Question **1**

Correct

Mark 1.00 out of 1.00

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Edit question

You need to do a black-box testing for a method that calculates the area of a sphere. This method received one parameter, the radius, of type double. What set of values would be used to do the black-box testing of this methods?

Select one:

- a. 0.0, 1.7, 4.6, 18.9, 102.3
- b. 5.7, 0.0, -435.34 ✔
- c. -323.9, -3.2, 1.6, 48.57
- d. 3.14, 3.1416, 3.141592

Question **2**

Correct

Mark 1.00 out of 1.00

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Given the following code:

```
public class Person {}
public class Student extends Person {
    int id;
    public Student(int id) {
        this.id = id;
        super();
    }
}
```

Select one:

- a. A compilation error occurs because inside the constructor of Student there is an attempt to access (by means of the super(); statement) a constructor of Person class that has not been explicitly defined.
- b. A compilation error occurs because the parameter received by the constructor of the class Student has the same name as the attribute of that class.
- c. A compilation error occurs because inside the constructor of Student it is necessary to call the constructor of Person in the first line. ✔
- d. The code does not produce compilation errors.

Question **3**

Correct

Mark 1.00 out of 1.00

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Given the following code, with each class in a separate file: which of the following assignments is correct?

```
public interface I1 {...}
public interface I2 extends I1 {...}
public class C1 implements I1 {...}
public class C2 extends C1 {...}
```

Select one:

- a. I2 i2 = new C1();
- b. I1 i1 = new C2(); ✔
- c. C2 c2 = new C1();
- d. C1 c1 = new I1();

Question **4**

Correct

Mark 1.00 out of 1.00

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Which of the following is the correct way to define an interface?

```
a) public interface MyInterface {abstract void doSomething();}
b) public interface MyInterface {private void doSomething();}
c) public interface MyInterface {protected void doSomething();}
d) public interface MyInterface {void doSomething();}
```

Select one:

- a. d ✔
- b. a
- c. b
- d. c

Question **5**

Correct

Mark 1.00 out of 1.00

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Edit question

What is a class in Java?

Select one:

- a. A method of an object
- b. A blueprint for creating objects ✔
- c. An instance of an object
- d. An object with private attributes only

Question **6**

Correct

Mark 1.00 out of 1.00

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Given classes Animal and Cat in this hierarchy of classes, what is printed on screen?

```
public class Animal {
    public void makeSound() {
        System.out.println("The animal makes a sound");
    }
}
public class Cat extends Animal {
    public void makeSound() {
        System.out.println("Meow");
    }
}
public class Main {
    public static void main(String[] args) {
        Animal animal = new Cat();
        animal.makeSound();
    }
}
```

Select one:

- a. The output will be The animal makes a sound
- b. The output will be Meow ✔
- c. The code will not compile
- d. An exception will be thrown at runtime

Question **7**

Correct

Mark 1.00 out of 1.00

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Edit question

The following code:

```
public class C{
        public static void main(String[] args) {
                m();
        }
        private static void m() { }
}
```

Select one:

- a. is correct. ✔
- b. is incorrect because a static method can only be called from non-static methods.
- c. is incorrect because m() cannot be accessed from the main() method, since m() is a private method.
- d. is incorrect because m() must be called using C.m().

Question **8**

Correct

Mark 1.00 out of 1.00

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Edit question

Given the following code and the test class, what line coverage is achieved?

```
public class C {
        public static int m(int a){
                if (a>0){
                        return 1;
                } else if (a<0){
                        return -1;
                } else{
                        return 0;
                }
        }
}

public class CTest {
        C c = new C();
        @Test
        public void test1() {
                assertEquals(C.m(-1), -1);
        }
        @Test
        public void test2() {
                assertEquals(C.m(0), 0);
        }
}
```

Select one:

- a. Less than 50%
- b. 100%
- c. 50%
- d. More than 50% but less than 100% ✔

Question **9**

Correct

Mark 1.00 out of 1.00

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Edit question

Given the following code, what does the program print on screen?

```
public class C{
    public static void main (String[] args){
        int a = 1;
        m(a);
        System.out.println(a);
    }
    public static void m(int a){
        a++;
        n(a);
        ++a;
    }
    public static void n(int a){
        a++;
    }
}
```

Select one:

- a. 2
- b. 4
- c. 3
- d. 1 ✔

Question **10**

Correct

Mark 1.00 out of 1.00

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Edit question

The following method signature is intended to warn the calling method that it should be careful because it may result in a MyException. Which keyword should be used in the space marked with ellipses?

```
public myMethod(int n, int m) ... MyException
```

Select one:

- a. throws ✔
- b. throw
- c. finally
- d. catch