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13MCA22

Second Semester MCA Degree Examination, June/July 2014
Object Oriented Programming using C++

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

1.
 - a. Explain principles of OOPS. (06 Marks)
 - b. What is inline function? In which situations inline function expansion will not work. (04 Marks)
 - c. How data encapsulation is achieved in C++? Explain with an example. (10 Marks)
2.
 - a. Write the uses of scope resolution operator. (04 Marks)
 - b. What are friend functions and friend classes why are they used? Explain with an example. (08 Marks)
 - c. What is constructor? Explain different types of constructor. (08 Marks)
3.
 - a. Write the rules for overloading an operator. (06 Marks)
 - b. Write a C++ program to overload '*' operator to multiply two matrices. (08 Marks)
 - c. Write a C++ program to overload '==' operator to check whether the strings are equal or not. (06 Marks)
4.
 - a. What is advantage of inheritance? Write a C++ program to demonstrate multiple inheritance. (08 Marks)
 - b. Write a general format for passing arguments to a base class constructor and also illustrate with an example. (08 Marks)
 - c. Write a note on 'this' pointer. (04 Marks)
5.
 - a. What is dynamic memory allocation? Explain how it is handled in C++, with an example. (06 Marks)
 - b. How runtime polymorphism is achieved in C++? Explain with an example. (08 Marks)
 - c. Explain different class access specifiers used in C++. (06 Marks)
6.
 - a. What is a stream? Explain the stream class hierarchy with a diagram. (10 Marks)
 - b. Write a function template to sort the integer and double numbers using selection sort. (10 Marks)
7.
 - a. What is exception? How exceptions are handled in C++? Explain how multiple catch statement can be used in exception. (10 Marks)
 - b. Write a note on STL container classes. (06 Marks)
 - c. Explain the following :
 i) seekg() ii) seekp() iii) tellg() iv) tellp(). (04 Marks)
8. Write short notes on :
 - a. Virtual base class
 - b. Destructors in derived classes
 - c. Local classes
 - d. Function over riding. (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
 2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.