E6 homework

Answer all questions. Use the Data Booklet. Total: 10 marks.

1 **Complete** the truth table for a 3-input OR gate. **[2]**

A	B	C	Z
0	0	0	
0	0	1	
0	1	0	
0	1	1	
1	0	0	
1	0	1	
1	1	0	
1	1	1	

2 **State** the Boolean expression for 'A and not B'. **[1]**

3 A greenhouse vent opens (Z) when it is hot (H) or humid (U), unless it is raining (R). **[2]**
Complete the Boolean expression.

4 **Complete** the logic diagram for Q3, with labelled input devices. **[3]**

5 **Explain** why a truth table is used before a logic circuit is built. **[2]**