

REŠENJA ZADATAKA

1. a) $I_{C1} \approx 0.5\text{mA}$; $I_{C2} \approx 0.5\text{mA}$, $V_I = 0$.

b) $a = \frac{v_i}{v_g} = -\frac{g_{m2}R_3}{1 + g_{m2}R_3} g_{m1} [R_1 \parallel (r_{\pi 2} + (\beta_0 + 1)R_3)] \approx -35.2$,

$$R_{ul} = r_{\pi 1} = 5\text{k}\Omega,$$

$$R_{izl} = R_3 \parallel \frac{r_{\pi 2} + R_1}{\beta_0 + 1} \approx 66\Omega.$$

c) $V_I = 0$;

$$v_{iMAX} \approx 0.886\text{V} \text{ (} Q_1 \text{ na granici zakočjenja); } v_{iMIN} = -1\text{V} \text{ (} Q_1 \text{ na granici zasićenja);}$$

$$V_{im\max} = 0.886\text{V}.$$

4. M_1 -zasićenje, M_2 -triodna oblast, IOP-linearni režim

$$v_i = (\sqrt{2} - 2) \sqrt{\frac{I_0}{B}} = -18.52 \sqrt{I_0}.$$