Exam 808: Java SE 8

1. Given:

```
import java.util.ArrayList;
import java.util.List;

public class JavaSETest {
    public static void main(String[] args) {
        List<Integer> elements = new ArrayList<>();
        elements.add(10);
        int firstElmnt = elements.get(1);
        System.out.println(firstElmnt);
    }
}
```

What is the result?

A) `null`
B) `10`
C) `0`
D) An `IndexOutOfBoundsException` is thrown at runtime.

2. Given the code fragment:

```
// Line n1
switch (cardVal) {
    case 4: case 5: case 6:
    case 7: case 8:
        System.out.println("Hit");
        break;
    case 9: case 10: case 11:
        System.out.println("Double");
        break;
    case 15: case 16:
        System.out.println("Surrender");
        break;
    default:
        System.out.println("Stand");
}
```

Which two code fragments can be inserted at `Line n1`, independently, enable to print `Stand`?

A) `int cardVal = 6;`
B) `int cardVal = 10;`
C) `int cardVal = 14;`
D) `int cardVal = 18;`

3. Given:

```
abstract class Writer {
    public static void write() {
        System.out.println("Writing...");
    }
}
class Author extends Writer {
    public static void write() {
        System.out.println("Writing book");
    }
}
public class Programmer extends Writer {
    public static void write() {
        System.out.println("Writing code");
    }
    public static void main(String[] args) {
        Writer w = new Programmer();
        w.write();
    }
}
```

What is the result?

A) `Writing...`
B) `Writing book`
C) `Writing code`
D) Compilation fails.

4. Given:

```
class SuperClass {
    SuperClass(int x) {
        System.out.println("Super");
    }
}

public class SubClass extends SuperClass {
    SubClass() {
        // Line n1
        System.out.println("Sub 2");
    }
}
```

Which statement, when inserted at `Line n1`, enables the code to compile?

A) `this(10);`
B) `super(10);`
C) `SuperClass(10);`
D) `super.SuperClass (10);`

5. Given the code fragment:

```
public class TestClass {
    public static void main(String[] args) {
        List<String> items = new ArrayList<>();
        items.add("Pen");
        items.add("Pencil");
        items.add("Box");
        for (String i : items) {
            if (i.indexOf("P") == 0) {
                continue;
            } else {
                System.out.print(i+" ");
            }
        }
    }
}
```

What is the result?

A) `Pen Pencil Box`
B) `Pen Pencil`
C) `Box`
D) Compilation fails.

6. Which access modifier makes a member available only to classes within the same package or subclasses?

A) `private`
B) `protected`
C) `public`
D) package-private

7. Given the code fragment:

```
public class Test {
    public static void main(String[] args) {
        int x = 10;
        int y = 2;
        try {
            for (int z = 2; z >= 0; z--) {
                int ans = x / z;
                System.out.print(ans+ " ");
            }
        } catch (Exception e1) {
            System.out.println("E1");
        } catch (ArithmeticException e1) {
            System.out.println("E2");
        }
    }
}
```

What is the result?

A) `E1`
B) `E2`
C) `5 10 E1`
D) Compilation fails.

8. Given the code fragment:

```
StringBuilder s1 = new StringBuilder("Java");
String s2 = "Love";
s1.append(s2);
s1.substring(4);
int foundAt = s1.indexOf(s2);
System.out.println(foundAt);
```

What is the result?

A) `-1`
B) `3`
C) `4`
D) A `StringIndexOutOfBoundsException` is thrown at runtime.

Answers:

1) D
2) C and D
3) A
4) B
5) C
6) B
7) D
8) C