ODSEK ZA TELEKOMUNIKACIJE I INFORMACIONE TEHNOLOGIJE ODSEK ZA SIGNALE I SISTEME ODSEK ZA FIZIČKU ELEKTRONIKU

REŠENJA ZADATAKA

1. a)
$$I_{D1} = 1 \text{mA}$$
; $I_{D2} = 100 \mu \text{A}$.

b)
$$a = \frac{v_p}{v_u} = -g_{m1} (R_3 \parallel R_p) \frac{R_2}{R_1 + R_2} \approx -2.53$$
.

c)
$$R_u = R_1 + R_2 = 5.05 \text{k}\Omega$$
; $R_i = R_3 = 1.2 \text{k}\Omega$.

4.

$$\begin{split} &v_I[\text{V}] = 14.4\text{V} = const \text{, } \text{za} - 500 \text{\mu} \text{A} \leq i_G \leq -144 \text{\mu} \text{A} \text{ (IOP- poz. zasićenje, } D_1\text{-OFF, } Q_1\text{-DAR, } Q_2\text{-DAR);} \\ &v_I[\text{V}] = -100 i_G[\text{mA}] \text{, } \text{za} - 144 \text{\mu} \text{A} \leq i_G \leq 0 \text{ (IOP- lin. režim, } D_1\text{-OFF, } Q_1\text{-DAR, } Q_2\text{-DAR);} \\ &v_I[\text{V}] = 0 = const \text{, } \text{za} \ 0 \leq i_G \leq 500 \text{\mu} \text{A} \text{ (IOP- lin. režim, } D_1\text{-ON, } Q_1\text{-OFF, } Q_2\text{-OFF).} \end{split}$$