CS 225, Spring 2017: Quiz #2 Feedback

QuizID: 70522 NetID: xinran2 Score: 3 / 5 Answer Source: Manually Verified from Quiz Sheet

1. Suppose you have the following code:

```
class Milkshake{
  public:
    bool awesome;
    void setTogo();
  private:
    char size;
    bool togo;
};

void Milkshake::setTogo() { // code code code }

void serveShake() { // code code code }

int main() {
    Milkshake m;
    return 0;
}
```

Where could the assignment `awesome = true;` occur?

A. [Correct Answer] [Your Answer] In the `setTogo` function.
B. In the `serveShake` function.
C. Only in the constructor if we were to write one.
D. In the `main` function.
E. None of the other options is correct.

2. What is one way that C++ enforces `encapsulation`?

A. By using pointers, rather than the objects themselves.
B. By convention, the main function is put in a separate file.
C. Compilation is orchestrated via a Makefile.
D. C++ employs inheritance.
E. [Correct Answer] [Your Answer] Creating private member variables and public functions to alter the variables in a controlled manner.

3. Consider the following code:

```
int main() {
    int *q;
    q = new int;
    *q = 6;
    delete q;
    q = NULL;
    // here {{#line}}
    return 0;
}
```

Suppose that `q` is stored in memory address `0xdeadbeef` and the memory address of the new int is `0xcafebabe`.

What is the value of `q` at line {{@line}}?

A. `0xcafebabe`
B. [Your Answer] `0xdeadbeef`
C. `6`
D. [Correct Answer] `NULL`
E. None of these.

4. What is the error in the following code?

```
#include <iostream>
using namespace std;

class LegoMovie{
  public:
    bool getEverythingIsAwesome();
    void setEverythingIsAwesome(bool b);
  private:
    bool everythingIsAwesome;
};

int main() {
    LegoMovie movie;
    movie.setEverythingIsAwesome(true);
    return 0;
}
```

A. The `LegoMovie` class is missing a destructor.
B. The `main` method does not call the `LegoMovie`'s member functions correctly.
C. None of the other answers is true of this code.
D. [Correct Answer] [Your Answer] There is no implementation for `LegoMovie`'s member functions.
E. The `LegoMovie` class is missing a constructor.

```
class Foo {
   public:
      Foo(int init);
   private:
      int bar;
};

Foo::Foo(int init) { bar = init; }

int main() {
    Foo *x = new Foo();
    Foo *y = new Foo(12);
    return 1;
}
```

5. What is the result when this code is compiled and run?

A. No error, and no output.
B. A runtime error, because the proper constructor doesn't exist for the assignment to `x`.
C. [Correct Answer] A compiler error, because the proper constructor doesn't exist for the assignment to `x`.
D. [Your Answer] A compiler error, because `y` is a pointer.
E. A compiler error, because `bar` is private.