

Prelab 1

Prelab for Part 1.

From the CMOS [data sheet for the 74HC02](#), look up the following:

- How many gates does it have ? _____
- How many inputs does each gate have ? _____
- If A and B are the inputs, and Y is the output, what is the Boolean expression for Y?
Y = _____

By looking at the DC characteristics of the gates:

- Define the parameter V_{IH} _____

- Define the parameter V_{IL} _____

- If $V_{CC} = 5\text{ V}$, what is the expected value of V_{IH} ? _____
- If $V_{CC} = 5\text{ V}$, what is the expected value of V_{IL} ? _____

Complete the truth table for a NOR gate with inputs A,B and output Y:

A	B	Y
0	0	
0	1	
1	0	
1	1	