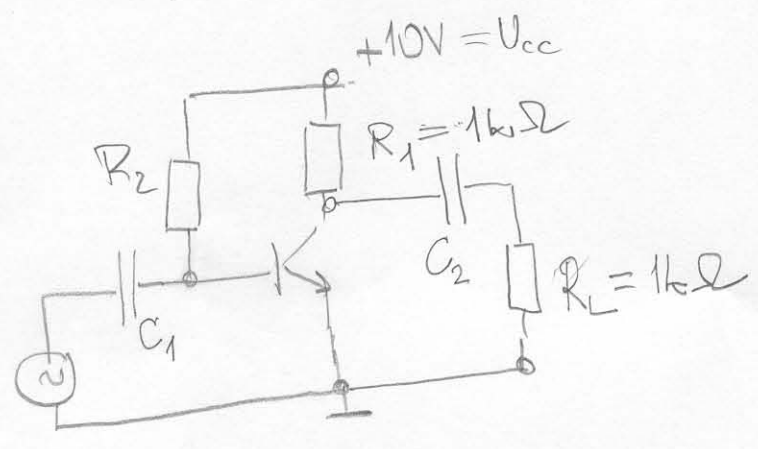


3) Bipolárny tranzistor v zapojení

$h_{21} = 300; h_{11} = h_{21} \cdot \frac{U_T}{I_E} = h_{21} \cdot \frac{nU_T}{I_E}$   
 $h_{12} = h_{22} = \emptyset$       Preciz?



Úlohy:

1) Vypočítajte  $R_2$  tak

$I_C = \frac{U_{cc} - U_{CE} = 10V - 0,65V}{R_1} = \frac{9,35V}{1k\Omega} = 9,35mA$

2 by  $U_{CE} = \frac{U_{cc}}{2}$

$I_B = \frac{I_C}{300} = \frac{9,35mA}{300} = 31,17\mu A$

2a) Ako sa zmení  $U_{CE}$  keď  $h_{21} = 400$

$U_{CE} = U_{cc} - R_1 \cdot I_C$   
 $U_{CE} = 5,36V$   
 $R_2 = \frac{10V - 0,65V}{16,6 \cdot 10^{-6}} = 563,25k\Omega$

2b) Ako sa zmení  $U_{CE}$  keď  $U_{cc} = 7,5V$

$I_B = \frac{7,5 - 0,65}{R_2} = 12,1\mu A$

2c) Ako sa zmení  $U_{CE}$  keď  $R_2 = 500k\Omega$

$I_C = h_{21} I_B = 3,64mA$

$U_{CE} = U_{cc} - \frac{U_{cc} - 0,65}{R_2} \cdot h_{21} \cdot R_1 = 4,39V$

$U_{CE} = U_{cc} - R_1 \cdot I_C = 7,5 - 3,64 \cdot 1k\Omega = 3,86V$

3) Nakreslite sign. schému pre stredné frekvencie

