

Laboratory Session 3 – The XOR Gate

Name: _____ Name: _____ Name: _____

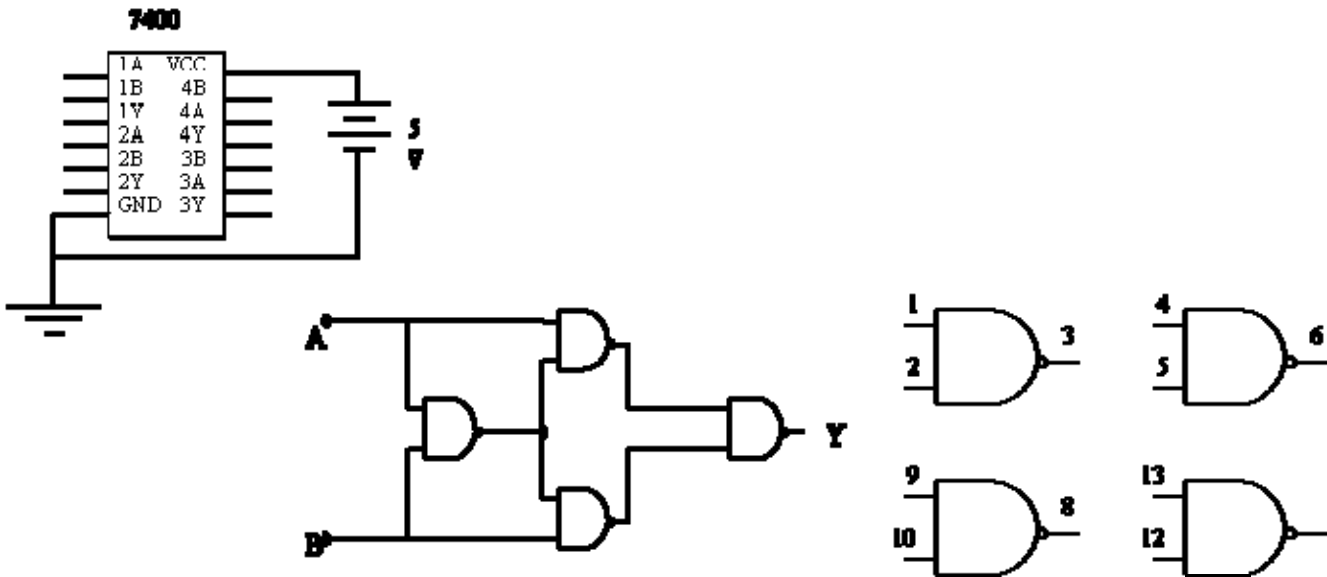
Materials:

4 NAND gates (one 7400 chip)
 Proto-board
 2 switches

light emitting diode (LED)
 Wires
 Wire Stripper

Introduction:

In this experiment you will connect and test an X-OR gate using four NAND gates. This experiment will help introduce you to the logic test kits that will be used in subsequent experiments.



Use the red wire for the +5 volts, black for the ground, and a third color for connecting the inputs and outputs of the logic circuit. Connect the inputs A & B to the toggle switches at the top of the test kit (high and low) and connect the output Y to an LED display.

Vary the inputs and verify that the circuit operates as an X-OR gate. Using a meter, measure the voltage at Y (to ground) when it is high and low and records the results here.

HIGH _____ LOW _____

Instructor's initials: _____