1. a)

$I_{DQ1} = I_{DQ2} = 2mA$

$U_{DSQ1} = 8V$

$U_{DSQ2} = 6V$

b)

$A_{Vz} = -0{,}154$

$A_{Vd} = -1$

P=6,5

c) $u_{iz} = 138 \sin \omega t$ mV

2. *a)*

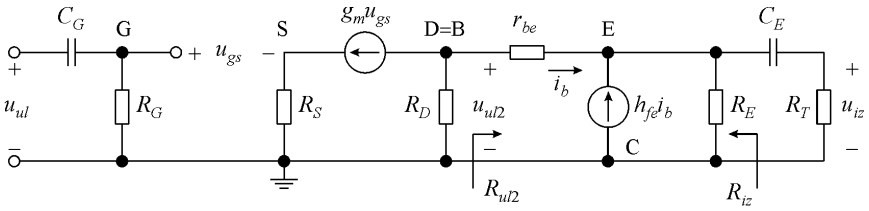
$R_S = 125\Omega$

$I_{CQ} = 1{,}56\ mA$

$U_{DSQ} = 6V$

$U_{CEQ} = 8{,}76V$

b)



c) $A_V = -5{,}16$

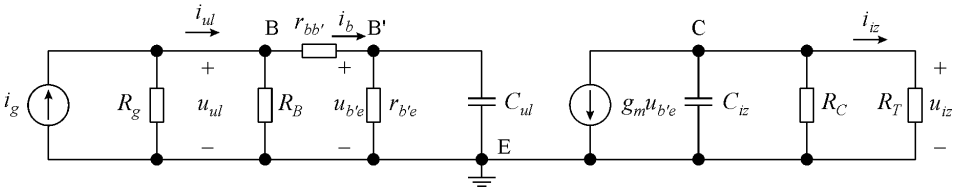
d) $f_d = 7{,}7Hz$

3. a)

$I_{CQ} = 2{,}9\ mA$

$U_{CEQ} = 4{,}75V$

b)



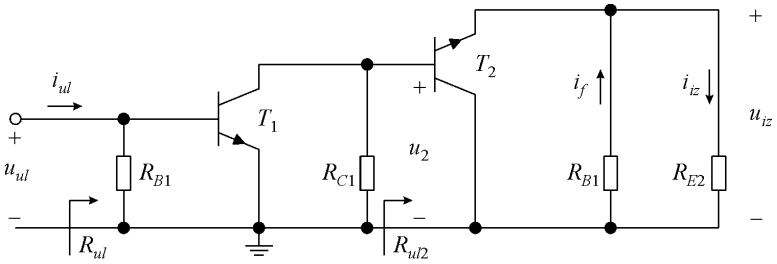
c) $A_{Ig} = -61{,}6$

d) $f_g = 2MHz$

4. a) $I_{CQ1} = 2{,}65\ mA$

$I_{CQ2} = 6{,}66\ mA$

b) *Povratna veza – naponska-paralelna – A-grana*

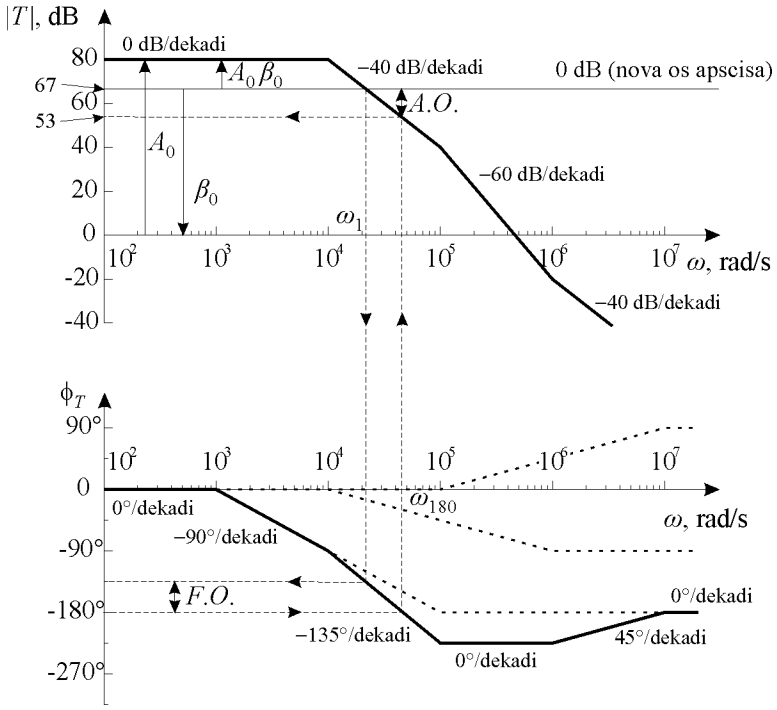


c) $R_M = -278$ V/mA

d) β=$-\frac{1}{100}$ mA/V

e) $A_{Vf} = -298$

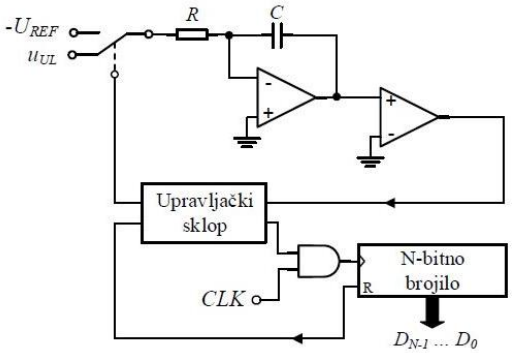
5.

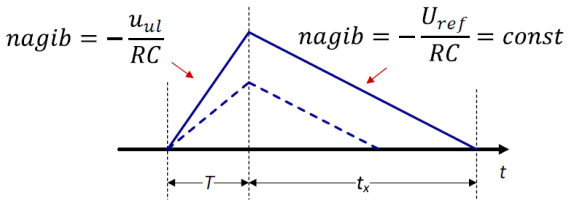


$\beta_0 = -0{,}45 \cdot 10^{-3}$

A.O. = 14dB

6. a)





$$\frac{u_{ul}}{RC}T = \frac{U_{ref}}{RC}t_x \Rightarrow t_x = \frac{u_{ul}}{U_{ref}}T$$

b) 5000 impulsa

c) 5020 impulsa, T = 20 ms

d) minimalna frekvencija 50Hz, maksimalna 100Hz