

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