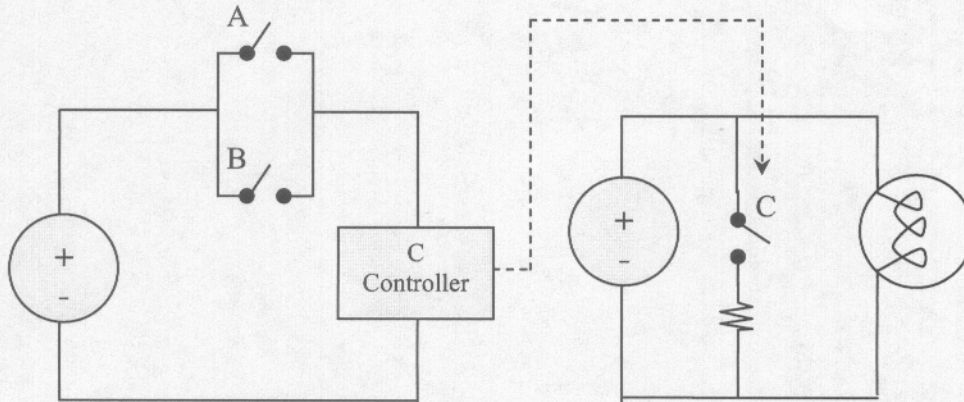


Key

ECE 130 HW#1

1. Consider the following switching circuit:



A and B switch an input voltage source to an element labeled "C Controller." This element closes C when the input voltage is high and opens C when the input voltage is low.

- A. Complete a truth table for the above circuit with inputs A and B and with an output L, which is the light.
- B. Write a logical expression in Boolean algebra that relates the output L to the two inputs.

A	B	C	L
0	0	0	1
0	1	1	0
1	0	1	0
1	1	1	0

$$L = \bar{A} \cdot \bar{B} \quad \leftarrow \text{OR}$$
$$L = (A+B)'$$