

# Quiz 4: Logic SOLUTION

## CSCI 110 Section 1

Wednesday, August 24, 2016

- 1) Say you have three floats: eps, a and, b. Write code to print "ok" if a minus b is less than eps, otherwise print "red alert". Afterwards in both cases, print "test complete". [50 points]

```
// Note: it's not necessary to declare the variables
// for questions like this unless I ask you to.
// I do it in class so you don't forget the names of
// the variables.
if (a - b < eps) {
    System.out.println("ok");
} else {
    System.out.println("red alert");
}
System.out.println("test complete");
```

- 2) What gets printed? [50 points]

```
String last = "walls";
String first = "abby";
if (last.equals("hello")) {
    if (first.equals("Raj")) {
        System.out.println("wonderful");
    }
} else {
    System.out.println("what");
    if (first.equals("Abby")) {
        System.out.println("result");
    }
    System.out.println("thousand");
}
```

**what**

**thousand**

String comparisons are case sensitive.

- 3) Say you have two integers, a and b. Write code that prints "even" if the sum of a and b is even and "odd" otherwise. Reminder: show your work for partial credit! [extra credit, 25 points]

```
if ((a + b) % 2 == 0) {  
    System.out.println("even");  
} else {  
    System.out.println("odd");  
}
```

// Alternate solution

```
if (a % 2 == 0) {  
    // a is even  
    if (b % 2 == 0) {  
        // b is even; even + even == even  
        System.out.println("even");  
    } else {  
        // b is odd; even + odd == odd  
        System.out.println("odd");  
    }  
} else {  
    // a is odd  
    if (b % 2 == 0) {  
        // b is even; odd + even == odd  
        System.out.println("odd");  
    } else {  
        // b is odd; odd + odd == even  
        System.out.println("even");  
    }  
}
```