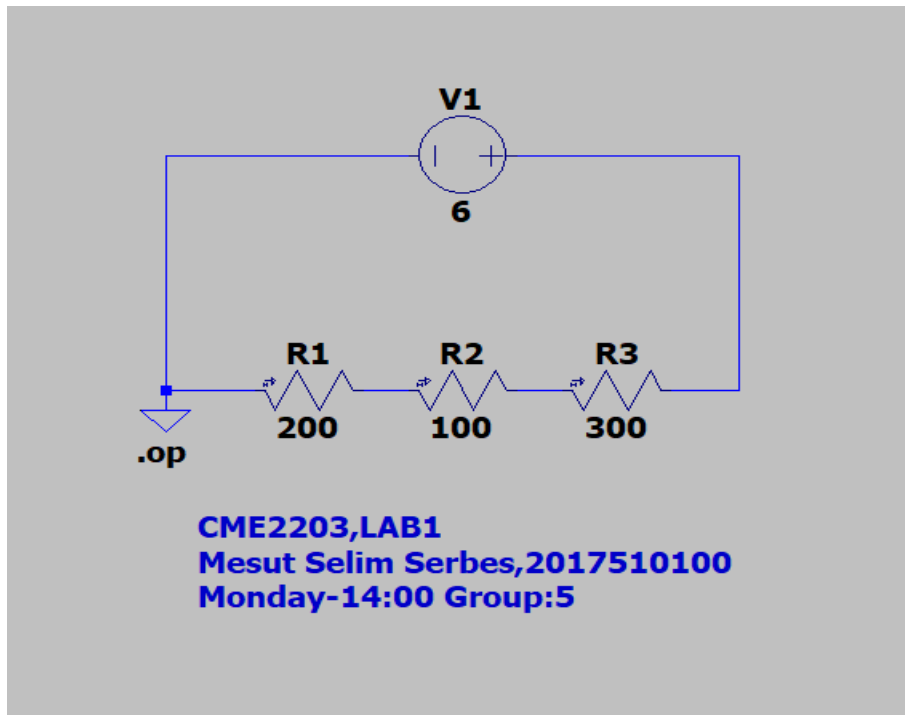


CME2203 Lab1 Preliminary Assignment

- A Solution



* D:\DEU\CME2203-Introduction-to-Circuits-and-Electronics\Lab1\Draft1.asc		
--- Operating Point ---		
V(n002) :	2	voltage
V(n003) :	3	voltage
V(n001) :	6	voltage
I(R3) :	-0.01	device_current
I(R2) :	-0.01	device_current
I(R1) :	-0.01	device_current
I(V1) :	-0.01	device_current

$$V1 = 00.1 \times 200 = 2V$$

$$V2 = 00.1 \times 100 = 1V$$

$$V3 = 00.1 \times 300 = 3V$$

$$P = V \cdot i$$

If $P < 0 \Rightarrow$ generate

If $P > 0 \Rightarrow$ absord

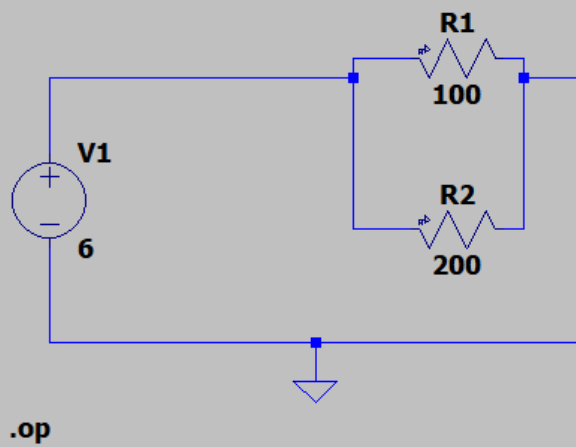
$$P_0 = (-0.01) \cdot 6 = -0.06 \text{ W} \Rightarrow \text{generate}$$

$$P_1 = (-0.01) \cdot (-2) = 0.02 \text{ W} \Rightarrow \text{absord}$$

$$P_2 = (-0.01) \cdot (-1) = 0.01 \text{ W} \Rightarrow \text{absord}$$

$$P_3 = (-0.01) \cdot (-3) = 0.03 \text{ W} \Rightarrow \text{absord}$$

• B Solution



CME2203, LAB1
Mesut Selim Serbes, 2017510100
Monday-14:00 Group:5

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* D:\DEU\CME2203-Introduction-to-Circuits-and-Electronics\Lab1\Draft2.asc
--- Operating Point ---
V(n001):      6          voltage
I(R2):        0.03       device_current
I(R1):        0.06       device_current
I(V1):        -0.09      device_current
```

$$P = V \cdot i$$

If $P < 0 \Rightarrow$ generate

If $P > 0 \Rightarrow$ absord

$$P_0 = (-0.09) \cdot 6 = -0.54 \text{ W} \Rightarrow \text{generate}$$

$$P_1 = (0.06) \cdot 6 = 0.36 \text{ W} \Rightarrow \text{absord}$$

$$P_2 = (-0.03) \cdot 6 = 0.18 \text{ W} \Rightarrow \text{absord}$$

Current on R1 = 0.06A

Current on R2 = 0.03A

The current that passes on substance is inversely proportional to its resistance.

Low current flows through a substance with high resistance.