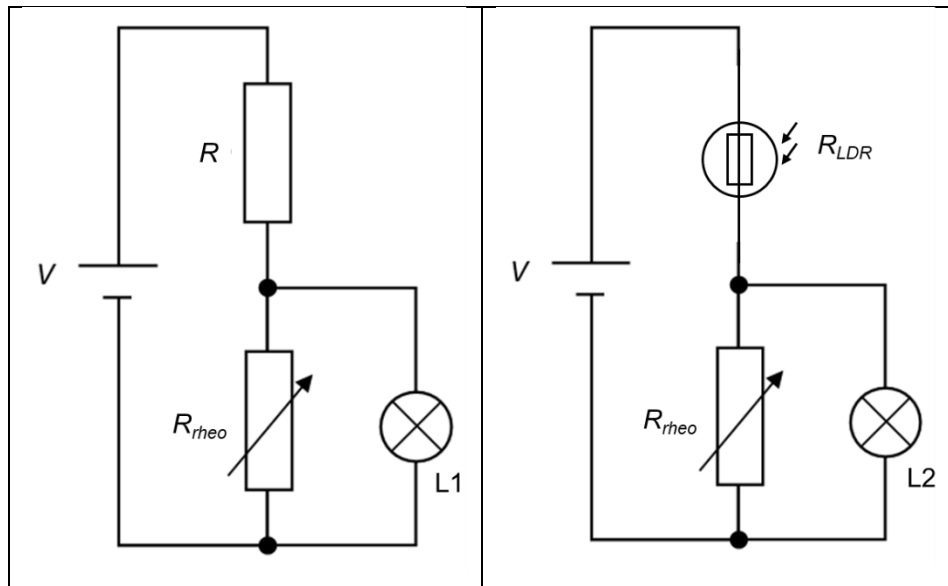


- 22 A fixed resistor and a light dependent resistor (LDR) are placed in two identical circuits far from each other. Initially when the circuit is connected, the resistance of the LDR  $R_{LDR}$ , the rheostat  $R_{rheo}$  and the fixed resistor  $R$  are equal. Assume the batteries have negligible internal resistance.



Which of the following correctly describes the brightness of L1 and L2 when varying  $R_{rheo}$  in both circuits?

- |          | <b><math>R_{rheo}</math> increases</b> | <b><math>R_{rheo}</math> decreases</b> |
|----------|--|--|
| <b>A</b> | L1 is brighter than L2                 | L1 is brighter than L2                 |
| <b>B</b> | L1 is brighter than L2                 | L2 is brighter than L1                 |
| <b>C</b> | L2 is brighter than L1                 | L1 is brighter than L2                 |
| <b>D</b> | L2 is brighter than L1                 | L2 is brighter than L1                 |

