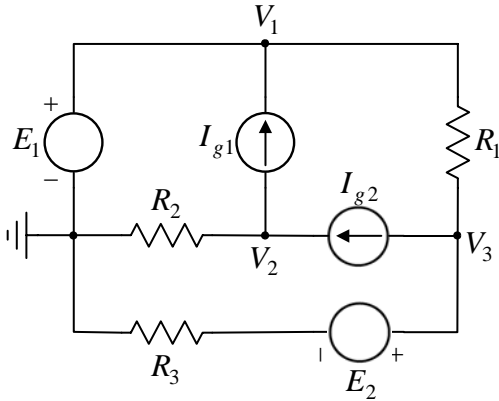


Osnovi elektronike SI

Rešenja zadataka – februar 2008.

I deo

2. zadatak



a) $V_1 = 3 \text{ V}; V_2 = 4 \text{ V}; V_3 = 6 \text{ V}$

b) $P_{R2} = 8 \text{ W}; P_{I_{g2}} = -8 \text{ W}; P_{E2} = 80 \text{ W}$

II deo

2. zadatak

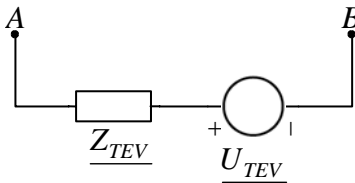
$$v(t) = 8V \cdot \sin(\omega t - 45^\circ) = 8V \cdot \cos(\omega t + 225^\circ) \Rightarrow \underline{V} = 4\sqrt{2} \cdot e^{j225^\circ} V = (-4 - j4)V$$

$$i(t) = -2\sqrt{2}A \cdot \sin(\omega t) = 2\sqrt{2}A \cdot \cos(\omega t + 90^\circ) \Rightarrow \underline{I} = 2 \cdot e^{j90^\circ} A = j2A$$

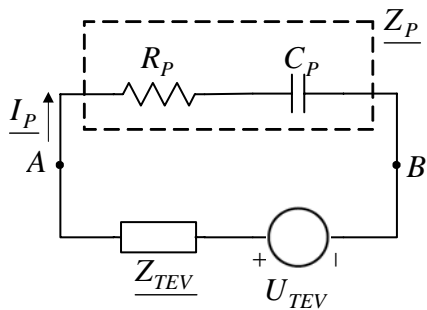
$$\underline{Z}_L = j\omega \cdot 200\mu H = j2\Omega$$

a) $\underline{U}_{TEV} = j12V$

$$\underline{Z}_{TEV} = (5 + j)\Omega$$



b) $\underline{Z}_P = \underline{Z}_{TEV}^* \Rightarrow \underline{Z}_P = (5 - j)\Omega \Rightarrow R_P = 5\Omega; C_P = 100\mu F$



III deo

2. zadatak

$$i = \frac{R_2}{R_1 R_3} (v_2 - v_1)$$