Using Classes – MCQ Part B

This quiz has 12 questions.

1. Consider the following code segment.

```
String str = "AP";
str += "CS " + 1 + 2;
System.out.println(str);
```

What is printed as a result of executing the code segment?

Ⓐ `CS AP12`

Ⓑ `AP CS3`

Ⓒ `CSAP 12`

Ⓓ `APCS 12`

Ⓔ `APCS 3`

2. Consider the following code segment.

```
String dessert = "pie";
dessert += "straw"+dessert+"berry";
```

What is the value of dessert after the code segment has been executed?

Ⓐ `strawpieberrie`

Ⓑ `piestrawpieberry`

Ⓒ `strawpieberrypie`

Ⓓ `strawberry`

Ⓔ `piestrawberry`

3. Which of the following code segments can be used to set the value of the string `str` to "`Good morning, sunshine!`"?

I.
```
String str = "Good " + "morning," +
     " sunshine!";
```

II.
```
String str = "Good";
str += " morning, sunshine!";
```

III.
```
String str = " morning, ";
str = "Good" + str + "sunshine!";
```

Ⓐ I only

Ⓑ II only

Ⓒ III only

Ⓓ I(and III only

Ⓔ I, II and III

4. Consider the following code segment.

```
String one = "ABC123";
String two = "C";
String three = "3";
System.out.println(one.indexOf(two));
System.out.println(one.indexOf(three));
System.out.println(two.indexOf(one));
```

What is printed when the code segment is executed?

Ⓐ
```
2
5
-1
```

Ⓑ
```
2
5
2
```

Ⓒ
```
2
6
-1
```

Ⓓ
```
3
6
-1
```

Ⓔ
```
-1
-1
2
```

5. Consider the following code segment.

```
String word = "September";
String str1 = word.substring(0, 3);
String str2 =
  word.substring(word.length()-3);
System.out.println(str1 + str2);
```

What is printed when the code segment is executed?

Ⓐ `epbe`

Ⓑ `epber`

Ⓒ `Sepbe`

Ⓓ `Seper`

Ⓔ `Sepber`

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6. Consider the following code segment.

```
String s1 = "ABCDEFGHI";
String s2 = s1.substring(6,7);
String s3 = new String("abcdefghi");
String s4 = s3.substring(4,5);
String s5 = s3.substring(2,3);
System.out.print(s2 + s4 + s5);
```

What, if anything, is printed when the code segment is executed?

Ⓐ `Fdb`

Ⓑ `FGdebc`

Ⓒ `Gec`

Ⓓ `DHefcd`

Ⓔ There is no output due to a compilation error.

7. Consider the following `calculate` method and description.

```
public double calculate(double x)
```

The method returns a value of `x + 1.5`.
The following code segment calls the method `calculate` in the same class.

```
Double d1 = new Double(7.5);
System.out.println(calculate(d1));
```

What, if anything, is printed when the code segment is executed?

Ⓐ `8.0`

Ⓑ `8.5`

Ⓒ `9`

Ⓓ `9.0`

Ⓔ Nothing is printed because the code does not compile. The actual parameter `d1` past to `calculate` is a `Double`, but the formal parameter `x` is a `double`.

8. Consider the following code segment.

```
Integer original = new Integer(8);
Integer first =
   new Integer(original.intValue()*2);
Integer second =
   new Integer(original.intValue()+2);
System.out.println(first.intValue() +
   " " + second.intValue());
```

What is printed when the code segment is executed?

Ⓐ `8 8`

Ⓑ `8 10`

Ⓒ `10 10`

Ⓓ `16 10`

Ⓔ `16 18`

9. Consider the following code segment.

```
Integer num = new Integer(15);
int n = num.intValue();
```

Which of the following statements best describes the type and contents of `num` and `n` after the code segment executes?

Ⓐ `num` is an `Integer` that contains the value `15`, and `n` is an `int` that contains the value `0`.

Ⓑ `num` is an `Integer` that contains the value `15`, and `n` is an `int` that contains the value `15`.

Ⓒ `num` is an `Integer` that contains the value `15`, and `n` is an `Integer` that contains the value `15`.

Ⓓ `num` is an `int` that contains the value `15`, and `n` is an `Integer` that contains the value `0`.

Ⓔ `num` is an `int` that contains the value `15`, and `n` is an `Integer` that contains the value `15`.

10. Which of the following expressions represents $x^{|k-j|}$,where `x`, `k`, and `j` are properly declared and initialized `int` variables?

Ⓐ `Math.abs(k-j, Math.pow(x));`

Ⓑ `Math.abs(Math.pow(x), k-j);`

Ⓒ `Math.pow(x,Math.abs(k-j));`

Ⓓ `Math.pow(Math.abs(k-j),x);`

Ⓔ `Math.pow.abs(x,k-j));`

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11. The code segment below is intended to randomly print one of the values 2, 4, 6, or 8 with equal probability.

```
int val = /* missing code*/;
val *= 2;
System.out.print(val);
```

Which of the following can be used to replace `/* missing code*/` so that the code segment works as intended?

Ⓐ `Math.random() * 4 + 1`

Ⓑ `Math.random() * 8`

Ⓒ `(int)(Math.random() * 4)`

Ⓓ `(int)(Math.random() * 4 + 1)`

Ⓔ `(int)(Math.random() * 8 + 1)`

12. Given the following code segment.

```
double s;
```

Assume `s` has been properly initialized to a `double` value. The area of a square is its side length times itself. Which of the following statements can be used to compute the area of a square whose side length is `s` units?

Ⓐ `pow(s,2);`

Ⓑ `s.pow(2);`

Ⓒ `Math.pow(s);`

Ⓓ `Math.pow(s,2);`

Ⓔ `Math.pow(2,s);`