

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]