain how the constructors are called in the multilevel inheritance, with examples. 7 a.
 - (05 Marks) (05 Marks)
 - Distinguish between pure and virtual functions. b.
 - Define early binding and late binding, with examples. (10 Marks) c.
- Describe the C++ functions that support random access to a file along with syntax. 8 a.
 - (10 Marks)
 - What are the manipulators? List the various predefined manipulators supplied by C++ I/O b (05 Marks) streams.
 - Explain C++ read and write file functions along with syntax. (05 Marks)

