20/20

Quiz 2 - Lesson – 5 & 6 [20 Points] **Set - 1**

Student id : [redacted] Name : [redacted] Date: 9/15/17

I. Circle the right choice. (Each 1 Point)

1. What will be happen when the following code is compiled and the main method of the QuizQuesion class is run? Circle the right choice.

```
public interface Compute {
        default int compute(int x, int y) {
                return x + y;
        }
}
```

```
public class Impl implements Compute{
  }
public class QuizQuesion {
 public static void main(String args[]){
        Impl obj = new Impl();
        System.out.println(obj.compute(5, 5));
 }
}
```

A. Compiler error B. Runtime error (C) Outputs 10 to the console

2. Which one of the given choice is related with user-input events in MVC – design Pattern?

a) Model b) View (c) Controller d) None

3. _____is a visual tool that comes with JavaFX.

a) JFC b) AWT (c) SceneBuilder d) None

4. What is the output of the given program? Circle the right choice. **[1 Point]**

```
public class ShadowTest {
  public int x = 0;
  class FirstLevel {
    public int x = 1;
    void methodInFirstLevel(int x) {
      System.out.println(x + " " + this.x);
    }
  }
  public static void main(String[] args) {
    ShadowTest st = new ShadowTest();
    ShadowTest.FirstLevel fl = st.new FirstLevel();
    fl.methodInFirstLevel(23);
  }
}
```

A. 23 0 B. 23 23 (C) 23 1 D. 1 1

5. What is the output of the following code?

```
interface i1 {
        default int show() {
                return 100;
        }
}
abstract class A {
        public int show() {
                return 50;
        }
}
public class TestClass extends A implements i1 {
        public static void main(String args[]) {
                TestClass t = new TestClass();
                System.out.println(t.show());
        }
}
```

a) 100 b) 50 c) Run time Error d) Compile time error

6. What is the output of the given code?

```
public class Person {
        private String fname;
        private String lname;
        public Person(String fname, String lname) {
                this.fname = fname;
                this.lname = lname;
        }
}
public class Test {
        public static void main(String[] args) {
                Person p1 = new Person("Renuka","Mohanraj");
                Person p2 = new Person("Renuka","Mohanraj");
                System.out.println(p1.equals(p2));
        }
}
```

a. true b. false

II. Say true or false for the given statements. Just put T or F as an answer in the dash . (Each 1 Point)

7. A member inner class cannot access the private field and private method of its enclosing class (outer class). F

8. Java 8 default methods can be override by the class which implements the interface. T ✓
9. Reflection allows a program to inspect the contents of arbitrary objects at run time. T ✓
10. "IS-A" a relationship states that every object of the sub class is an object of the super class. This statement is T.

III. Answer the following questions ✓

11. Find which line produces the error and write the reason why, say how to fix? [3 Points]

```
abstract class AProduct{
  private String productid;
  public void setProductId (String id){
   productid=id;
  }
  public String getProductId (){
   return productid;
  }
    public abstract double getPrice();
}
```

```
class Bicycle extends AProduct
{
  public  double getPrice(){
    return 230.45;
  }
}
class Test {
  public static void main(String[] args) {
    AProduct myProduct = new AProduct();
     Bicycle myCycle = new Bicycle();
}
```

a. Write which line produces an error in the above code.
AProduct myProduct = new AProduct();

b. Write the reason for the Error.
Abstract classes cannot be instantiated.

c. How do you fix the error? Write your solution.
AProduct myProduct = new Bicycle();
or eliminate that error line.

12. Find which line produces the error and write the reason why, say how to fix? [3 Points]

```
public class First {
        private String name;
        private int score;
        First(String name, int score) {
                this.name = name;
                this.score = score;
        }
}
```

```
public class Second extends First {
        private int ec;
        Second(String name, int score, int ec) {
                this.ec = ec;
                super(name,score);
        }
}
```

interchange the order.

a. Write which line produces an error in the above code.

Super(name, score); or this.ec = ec;

b. Write the reason for the Error.

Because the super keyword which invokes the superClass constructor has to be the first line in the subclass constructor.

c. How do you fix the error? Write your solution.

Super(name, score); i.e switch these two lines
this.ec = ec;

13. Comparison of Actual Classes, Abstract Classes and Interfaces with the given specific Property? **Just fill the table cells with words "Allowed" or "Not Allowed". (Please don't use other words) [4 Points]**

Aspects	Actual Class	Abstract class	Pre-Java 8 Interface	Java 8 Interface
Inclusion of constructor(s)	Allowed	Allowed	Not Allowed	Not Allowed
Instances (Objects) of these aspects can be created directly is allowed or not.	Allowed	Not Allowed	Not Allowed	Not Allowed
Inclusion of abstract methods	Not Allowed	Allowed	Allowed	Allowed
Inclusion of static methods	Allowed	Allowed	Not Allowed	Allowed