Lista 1 - Dispositivos e Circuitos Eletrônicos

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1- $I = ?$

$R = 10\,\Omega$

$U = 20V$

$I = \frac{U}{R} \rightarrow I = \frac{20}{10} = 2\,A$ //

2- $R = ?$

$U = 4,2\,V$

$I = 4,2\,A$

$R = \frac{U}{I} \rightarrow R = \frac{4,2}{4,2} = 10\,\Omega$ //

3- $R = 10\,\Omega$

$I = 6\,A$

$U = ?$

$U = R \cdot I \rightarrow U = 10 \cdot 6 = 60\,V$ //

4- $R = 2,5\,mA = 0,0025\,A$

$U = 1,5\,V$

$R = ?$

$R = \frac{U}{I} \rightarrow R = \frac{1,5}{0,0025} = 600\,\Omega$

$R = 6 \cdot 10^2\,\Omega$ (IV) //

$R = 10\,\Omega$

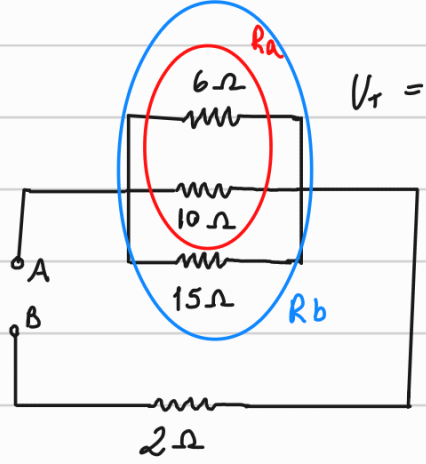
$U = 120\,V$

$I = ?$

$I = \frac{U}{R} \rightarrow I = \frac{120}{10} = 12\,A$

$I = 12\,A$ (III) //

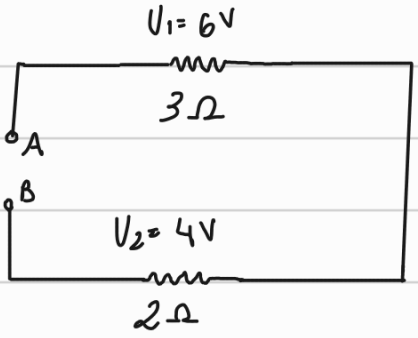
5 -



$U_T = 10V$

$$R_a = \frac{10 \cdot 6}{10+6} = \frac{60}{16} = 3{,}75\,\Omega$$

$$R_b = \frac{3{,}75 \cdot 15}{3{,}75 + 15} = \frac{56{,}25}{18{,}75} = 3\,\Omega$$



$R_T = 3 + 2 = 5\,A$

$$I_T = \frac{U_T}{R} \rightarrow I_T = \frac{10}{5} = 2A$$

$I_T = 2A$ $\quad U_T = 10V$ $\quad U_2 = R \cdot I_T \rightarrow U = 2 \cdot 2 = 4V$

$$I = \frac{U_1}{R} \rightarrow I = \frac{6}{6} = 1A\ (III) \;//$$

6 - $R_a = ?$

$R_1 = 2\Omega$

$U = 5V$

2Ω — $1V$

R_a — $4V$

$R_a = 8\,\Omega$ //