QCM1Certification

1.

Given:

```
1. class Atom {
2.     Atom() { System.out.print("atom "); }
3. }
4. class Rock extends Atom {
5.     Rock(String type) { System.out.print(type); }
6. }
7. public class Mountain extends Rock {
8.     Mountain() {
9.         super("granite ");
10.        new Rock("granite ");
11.    }
12.    public static void main(String[] a) { new Mountain(); }
13. }
```

What is the result?

- ○ A. Compilation fails.
- ○ B. atom granite
- ○ C. granite granite
- ○ D. atom granite granite
- ○ E. An exception is thrown at runtime.
- ○ F. atom granite atom granite

2.

Given:

```
1. public class Blip {
2.     protected int blipvert(int x) { return 0; }
3. }
4. class Vert extends Blip {
5.     //    insert code here
6. }
```

Which five methods, inserted independently at line 5, will compile? (Choose five.)

- ☐ A. `public int blipvert(int x) { return 0; }`
- ☐ B. `private int blipvert(int x) { return 0; }`
- ☐ C. `private int blipvert(long x) { return 0; }`
- ☐ D. `protected long blipvert(int x) { return 0; }`
- ☐ E. `protected int blipvert(long x) { return 0; }`
- ☐ F. `protected long blipvert(long x) { return 0; }`
- ☐ G. `protected long blipvert(int x, int y) { return 0; }`

3.

Given:

```
interface TestA { String toString(); }

public class Test {
    public static void main(String[] args) {
        System.out.println(new TestA() {
            public String toString() { return "test"; }
        });
    }
}
```

What is the result?

- ○ A. test
- ○ B. null
- ○ C. An exception is thrown at runtime.
- ○ D. Compilation fails because of an error in line 1.
- ○ E. Compilation fails because of an error in line 4.
- ○ F. Compilation fails because of an error in line 5.

4.

Given:

```
1. public abstract class Shape {
2.     private int x;
3.     private int y;
4.     public abstract void draw();
5.     public void setAnchor(int x, int y) {
6.         this.x = x;
7.         this.y = y;
8.     }
9. }
```

Which two classes use the Shape class correctly? (Choose two.)

☐ A.
```
public class Circle implements Shape {
    private int radius;
}
```

☐ B.
```
public abstract class Circle extends Shape {
    private int radius;
}
```

☐ C.
```
public class Circle extends Shape {
    private int radius;
    public void draw();
}
```

☐ D.
```
public abstract class Circle implements Shape {
    private int radius;
    public void draw();
}
```

☐ E.
```
public class Circle extends Shape {
    private int radius;
    public void draw() {/* code here */}
}
```

☐ F.
```
public abstract class Circle implements Shape {
    private int radius;
    public void draw() {/* code here */}
}
```

5.

Given:

```
5. class Building { }
6. public class Barn extends Building {
7.     public static void main(String[] args) {
8.         Building build1 = new Building();
9.         Barn barn1 = new Barn();
10.        Barn barn2 = (Barn) build1;
11.        Object obj1 = (Object) build1;
12.        String str1 = (String) build1;
13.        Building build2 = (Building) barn1;
14.    }
15. }
```

Which is true?

- ○ A. If line 10 is removed, the compilation succeeds.
- ○ B. If line 11 is removed, the compilation succeeds.
- ○ C. If line 12 is removed, the compilation succeeds.
- ○ D. If line 13 is removed, the compilation succeeds.
- ○ E. More than one line must be removed for compilation to succeed.