REŠENJA ZADATAKA

1. a) $I_{C1} = 1\text{mA}$, $I_{C2} = 1\text{mA}$, $R_1 = 1.6\text{k}\Omega$, $R_2 = 4.4\text{k}\Omega$.

b) $a_v = \dfrac{v_p}{v_g} = \left(- g_{m1}\left(R_1 \parallel r_{\pi 2}\right)\right) \cdot \left(- g_{m2}\left(R_4 \parallel R_P\right)\right) = 5203$

c) $R_{ul} = r_{\pi 1} = 2.5\text{k}\Omega$ $\qquad\qquad$ $R_{izl} = R_4 = 5\text{k}\Omega$

d) $v_{P\max} = 3.8\text{V}$ (Q_2 na granici zasićenja)
$v_{P\min} = -3.33\text{V}$ (Q_2 na granici zakočenja)
$V_P = 0$
$V_{pm\max} = \min\left\{v_{P\max} - V_P, V_P - v_{P\min}\right\} = 3.33\text{V}$

4.

$v_I[\text{V}] = V_D + |V_{BE}| = 1.4\text{V} = const$, za $-3\text{V} \le v_G \le -1.4\text{V}$ (IOP- lin. režim, D_1-OFF, Q_1-OFF, D_2-ON, Q_2-DAR);

$v_I[\text{V}] = -v_G[\text{V}]$, za $-1.4\text{V} \le v_G \le 1.4\text{V}$ (IOP-lin. režim, D_1-OFF, Q_1-OFF, D_2-OFF, Q_2-OFF);

$v_I[\text{V}] = -V_D - |V_{BE}| = -1.4\text{V} = const$, za $1.4\text{V} \le v_G \le 3\text{V}$ (IOP- lin. režim, D_1-ON, Q_1-DAR, D_2-OFF, Q_2-OFF).