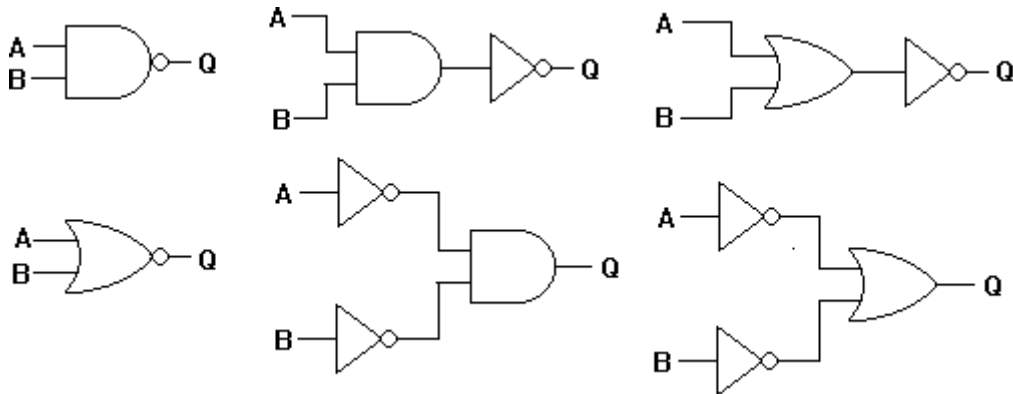
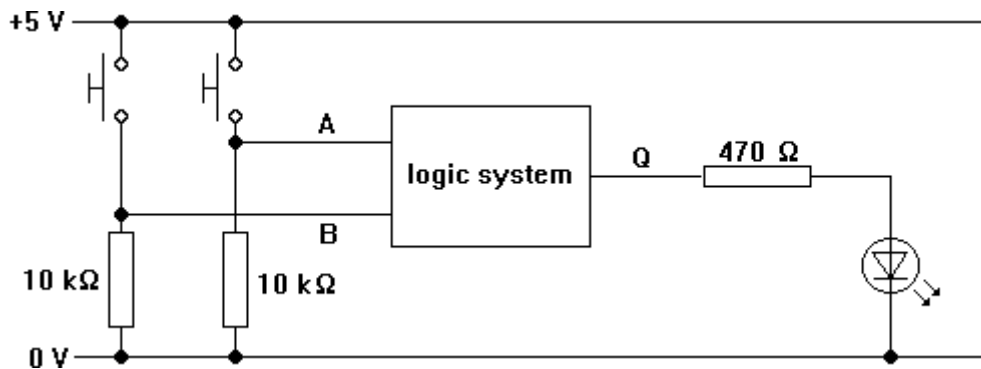


### Truth tables of some logic systems

You are going to find out the truth tables of the logic systems shown here.



The circuit below shows the arrangement of switches, resistors and LED needed to get signals into and out of the system.



1. Assemble the switches and their 10 kΩ pull-down resistors on the left-hand end of your breadboard. Use a voltmeter to check that A and B go high when the relevant switch is pressed.
2. Add the LED and its 470 Ω current-limiting resistor at the right-hand end. Check that the LED glows when Q is plugged into the top supply rail.
3. Place a 4011 NAND gate i.c. in the centre of your breadboard. Connect one of its gates to A, B and Q. Record its truth table by pressing the switches in all four combinations.
4. Use gates from 4071, 4081, 4001 and 4069 i.c.s to assemble the other logic systems. Record their truth tables.