1. Choose the **true** statements below.
   
   A. Private class members must be declared before public members.  
   B. **Class members are private by default.**  
   C. Members of a struct are private by default.  
   D. All class constructors must be public.

2. Choose the **false** statements below.

   A. **Constructors do not have the same name the class.**  
   B. Constructors cannot have a return type.  
   C. **Constructors cannot take arguments.**  
   D. Destructors cannot take arguments.

3. Choose the **true** statements below.

   A. Destructors may return a value.  
   B. All private members of a class must be declared together.  
   C. All public members of a class must be declared together.  
   D. **A class object can be declared as a pointer.**  
   E. The "new" operator can dynamically allocate an instance of a class.

4. Choose the **false** statements below.

   A. Member functions may be overloaded.  
   B. **Constructors may not be overloaded.**  
   C. A class may have only one destructor.  
   D. The data members of a class cannot all be pointers.

5. Object oriented design combines data and code together in one object to accomplish what?

   A. **Abstraction**  
   B. Overloading  
   C. **Encapsulation**  
   D. Isolation  
   E. Localization

6. Which of the following will work as a static array's size declarator?

   A. **A literal value greater than 1**  
   B. A named constant value greater than 0  
   C. any literal or named constant value  
   D. a named constant value of zero or above  
   E. any unsigned integer value

7. What member function is never declared with a return data type, but may have arguments?

   A. **The constructor**  
   B. The destructor  
   C. Neither the constructor nor the destructor  
   D. All class member functions will have a return data type.
8. Destructor function names always start with
   A. A number
   B. A tilde character (~)
   C. A data return type name
   D. The word "operator"

9. A constructor that requires no arguments is called
   A. A null constructor
   B. An overloaded constructor
   C. A default constructor
   D. A copy constructor

**Circle T or F**
10. -T- F   Constructors are never declared with a return data type.
11. -T- F   Destructors are never declared with a return type.
12. T -F- Destructors may take any number of arguments.

13. Given the following pointer declaration:
    ```c++
    int *ptr = new int;
    ```
    Assume the address stored in ptr is 1024. After the following code executes, what will the value stored in ptr be? Circle your answer.
    ```c++
    int x = 3;
    ptr = ptr + x;
    ```
    1024 + (3*4) = 1036

14. What is the exact output of the following code? Circle your answer.
    ```c++
    char a[] = "SOMETHING";
    a[5] = a[0];
    cout << a + 5;
    ```
    SING

15. Given an integer x,
    write a boolean expression that will evaluate to true...
    a. when x is less than 25 but not less than 5.
    `(x < 25 && >= 5)`
    b. when x is an even number.
    `(x % 2 == 0)`
    c. when x falls in the range 1 to 10.
    `(x >= 1 && x <= 10)`
16. Write the definition for a class that has one integer data member that is private, and a constructor that will initialize the data member when the following code is executed.

```cpp
MyData data(100);

class MyData {
    int n;
    public:
        MyData(int value) {
            n = value;
        }
};
```

You had to get this correct as no partial credit was given. This course is about classes. You must know how to write a simple class perfectly.

17. Write a for-loop that will populate the following array with even numbers 2 through 200.

```cpp
int arr[100];

for (int i=0; i<100; i++)
    arr[i] = (i+1) * 2;
```

Many correct ways to do this.