

## REŠENJA ZADATAKA

1. a)  $I_{D1} = 2\text{mA}$ ;  $I_{D2} = 1.25\text{mA}$ ;  $V_I = 5\text{V}$ .

b)  $a = \frac{v_i}{v_g} = \frac{g_{m1}R_3}{1 + g_{m1}R_3} \cdot \frac{g_{m2}R_4}{1 + g_{m2}R_4} = 0.879$ .

c)  $R_{ul} = R_1 \parallel R_2 = 333.3\text{k}\Omega$ ;  $R_{izl} = R_4 \parallel \frac{1}{g_{m2}} = 190.5\Omega$ .

## 4.

$v_I[\text{V}] = 12\text{V}$ , za  $-12\text{V} \leq v_G \leq -7.2\text{V}$  (IOP-poz. zasićenje,  $D_1$ -ON,  $D_2$ -OFF,  $D_3$ -ON,  $D_4$ -OFF);

$v_I[\text{V}] = -10v_G[\text{V}] - 60$ , za  $-7.2\text{V} \leq v_G \leq -6\text{V}$  (IOP-lin. režim,  $D_1$ -ON,  $D_2$ -OFF,  $D_3$ -ON,  $D_4$ -OFF);

$v_I[\text{V}] = 0$ , za  $-6\text{V} \leq v_G \leq 6\text{V}$  (IOP-lin. režim,  $D_1$ -ON,  $D_2$ -ON,  $D_3$ -ON,  $D_4$ -ON);

$v_I[\text{V}] = -10v_G[\text{V}] + 60$ , za  $6\text{V} \leq v_G \leq 7.2\text{V}$  (IOP-lin. režim,  $D_1$ -OFF,  $D_2$ -ON,  $D_3$ -OFF,  $D_4$ -ON);

$v_I[\text{V}] = -12\text{V}$ , za  $7.2\text{V} \leq v_G \leq 12\text{V}$  (IOP-neg. zasićenje,  $D_1$ -OFF,  $D_2$ -ON,  $D_3$ -OFF,  $D_4$ -ON).