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	FINALTERM EXAMINATION SPRING 2006 CS201 - INTRODUCTION TO PROGRAMMING (Session - 2)	Marks: 50 Time: 120min

StudentID/LoginID: _____

Student Name: _____

Center Name/Code: _____

Exam Date: Wednesday, August 23, 2006

Please read the following instructions carefully before attempting any of the questions:

1. Attempt all questions. Marks are written adjacent to each question.

2. Do not ask any questions about the contents of this examination from anyone.

a. If you think that there is something wrong with any of the questions, attempt it to the best of your understanding.

b. If you believe that some essential piece of information is missing, make an appropriate assumption and use it to solve the problem.

c. Write all steps, missing steps may lead to deduction of marks.

d. All coding questions should be answered using the **C** ++ syntax.

You are allowed to use the Dev-C++ compiler to write and test your code. If you do so please remember to copy and paste your code into the examination solution area. **(Do NOT share your code; your colleague could get higher marks than you!!)**

****WARNING: Please note that Virtual University takes serious note of unfair means. Anyone found involved in cheating will get an `F` grade in this course.**

For Teacher's use only											
Question	1	2	3	4	5	6	7	8	9		Total

Marks											

Question No: 1 (Marks: 2) - Please choose one

. A function that calls itself is known as

- Iterative function
- Inline function
- Recursive function
- main ()

Question No: 2 (Marks: 2) - Please choose one

The function call to a default constructor

- looks like any function call, except there is no return value
- never takes any arguments
- creates but cannot initialize an object
- is made automatically when an object is created

Question No: 3 (Marks: 2) - Please choose one

Static member functions

- must be declared inside the class definition, but defined outside it
- must be declared private
- have multiple copies for the entire class
- can access only static data

Question No: 4 (Marks: 2) - Please choose one

The reserved words public and private comes under the category

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- structures
- strings
- accessibility modifiers
- types of functions

Question No: 5 (Marks: 6)

Write a program that will read any four digit number from the user through key board and st number into an Integer variable **n.** The program then calculates the sum of all the digits in t number **n** and display the result on the screen.

Question No: 6 (Marks: 10)

Write a program that will create a class **book.** The class book has the following data members
bookid(long integer)
author(char array of size 20)
yearpb(integer)
The class book has a parameterized constructor and a member function **show()** that is used to display the data in a tabular form. The program creates three objects **b1**, **b2** and **b3** and assigned data trough the parameterized constructor. The program then display the using the **show()** function.

Question No: 7 (Marks: 8)

Analyze the following code and list all the errors along the line numbers.

```
class test
{
private:
    int a, b;
public:
        test( int x, int y)a(x),b(y){};
        void show()
         {
           cout<<endl<<a<<endl<<b;
         }
         test operator +(test t);
   }
test operator+(test t)
{
```

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```
  test temp;
  temp.x=a+a.t;
  temp.b=b+b.t
 return(temp);
}
```

Question No: 8 (Marks: 10)

Is it possible to define a two dimensional array of objects in a class? If yes justify your answer by giving an example program. If no then give reasons.

Question No: 9 (Marks: 8)

Write a program that uses a function template **divide().** The function **divide()** will take two values and return the reminder of these two values. Test the function with two integer values **x=104** and **y=49** and two float vales **a=6.9** and **b=2.7**.