CS1356 Introduction to Information Engineering
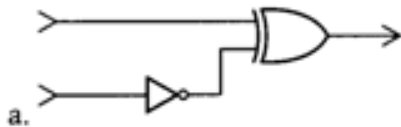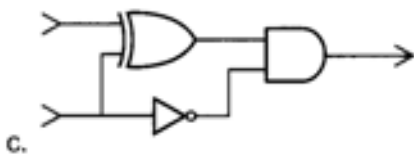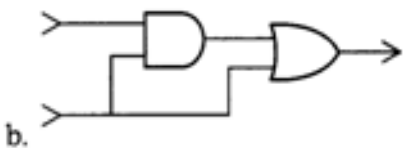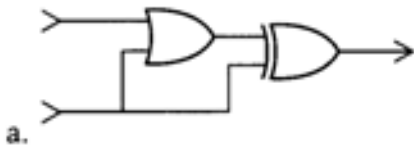
Homework 4

1. Determine the output of each of the following circuits, assuming that the upper input is 1 and the lower input is 0.
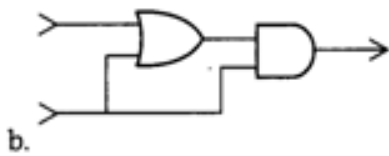

2. For each of the following circuits, identify the input combinations that produce an output of 1.

3. In each circuit below, the rectangles represent the same type of gate. Based on the input and output information given, identify whether the gate involved is an AND, OR, or XOR.

a.

b.

c.
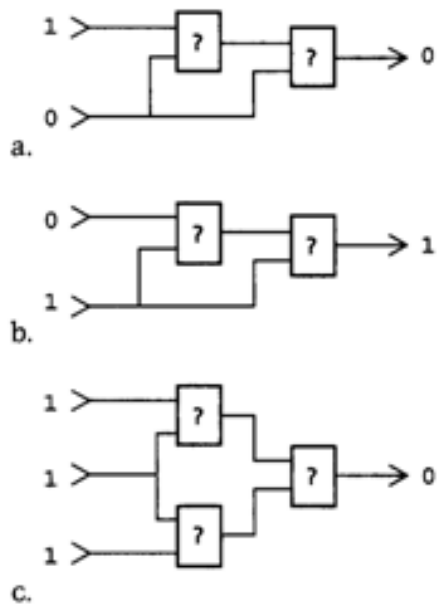
4. Assume that both of the inputs in the circuit below are 1. Describe what would happen if the upper input were temporarily changed to 0. Describe what would happen if the lower input were temporarily changed to 0. Redraw the circuit using NAND gates.
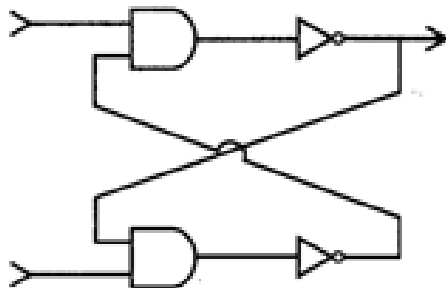
※additional remark on NAND gate

A	B	Out
0	0	1
0	1	1
1	0	1
1	1	0