

q1) What output will be produced by the following Java program fragment?

```
boolean a = true;
boolean b = false;
a = a || b;
b = a && ! b;
System.out.println(a + " " + b);
```

q2) Write a generatePassword() method it generates and returns a random password with given length.

q3) A programmer has been asked to write a method powersOfTwoArray(n) which should return an array containing the powers of 2 from 2⁰ up to and including 2ⁿ, where n is an integer that is supplied as an argument.

For example, if n=4, then the method should return an array containing the numbers [1, 2, 4, 8, 16].

You can assume that the integer n supplied is non-negative and that it is less-or-equal to 30.

Clearly identify each of the errors, stating:

- (a) The line(s) on which the error appears
- (b) What effect the error would have
- (c) How the error should be corrected

q4) Define a class named Person, and fill it with appropriate properties (name, surname, gender, age, nationality etc). Create an object using your info.

q4b) Design the constructor method so that it can work with both two parameters (name, surname) and a third parameter (age).