50.003 Quiz 3 (15 Minutes)

**Name:**

**ID:**

Q1. A thread ends when

1. the program that created it ends
2. it calls *sleep()*
3. it reaches the end of *run()*
4. it calls *interrupt()*

Answer: \_\_\_\_\_C\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q2. Read the following code:

public static void main() {

Thread t1 = new Thread(new Runnable() {

public void run() {

System.out.print("O");

System.out.print ("Y");

}

});

Thread t2 = new Thread(new Blue());

System.out.print("R");

t1.start();

System.out.print("G");

t2.start();

System.out.print("I");

t1.join();

System.out.print("V");

t2.join();

System.out.print("K");

}

public static class Blue implements Runnable {

public void run() {

System.out.print("B");

}

}

Assume that print() is threadsafe and atomic; and JVM doesn’t re-order statements. Which of the following sequences can be printed by this code? Circle possible or impossible.

ROYGBIVK **possible** impossible

ROYBGIVK possible **impossible**

RGOYIBVK **possible** impossible

OYBRGIVK possible **impossible**

Q3. Write a class extending thread that prints out the numbers from 1 to 1000. Furthermore, it should be such that the thread could be stopped anytime during the printing.

Answer:

**class** MyThread2 **extends** Thread {

**public** **void** run() {

**for** (**int** i = 0; i < 1000; i++) {

if (isInterrupted()) {

break;

}

System.*out*.println(i+1);

}

}

}