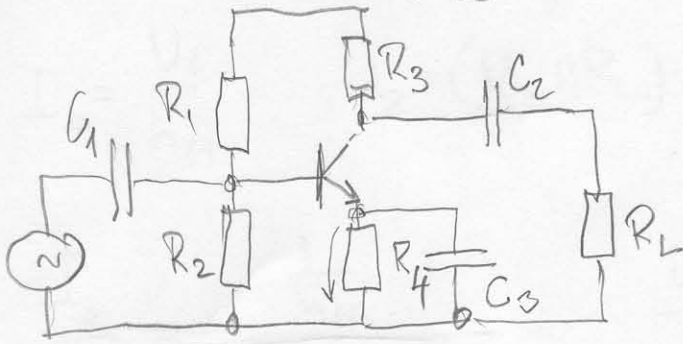


5) Tranzistor s mostikovou zapojení

$+U_{CC} = 12V$



$h_{21} = 300 \quad h_{11} = h_{21} r_E$

$U_{U4} = 1,8V ; U_{CE} = 7V, I_E = 2mA$

$I_{R1}, I_{R2} > 10 \cdot I_B$

Ulohy:

1.) Kde je to zapojenie

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2.) Vypočítajte prvky n z zabezpečenie prac. bodu so zadanim

$\frac{U_{U4}}{I_E} = R_4 = \frac{1,8}{2 \cdot 10^{-3}} = 0,9 k\Omega$

$R_3 = \frac{U_{CC} - U_{CE}}{2 I_E \frac{h_{21}}{h_{21} + 1}} = \frac{5V}{2 \cdot 10^{-3} \cdot \frac{300}{301}} = 2,5 k\Omega$

$I_b = \frac{2mA}{300} = 6,66 \mu A$

Zvolime

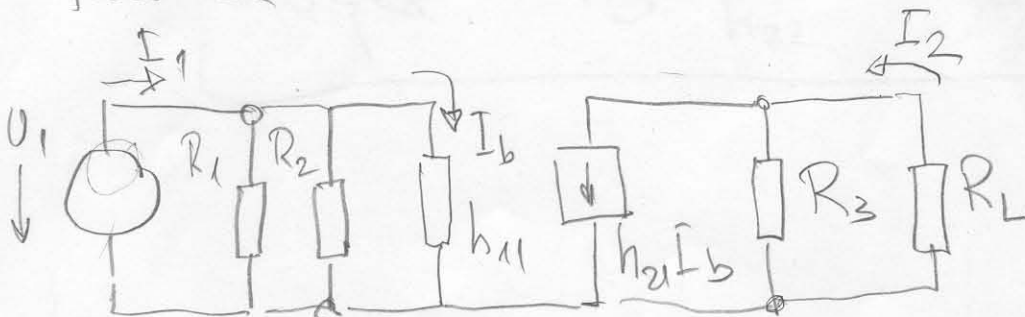
$I_{R2} = 100 \mu A$

$R_2 = \frac{0,45}{100 \cdot 10^{-6}} = 24,5 k\Omega$

$R_1 = \frac{12 - 2,45}{(100 + 6,6) \cdot 10^{-6}} = 89,5 k\Omega$

3.) Nakreslite náhradní signálovú schému pre strednú frekvenciu

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3a Určite h_{11}

$h_{11} = h_{21} \frac{r_U}{I_E} = 3900$

$h_{11}(u=2) = 7,8 k\Omega$