

Course No: SWEN 2405/TEC 1305

University of Palestine

Instructor Name: Dr. Ayman Srour

Course Title: Programming I



Student No.: _____

Date: 18/1/2017

Student Name: _____

No. of Questions: (7)

Final Exam

College Name: Eng. College

Time: 2hours

2016/2017

Dep. / Specialist: Software Eng.

Using Calculator (No)

Total Grade:30

Using Dictionary (No)

Q1) Find the error in each of the following code segments, and explain how to correct it: (10 Marks)

1. The following code should print all values of the array

```
int[][] name = {{1,2}, {3,4,5}, {6,7,8,9}};
for (int i=0; i < a.length; i++)
    for (int j=0; j< a[0].length; j++)
        System.out.println( a[i][j] );
```


2. The following code should print the values 1 to 10:

```
n = 1;
while ( n < 10 )
    System.out.println( n++ );
```


3.

```
while ( x <= 100 )
    total += x;
    ++x;
```


4.

```
String s1= new String("abc");
String s2= new String("abc");
If(s1==s2)
    System.out.print( "s1 is equal s2 " );
```


5. The following code should print the column size of array a

```
int [][] a= {{2,3},{6,7},{9,6}};
System.out.print("column size of a is: " + a.length) ;
```


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Q₂) convert the following **while loop** statement to its equivalent **for** loop statement

(2 Marks)

```
int sum = 0;
int i = 0;
while (i < 5)
{
    sum += i;
    i++;
}
System.out.print(sum);
```

Q₃) convert the following code segment to its equivalent **if ...else** statement

(2 Marks)

```
int value = 1;
switch (value) {
case 1:
    System.out.println("A");
    break;
case 2:
    System.out.println("B");
    break;
case 3:
    System.out.println("C");
    break;
default:
    System.out.println("D");
    break;
}
```

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Q4) How do you check if two Strings are equal in Java?

(2 Marks)

Q5) Consider the following string:

```
String st = "Did Hannah see bees? Hannah did.";
```

- a.** What is the value displayed by the expression `st.length()`?
- b.** What is the value returned by the method call `st.charAt(12)`?
- c.** Write an expression that refers to the letter `b` in the string referred to by `st`.

(3 Marks)

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Q₆) Compare and contrast among the following:

- a. While and do.. While repetition statements.
- b. Break, continue statement.
- c. String and StringBuffer.

(6 Marks)

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Q₇) Write a complete Java program that declare, store and manipulate two matrices **A_{2x2}** and **B_{2x2}**.

$$\text{where } A = \begin{pmatrix} 2 & 3 \\ 4 & 1 \end{pmatrix}, B = \begin{pmatrix} 0 & 5 \\ 7 & 3 \end{pmatrix}$$

The program must consist of the following methods:

1. A method to calculate and print the values of **A+B**.
2. A method to calculate and print the value of **k*A**, where k=2.

(5 Marks)

End of Questions
Good Luck