

## 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?

- (A) CS AP12
- (B) AP CS3
- (C) CSAP 12
- (D) APCS 12
- (E) APCS 3

(A) (B) (C) **(D)** (E)

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?

- (A) strawpieberrie
- (B) piestrawpieberry
- (C) strawpieberrypie
- (D) strawberry
- (E) piestrawberry

(A) **(B)** (C) (D) (E)

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!";

- (A) I only
- (B) II only
- (C) III only
- (D) I( and III only
- (E) I, II and III

(A) (B) (C) (D) **(E)**

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?

- (A) 2  
5  
-1
- (B) 2  
5  
2
- (C) 2  
6  
-1
- (D) 3  
6  
-1
- (E) -1  
-1  
2

**(A)** (B) (C) (D) (E)

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?

- (A) epbe
- (B) epber
- (C) Sepbe
- (D) Seper
- (E) Sepber

(A) (B) (C) (D) **(E)**

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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?

- (A) Fdb  
 (B) FGdebc  
 (C) Gec  
 (D) DHefcd  
 (E) There is no output due to a compilation error.

(A) (B) (C) (D) (E)

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?

- (A) 8.0  
 (B) 8.5  
 (C) 9  
 (D) 9.0  
 (E) 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.

(A) (B) (C) (D) (E)

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?

- (A) 8 8  
 (B) 8 10  
 (C) 10 10  
 (D) 16 10  
 (E) 16 18

(A) (B) (C) (D) (E)

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?

- (A) num is an Integer that contains the value 15, and n is an int that contains the value 0.  
 (B) num is an Integer that contains the value 15, and n is an int that contains the value 15.  
 (C) num is an Integer that contains the value 15, and n is an Integer that contains the value 15.  
 (D) num is an int that contains the value 15, and n is an Integer that contains the value 0.  
 (E) num is an int that contains the value 15, and n is an Integer that contains the value 15.

(A) (B) (C) (D) (E)

10. Which of the following expressions represents

$x^{|k-j|}$ , where x, k, and j are properly declared and initialized int variables?

- (A) Math.abs(k-j, Math.pow(x));  
 (B) Math.abs(Math.pow(x), k-j);  
 (C) Math.pow(x, Math.abs(k-j));  
 (D) Math.pow(Math.abs(k-j), x);  
 (E) Math.pow.abs(x, k-j);

(A) (B) (C) (D) (E)

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11. The code segment below is intended to randomly print one of the values 1, 3, 5, or 7 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);`
- Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ