HackerRank
For Work

INFO6205_Summer18_Quiz2   30 minutes

Question - 1
What is the worst case complexity of the code given below?   SCORE: **6 points**

```
for(int i = 0; i<l;i++){
   for(int j = 0; j<m ;j++){
      //do foo
   }
   for(int k = 0; k< n;k++){
      //do bar
   }

}
```

- ◯ $O(k^2)$

- ⦿ $O(l*(m+n))$

- ◯ $O(m)$

- ◯ $O(l*log(m+n))$

- ◯ none of the above

Question - 2
Arrays   SCORE: **6 points**

Select the option(s) which best describes array data structure :

- ◯ is of variable size and is accessed sequentially from the head

- ⦿ is of fixed size and can be accessed randomly or by index

- ◯ is grow-able and is accessed by key

- ◯ none of the above

Question - 3
equals(), hashCode() and compareTo()   SCORE: **6 points**

Please choose the correct statements:

- ⦿ If x.equals(y) is true, then x.hashCode() == y.hashCode() must be true

- ◯ If x.hashCode() == y.hashCode() is true, then x.equals(y) must be true

- ⦿ If x.equals(y) is true, then x.compareTo(y) == 0

- ⦿ If x.compareTo(y) == 0, x.equals(y) must be true

Question - 4

SCORE: **6 points**

What will be the output of the code below ?

```
String s="Hi";
String s1 = "Hi";
String s2 = new String("Hi");
System.out.println(s==s1);
System.out.println(s==s2);
System.out.println(s.equals(s1));
System.out.println(s.equals(s2));
```

○ true true true true

○ true false true false

◉ true false true true

○ false false true true

○ none of the above

Question - 5

SCORE: **6 points**

Arrange the steps of reduction for solving problem A using B in order:

a) Transform Domain of problem B into domain of problem A
b) solve problem B
c) Transform Domain of problem A into domain of problem B

○ b,c,a

○ a,b,c

◉ c,b,a

○ none of the above