REŠENJA

1. a) $U_{OUT} = U'_{OUT} + U''_{OUT} + U'''_{OUT}$,

$U'_{OUT} = U_{OUT}\left(I_G \neq 0, U_{G1} = 0, U_{G2} = 0\right)$,

$U''_{OUT} = U_{OUT}\left(I_G = 0, U_{G1} \neq 0, U_{G2} = 0\right)$,

$U'''_{OUT} = U_{OUT}\left(I_G = 0, U_{G1} = 0, U_{G2} \neq 0\right)$,

$U_{OUT} = R \cdot I_G + \frac{1}{2}U_{G1} + \frac{1}{4}U_{G2}$.

b) $P_{I_G} = 6R \cdot I_G^2 + \frac{1}{2}U_{G1} \cdot I_G + \frac{1}{4}U_{G2} \cdot I_G$.

2. $R_{EKV} = 4R$.

3. a) $\underline{U_1} = \left(-4 - j4\right)\text{V}$.

b) $\underline{I_2} = \left(\frac{1}{2} - j\frac{\sqrt{3}}{2}\right)\text{A}$.

c) $u_3(t) = 2\sqrt{5}\text{V} \cdot \cos\left(2\pi ft + 108.43°\right)$.

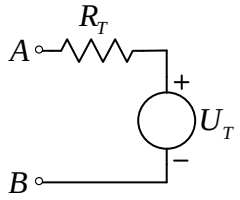
d) $i_4(t) = \sqrt{26}\text{A} \cdot \cos\left(\omega t + 33.69°\right)$.

4. a) $I_1 = 400\mu\text{A}$.

b) $P_{U_G} = -4.8\text{mW}$.

c) $P_{I_G} = 128\text{mW}$.

5. a) $U_T = 2\text{V}$, $R_T = 1\Omega$.



b) $I_X = -400\text{mA}$.

c) $P_X = 640\text{mW}$.