

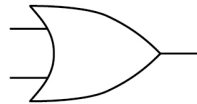
1 5

A burglar alarm sounds an alarm when it is armed (turned on) and the window or door is opened.

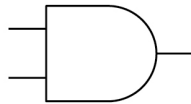
The truth table for this basic system is shown in **Figure 4**.

**Figure 4**

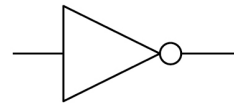
Armed (A) 0 = Off 1 = On	Door (B) 0 = Closed 1 = Open	Window (C) 0 = Closed 1 = Open	Alarm (Q) 0 = Off 1 = On
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1



OR



AND



NOT

Draw the logic circuit that represents the truth table in **Figure 4**. You **must** use the correct symbols for logic gates. You may not need to use all the gates shown.

**[3 marks]**

