**Java Test 3**

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**Time Limit : 40 min**

**How to submit:**  Please create git repo on github.com and name your files with question\_no.java , please check in code there and your link on slack channel. For non code – please create a file Answers.md add your answers in that file.

1. Fill in the blanks: Given two non-null String objects with reference names apples\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and oranges, if apples oranges evaluates to true, then apples\_\_\_\_\_\_\_\_\_\_\_\_\_\_ oranges must also evaluate to true.
   1. ==, equals()
   2. !=, equals()
   3. equals(), ==
   4. equals(), =!

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2. ==, equals()
3. !=, equals()
4. equals(), ==
5. equals(), =!
6. How many 1s are outputted when the following application is compiled and run?

*package* city;

public class Road {

public static void main(String... in) {

int intersections = 100;

int streets = 200;

*if* (intersections < 150) {

System.out.print("1");

} *else* *if* (streets && intersections > 1000) {

System.out.print("2");

} *if* (streets < 500)

System.out.print("1");

*else*

System.out.print("2");

}

}

1. None
2. One
3. Two
4. The code does not compile.
5. Which of the following create an empty two-dimensional array with dimensions 2×2
6. int[][] blue = new int[2, 2];
7. int[][] blue = new int[2], [2];
8. int[][] blue = new int[2][2];
9. int[][] blue = new int[2 x 2];
10. How many lines does the following code output?

String[] days = new String[] { "Sunday", "Monday", "Tuesday",

"Wednesday", "Thursday", "Friday", "Saturday" };

*for* (int i = 0; i < days.length; i++)

System.out.println(days[i]);

1. Six
2. Seven
3. The code does not compile.
4. The code compiles but throws an exception at runtime.
5. Which of the following references the first and last element in a non-empty array?
   1. trains[0] and trains[trains.length]
   2. trains[0] and trains[trains.length - 1]
   3. trains[1] and trains[trains.length]
   4. trains[1] and trains[trains.length - 1]
6. How many of the following are legal declarations?

String lion [] = new String[] {"lion"};

String tiger [] = new String[1] {"tiger"};

String bear [] = new String[] {};

String ohMy [] = new String[0] {};

1. None
2. One
3. Two
4. Three
5. Which is the first line to prevent this code from compiling and running without error?

char[][] ticTacToe = new char[3,3]; *// r1*

ticTacToe[1][3] = 'X'; *// r2*

ticTacToe[2][2] = 'X';

ticTacToe[3][1] = 'X';

System.out.println(ticTacToe.length + " in a row!"); *// r3*

1. Line r1
2. Line r2
3. Line r3
4. None of the above
5. Write a program to sort the array without using Arrays.sort() method.
6. Write a program to reverse an array.
7. Write a program to check if string is palindrop ( example abba )
8. Write a program that checks whether the given string contains only digits.
9. What are exceptions and define checked and uncheck exceptions
10. Write a program that counts duplicate characters from a given string
11. Write a program that counts the occurrences of a certain character in a given string.