

## Multiple Choice Questions (10 points)

Answer all of the following questions. READ EACH QUESTION CAREFULLY. Fill the correct bubble on your scantron sheet.

Each correct answer is worth 1 point. Each question has EXACTLY one correct answer.

1. Consider

```
int a = 6;  
int b = 12;  
while (a < b) {
```

```
    System.out.println("In the loop");
```

```
    a+=2;
```

```
    b-=2;
```

```
}
```

How many times is the phrase "In the loop" printed?

- A. 1
  - B. 2
  - C. 3
  - D. 4
  - E. 5
2. In Java, elements of an array are automatically initialized to some default value.
- What is the default value for the elements of an array of integers?
- A. 0
  - B. "0"
  - C. null
  - D. 1
  - E. '0'

3. You want to initialize all of the elements of a double array `a` to the same value equal to 1.5.

What could you write?

Assume that the array has been correctly initialized.

- A. `for(int i=1; i<a.length; i++) a[i] = 1.5;`
- B. `for(int i=0; i<=a.length; i++) a[i] = 1.5;`
- C. `for(int i=0; i<a.length; i++) a[i] = 1.5;`
- D. `for(int i=0; i<a.length+1; i++) a[i] = 1.5;`
- E. `for(int i=0; i<a.length-1; i++) a[i] = 1.5;`

4. Which of the following while statements is equivalent to

```
do{  
    y=x+7;  
    x++;  
}while (x<9) ;
```

(You might want to draw a flow chart to figure out the answer)

A. 

```
y=x+7;  
x++;  
while (x<9) {  
    y=x+7;  
    x++;  
}
```

B. 

```
while (x<9) {  
    y=x+7;  
    x++;  
}  
y=x+7;  
x++;
```

C. 

```
while (x<=9) {  
    y=x+7;  
    x++;  
}
```

D. A and B

E. A, B and C

5. Consider the code

```
int[] x = {5,6,7,8,9};  
int[] y = x;  
y[2] = 10;
```

What is the value of x[2]?

- A. 6
  - B. 7
  - C. 10
  - D. 8
  - E. 0
6. Consider the following piece of code:

```
int i;  
for(i=0; i<10; i++){  
    /* some code that doesn't modify i */  
  
}  
System.out.println("i="+i); /* line A */
```

What is printed by the statement on line A?

- A. i=0
- B. i=9
- C. i=10
- D. i=11
- E. This piece of code doesn't compile since the scope of i is limited to the for loop.

7. What is printed by the following code fragment?
- ```
int[] a = {0,1,2,3,4,5,6};  
System.out.println(a.length);
```
- A. 5  
B. 6  
C. 7  
D. 8  
E. Can't tell. There is not enough information.
8. How would you declare and initialize an array, palette, of Color objects of size 6?
- A. **Color palette = new Color[5];**  
B. **Color palette[6];**  
C. **Color[5] palette;**  
D. **Color[] palette = new Color[6];**  
E. **Color[] palette = new Color[5];**
9. The documentation of a class lists a method castToIntArray that has a double array as a formal parameter and returns an array of integers. What is the signature of the method?
- A. **public void castToIntArray(double[] a)**  
B. **public [] castToIntArray(double a)**  
C. **public int castToIntArray(double a)**  
D. **public int[] castToIntArray(double[] a)**  
E. **public int[] castToIntArray()**

10. Which of the following is true regarding the continue statement in a for loop?
- A. continue transfers the control flow to the initialization statement of the for loop.
  - B. continue transfers the control flow to the conditional statement of the for loop.
  - C. continue transfers the control flow to the update statement of the for loop.
  - D. continue transfers the control flow to the statement just after the for loop
  - E. continue transfers the control flow to the statement just before the for loop