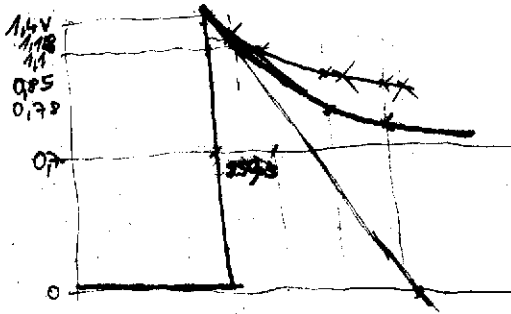


6.9

JP1, JP7 68Ω

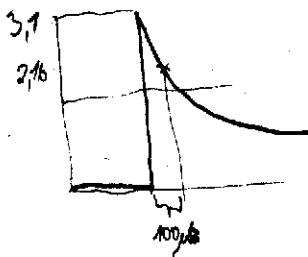


$$\tau = 0.8 \text{ ms}$$

$$\tau = \frac{L}{R}$$

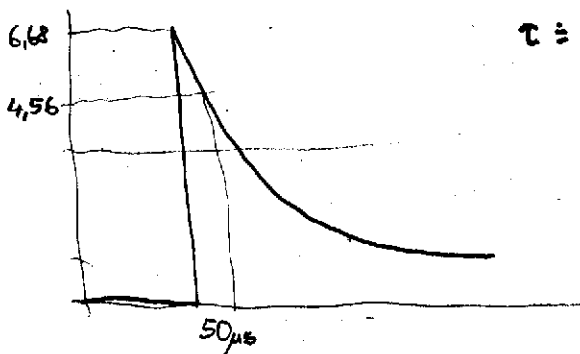
$$L = \tau R = 0.8 \cdot 10^{-3} (68\Omega) = 0.027 \text{ H}$$

JP1, JP8 150Ω



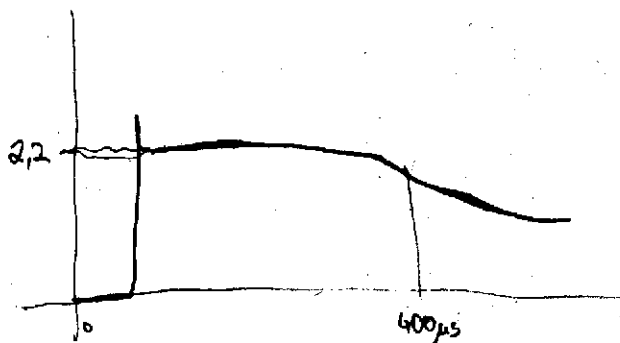
$$\tau = 330 \mu\text{s}$$

JP1, JP9 330Ω

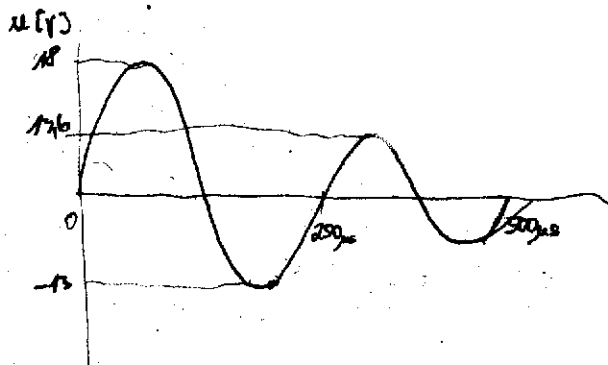


$$\tau = 160 \mu\text{s}$$

7. diode JP1, JP5, JP9



6.11



$$\omega_0 = 2\pi \cdot \frac{1}{T} = 25130 \text{ s}^{-1}$$

$$\delta = \ln \frac{15}{13.6} = 0.28$$

$$\alpha = \frac{\delta \omega}{2\pi} = 1120$$

$$C_1 = 47 \text{ mF}$$

$$\omega = \sqrt{\frac{1}{LC} - \alpha^2}$$

$$\omega^2 = \frac{1}{LC} - \alpha^2$$

$$\frac{1}{LC} = \omega^2 + \alpha^2$$

$$\text{Hence } L = \frac{1}{C \cdot (\omega^2 + \alpha^2)} = \underline{\underline{34 \text{ mH}}}$$

$$\alpha = \frac{R}{2L} \rightarrow R = 2L\alpha = \underline{\underline{76 \Omega}}$$

$$5) R = 2\sqrt{L/C} = 1700 \Omega$$

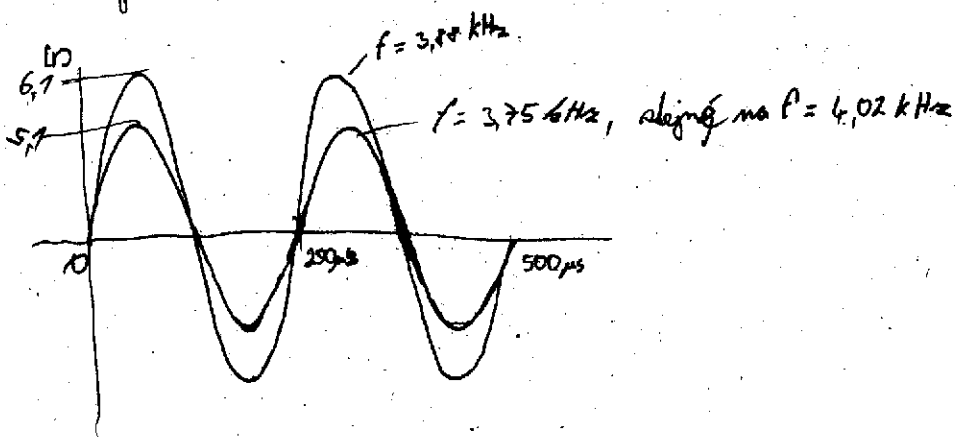
napojka na JP4, $R = 1,8 \text{ k}\Omega$

$$R = 2\sqrt{\frac{L}{C}}$$

$$R^2 = 4 \frac{L}{C}$$

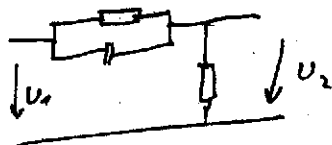
$$\frac{R^2 C}{4} = L$$

$$6) f_0 = 6000 \text{ Hz}$$



6.1.2

a)



$$U_1 = 1V$$

f [Hz]	40	80	100	200	400	800	1000	2000	4000	10000
U2 [V]	0,995	0,996	0,997	0,998	0,992	0,979	0,971	0,968	0,961	0,936
φ [°]	1,5	4	8	19	36	51	53	59	68	82
G/B3	-20	-20	-20	-20	-18	-15	-14	-9	-4	-2

	10 k	20 k	40 k
	0,975	0,969	0,986
	22	14	7,5
	-1	-0,3	-0,1

$$C = 33 \text{ mF}$$

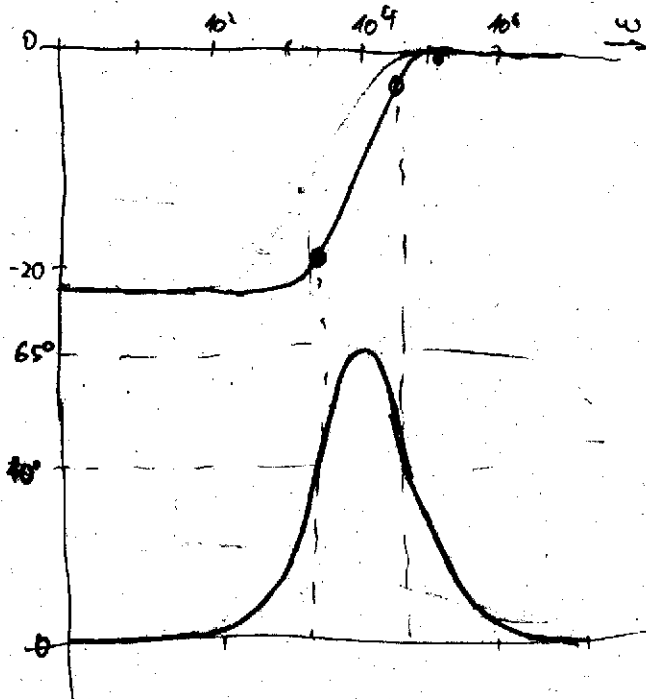
$$R_1 = 10k\Omega$$

$$x = \frac{R_1 + R_2}{R_2}$$

$$R_2 = R_1 + R_2$$

$$R_2 = \frac{R_1}{x-1} = 635 \Omega$$

Matlab

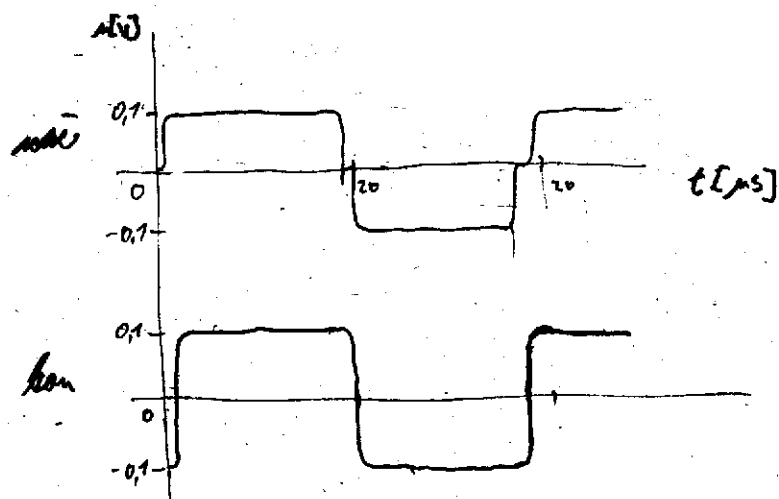


6.3.1

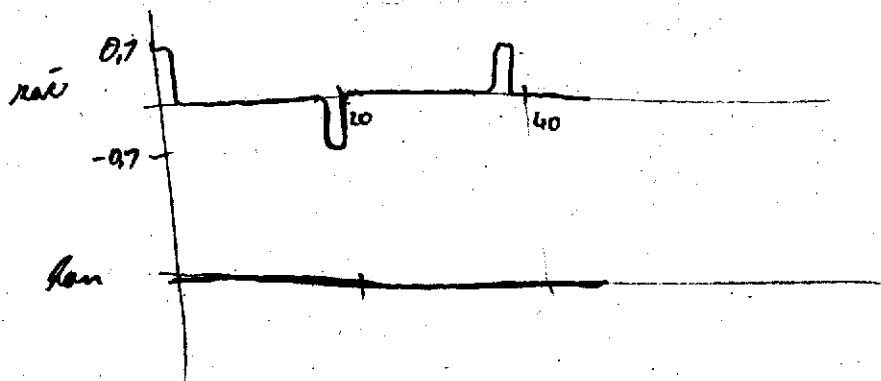
dlouhý impuls

A) $R_i = R_o$

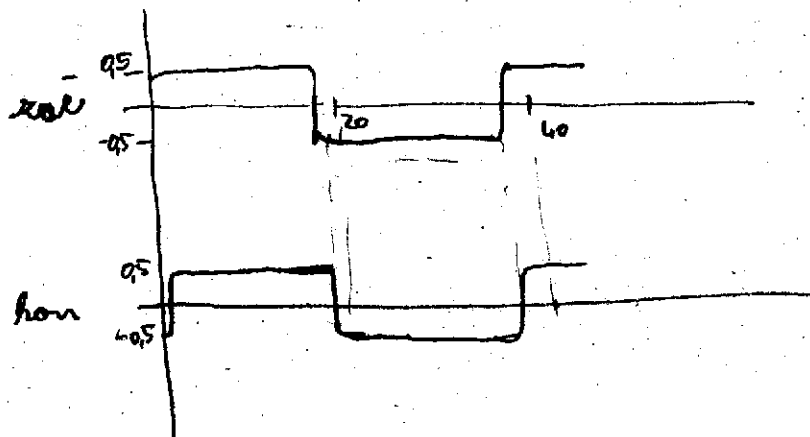
a) $R_s = \infty$



b) $R_s = 0$

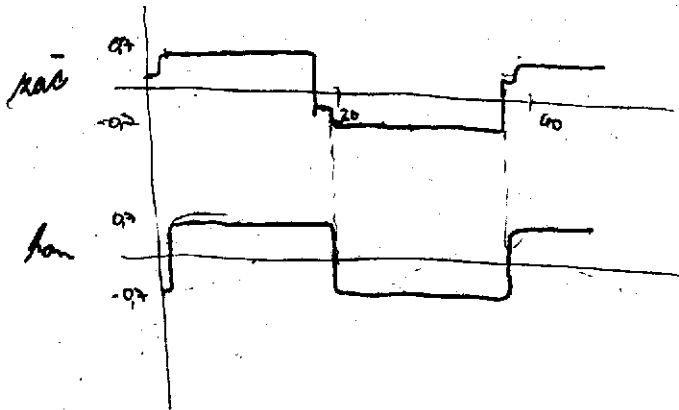


c) $R_s = R_o$

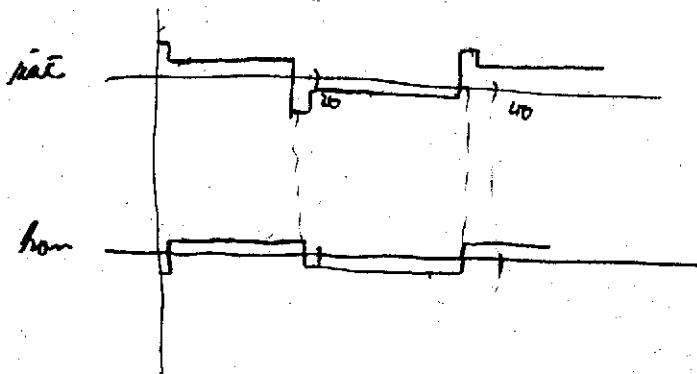


b) $R_i = R_o$

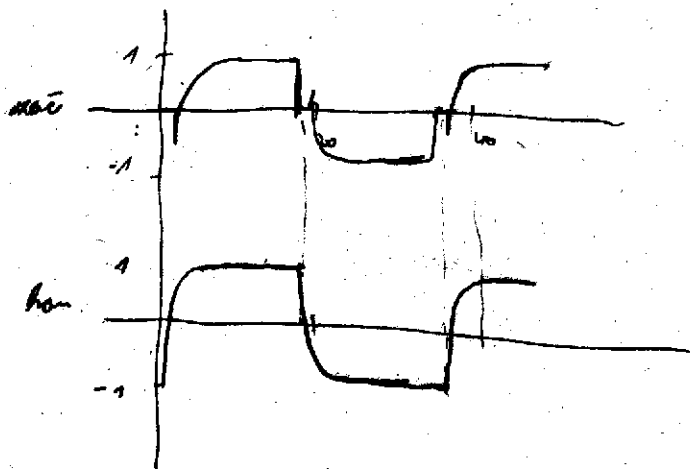
a) $R_s > R_o$



b) $R_s < R_o$

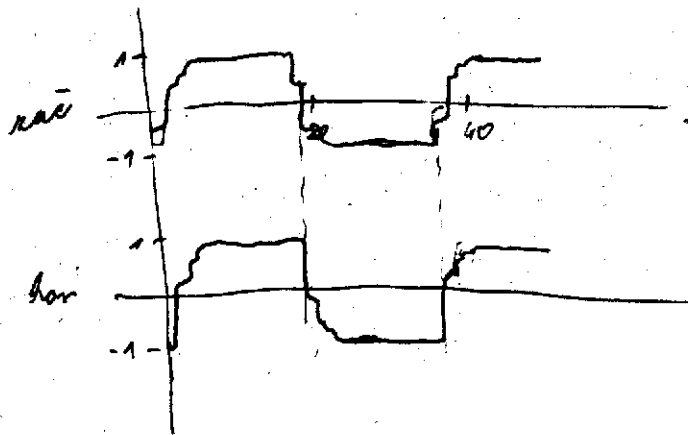


c) $R_i = R_o, C_1$

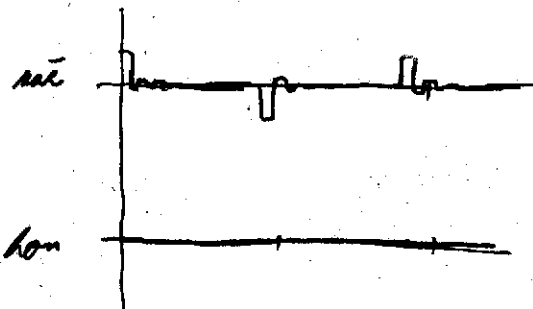


D) $R_i > R_o$

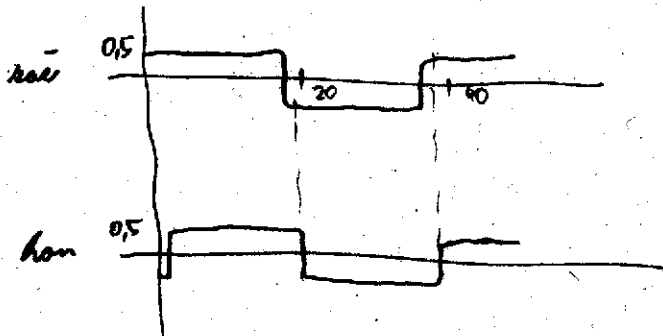
a) $R_s \rightarrow \infty$



b) $R_s = 0$

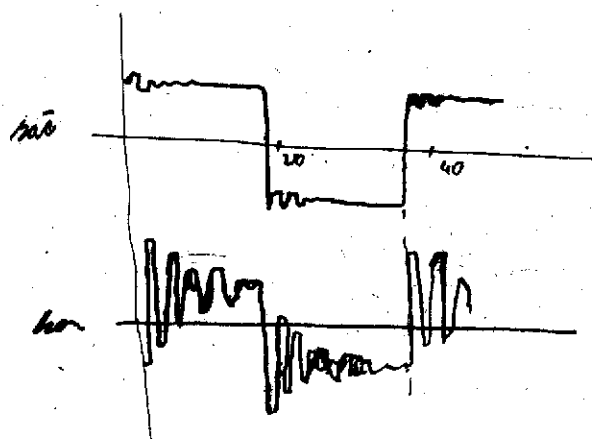


c) $R_s = R_o$

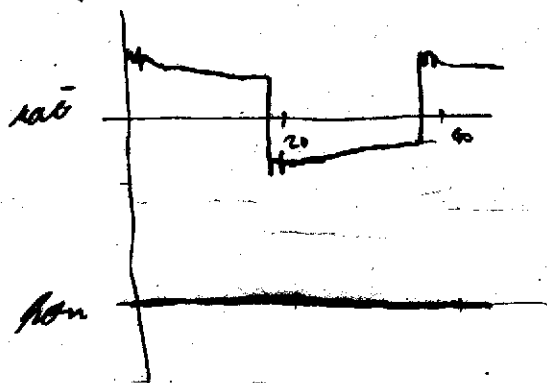


E) $R_i < R_o$

a) $R_s \sim \infty$



b) $R_s = 0$



c) $R_s = R_o$

