Review Test Submission: Quiz 9 - OO Prog

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Course	201503_Advanced Software Paradigms_CSCI_6221_11
Test	Quiz 9 - OO Prog
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Attempt Score	76.66667 out of 100 points
Time Elapsed	36 minutes out of 39 minutes
Results Displayed	All Answers, Submitted Answers, Correct Answers

Question 1

10 out of 10 points

Indicate what sentences are true (multiple answers **may** be true)

Selected Answers:
- C++ has extensive access controls to its class entities. Individual entities can be marked public, private, or protected
- In Java, method binding is dynamic by default.
- In C++, a method can only be dynamically bound if all of its ancestors are marked virtual.

Answers:

C++ has extensive access controls to its class entities. Individual entities can be marked public, private, or protected

All answers are wrong

In Java, method binding is dynamic by default.

In C++, a method can only be dynamically bound if all of its ancestors are marked virtual.

Question 2 10 out of 10 points

What is true about reflection?

Selected Answers:
- Reflection violates the rules of information hiding.
- Performance nearly always suffers with the use of reflection.
- Reflection provides the possibility of late binding of calls to methods that are outside of the inheritance hierarchy of the calling code.

Answers:
- Reflection violates the rules of information hiding.

All aswers are false

- Performance nearly always suffers with the use of reflection.
- Reflection provides the possibility of late binding of calls to methods that are outside of the inheritance hierarchy of the calling code.

Question 3

10 out of 10 points

Given the following Java code, what method m will be executed when b.m() is executed..

```
class A { void m() {..} }

class B extends A {void m() {..} }

class Client {

   A a = new A();

   B b = new B();

   b.m();

}
```

Answers:

- ✓ Method m belonging to class B will be executed.
- Since B is a sub-class A, method m belonging to class A will be executed after method m belong to class B is executed. Sub class methods are always executed first.
- Since B is a sub-class A, method m belonging to class B will be executed after method m belong to class A is executed. Super class methods are always executed first.
- ✓ Method m belonging to class B will be executed.
- All answers are wrong

Question 4

10 out of 10 points

Regarding multi-inheritance in C++ and interfaces in Java, indicate that answers are correct.

Selected Answers:

- ✗ In Java, both abstract classes and interfaces can have object instances.
- ✗

In Java, abstract classes and interfaces are similar, and sub-classes of an abstract classes must implement all the methods defined in the abstract class.

A significant problem with multiple inheritance is that two of the parents can define a method with the same name and the same protocol.

Answers: In Java, both abstract classes and interfaces can have object instances.

In Java, abstract classes and interfaces are similar, and sub-classes of an abstract classes must implement all the methods defined in the abstract class.

In Java, a class that implements an interface shall implement most of the methods declared in the interface.

A significant problem with multiple inheritance is that two of the parents can define a method with the same name and the same protocol.

Question 5 10 out of 10 points

Given the following Java code, what method m will be executed when b.m() is executed..

```
class A { void m() {..} }

class B extends A {void m() {..} }

class Client {

   A b = new B();

   b.m();

}
```

Selected Answers: Method m belonging to class B will be executed.

Since B is a sub-class A, method m belonging to class A will be executed after method m belong to class B is executed. Sub class methods are always executed first.

Answers: Method m belonging to class B will be executed.

All answers are wrong

Since B is a sub-class A, method m belonging to class A will be executed after method m belong to class B is executed. Sub class methods are always executed first.

Since B is a sub-class A, method m belonging to class B will be executed after method m belong to class A is executed. Super class methods are always executed first.

Question 6

6.66667 out of 10 points

Regarding inheritance, indicate what answers are true.

Selected Answers: Reuse of abstract data types is much easier, because the modifications of existing types need not be done on the legacy code

One reason why all Java objects have a common ancestor is so they can all inherit a few universally useful methods.

In Java and Smaltalk, all classes are sub-classes of the class Object.

Answers: Reuse of abstract data types is much easier, because the modifications of existing types need not be done on the legacy code

One disadvantage of inheritance is that types cannot be defined to be independent.

One reason why all Java objects have a common ancestor is so they can all inherit a few universally useful methods.

In Java and Smaltalk, all classes are sub-classes of the class Object.

Question 7 20 out of 20 points

Both Java and C# provide support for reflection.

Selected Answer: True

Answers: True

False

Question 8 0 out of 20 points

Given the following Java classes, which method m will be executed

-x-x-x

```
public interface ITest {
    public void m();
}
```

-x-x-x-

```
public class Client {

    public void testM(ITest i){
        i.m();
    }

    public static void main(String[] args){
        A a = new B();
        Client c = new Client();
        c.testM(a);
    }
}
```

-x-x-x-x-x

```
class A implements ITest {
```

```
    public void m() {...};
}

-x-x-x-

class B extends A implements ITest{
    public void m() {...};
}

-x-x-x-
```

Selected Answer: All answers are wrong

Answers:

Method m belonging to class B will be executed.

All answers are wrong

Since B is a sub-class A, method m belonging to class A will be executed after method m belong to class B is executed.

Since B is a sub-class A, method m belonging to class B will be executed after method m belong to class A is executed. Super class methods are always executed first.

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