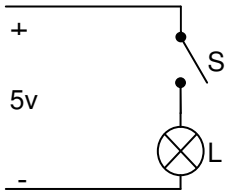
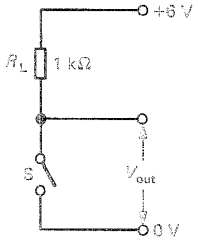
Questions on Switches

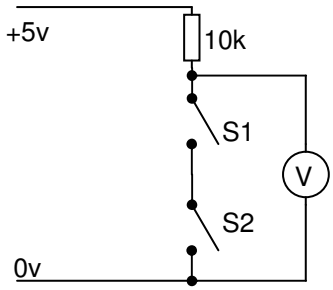
Q1
In the diagram below, what is the pd across L when S is (a) open, (b) closed?



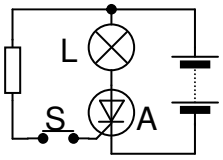
Q2
In the circuit to the right, what is Vout when
(a) S is open
(b) S is closed?



Q3
In the circuit below what is the reading on the voltmeter when (a) S1 and S2 are both open,
(b) S1 and S2 are both closed, and
(c) S1 is open and S2 is closed?



Q4
In the circuit shown
(a) What type of switch is S?
(b) Name component A.
(c) How does L behave when S is ii) pushed, iii) released?



Q5
Draw a potential divider circuit which uses a switch and a pull-down resistor to give an "active high" output.

Q6
Copy the following table and fill in the gaps:

Description	Symbol
Push to make switch	
S…….. p…… s…….. t……., normally open	
Single pole double throw switch	
Push to break switch	
…….. pole ……throw, normally ……	
Double pole double throw switch	

Q7
(a) What is contact bounce in a switch?
(b) Why is contact bounce a problem in counting circuits?
(c) Draw a switch input circuit and add a component to de-bounce the switch.

Q8
A relay is an electronically operated switch. The circuit below shows a dpdt relay. Connect up the relay contacts to the motor so that when the relay contacts changeover, the motor will reverse.