2. **Control statements**

(a) Under what conditions will the statements `p1`, `p2`, `p3` and `p4` be executed?

```
if (a<0) { p1 } else if (b!=0) { p2 }
else if (a==b) { p3 } else if (a==0) { p4 }
```

[4]

(b) Rewrite the following program statement

```
if (a<b) if (b<0) { p1 }
else if (a==b) if (b==0) { p2 } else if (b>0) { p3 }
```

in the simplest form you can. [2]

(c) Give the output of the following program.

```
1   class TooMany {
2       static void howMany (int k) {
3          switch (k)  {
4           case 1 : System.out.print("one");
5           case 2 : System.out.print("too");
6           case 3 : System.out.println("many");
7           }
8       }
9
10      public static void main(String[] args) {
11          howMany(3);
12          howMany(2);
13          howMany(1);
14      }
15  }
```

[3]

State the difference to the output if a break statement were added to the end of:

(i) line 4;

(ii) lines 4 and 5;

(iii) lines 4, 5 and 6.

[3]