

Course Title: Programming 1
Date: 27 / 05 / 2018
No. of Questions: 3 Questions
Time: 2 hours
Using Calculator (No)

University of Palestine



Final Exam
Second semester 2017 -2018
Total Grade: 50

Instructor Name: Eng. Eman Alajrami
Student No.: _____
Student Name: _____
College Name: _____
Dep. / Specialist: _____

First Question	No. of Branches (5)	10 Marks
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1-Multiple Choice Questions:

1. Suppose array a is `int[] a = {7, 2, 3}`, what is `a[0] - A[2]`?

- a. 5
- b. 4
- c. 3
- d. None of the above

2. Analyze the following code:

```
class Test {  
  
    public static void main(String[] args) {  
        double radius = 5;  
        final static double PI = 3.15169;  
        double area = radius * radius * PI;  
        System.out.println("Area is " + area);  
    }  
}
```

- a. The program has syntax errors because the variable radius is not initialized.
- b. The program has syntax errors because a static PI is defined inside a method.
- c. The program has no syntax errors but will get a runtime error because radius is not initialized.
- d. The program compiles and runs fine

3. Analyze the following code.

```
public class Test {  
    public static void main(String[] args) {  
  
        int n = 5;  
        xMethod(n);  
  
        System.out.println("n is " + n);  
    }  
  
    public static void xMethod(int n) {  
        n++;  
    }  
}
```

- a. The code prints *n is 1*.
- b. The code prints *n is 5*.
- c. The code prints *n is 6*.
- d. The code has a syntax error because xMethod does not return a value.

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4. Analyze the following code:

```
public class Test {  
  
    public static void main(String[] args) {  
        int[] x = new int[5];  
        for (int i = 0; i < x.length; i++)  
            x[i] = i;  
        System.out.println(x[i]);  
    }  
}
```

- a. The program displays 0 1 2 3 4.
- b. The program displays 4.
- c. The program has a runtime error because the last statement in the main method causes `ArrayIndexOutOfBoundsException` exception.
- d. The program has syntax error because `i` is not defined in the last statement in the main method.

```
5. static void nPrint(String message, int n) {  
  
    while (n > 0) {  
        System.out.print(message);  
        n--;  
    }  
}
```

What is the printout of the call `nPrint("a", 4)`?

- a. aaaaa
- b. aaaa
- c. aaa
- d. invalid call

Second Question	No. Of Branches (2)	25 Marks
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1. Fix syntax errors in the following code:

```
a. public class Test1 {  
  
    public static void main(String[] args) {  
        double count = 1;  
        while (count<= 5) {  
            xMethod(count);  
count++;  
        }  
    }  
  
    public static double xMethod(int i) {  
        i++;  
    }  
}
```

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b. public class Test

```
{
    public static void main(string[] args)
    {
        for (int i = 0; i < 10; i++);
        {
            if (j > i) then
                j++
            else
                j--;
        }
    }
}
```

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c. public class Test

```
{
    public static void main(string[] args)
    {
        int a [] = new int [ 10];
        for (int i = 0; i <= a.length; i++);
        {
            System.out.println( a[i] );
        }
    }
}
```

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2. What is the output when the following code fragment is executed?

1) char ch;

```
char [ ] Name= {'P', 'a', 'l', 'e', 's', 't', 'i', 'n', 'e', '!'};  
ch = Name[1];  
Name[3] = ch;  
System.out.println(ch);  
for (int i=0; i<Name.length ; i++)  
system.out.print( Name[i]);
```

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2) public class Test2 {

```
    public static void main(String[] args) {  
        int i = 1;  
        while (i <= 5) {  
            xMethod(i);  
            i++;  
        }  
  
        System.out.println("i is " + i);  
    }
```

```
    public static void xMethod(int i) {  
        do {  
            if (i % 2 != 0)  
                System.out.print(i + " ");  
            i--;  
        }  
        while (i >= 1);  
        System.out.println("\n * ");  
    }  
}
```

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