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10CS36

Third Semester B.E. Degree Examination, June/July 2013
Object Oriented Programming with C++

Time: 3 hrs. Max. Marks:100

Note: ***Answer FIVE full questions, selecting atleast TWO questions from each part.***

PART – A

1 a. What is a statement? Explain jump statements with syntax. **(08 Marks)**
b. What is inline function? Write a C++ program to find maximum of 2 numbers using inline function. **(04 Marks)**
c. What is function overloading? Explain with example, why function overloading is important? **(08 Marks)**

2 a. What is class? Explain the syntax of class. **(08 Marks)**
b. Mention the restrictions that are placed on static member functions. **(04 Marks)**
c. What is paramterized constructor? Explain the different methods of passing arguments to the parameterized constructor with example. **(08 Marks)**

3 a. What are friend functions? What are the advantages of using friend functions? Write a C++ program to find sum of 2 numbers, using friend functions. **(08 Marks)**
b. What are generic functions? Explain with syntax. **(04 Marks)**
c. Write a C++ program to demonstrate the addition of two longitude and latitude values by overloading + operator. **(08 Marks)**

4 a. What is inheritance? Explain the syntax of defining derived classes. **(08 Marks)**
b. What is copy constructor? When the copy constructor is employed? Explain with syntax. **(04 Marks)**
c. Explain protected base – class inheritance, with suitable example. **(08 Marks)**

PART – B

5 a. Explain when constructors and destructors are executed? Explain the order of invocation of constructors and destructors in multilevel inheritance with a suitable program. **(10 Marks)**
b. Explain how to pass parameters to base – class constructors, with suitable program. **(10 Marks)**

6 a. What is virtual function? What is the use of virtual function? Write a C++ program to demonstrate calling of virtual function through a base class relevance. **(10 Marks)**
b. What is pure virtual function? Explain with syntax. **(04 Marks)**
c. What is an abstract class? How it supports run-time polymorphism? **(02 Marks)**
d. Mention the differences between early binding and late binding. **(04 Marks)**

7 a. What are streams in C++? Mention four built – in streams that are automatically opened when a C++ program beings execution. **(06 Marks)**
b. Explain width( ), precision( ) and fill( ) functions. **(06 Marks)**
c. What are I/O manipulators? List and mention the purpose of C++ I.O manipulators. **(08 Marks)**

8 a. What is an exception? Explain the syntax of try and catch. **(05 Marks)**
b. What are containers? Mention any four container classes defined by STL. **(05 Marks)**
c. Explain any six commonly used member functions defined by vector. **(06 Marks)**
d. Explain any four commonly used member functions of map. **(04 Marks)**

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