

Skupina A (Oddajte samo ta list, vmesni rezultati in izpeljave naj bodo jasno vidne)

1. Frekvenčna odvisnost (50%) 4. Sklop

Izpelji $H(\omega)$ in absolutno vrednost $|H(\omega)|$ vezja po sliki

OHMOV ZAKON $R = \frac{U}{I}$
 $I = \frac{U}{R}$

1. Kirchofov zakon

$$I_L = I_C$$

$$I_L = \frac{U_{vh}}{j\omega L + \frac{1}{j\omega C}}$$

$$I_C = \frac{U_{izh}}{j\omega C}$$

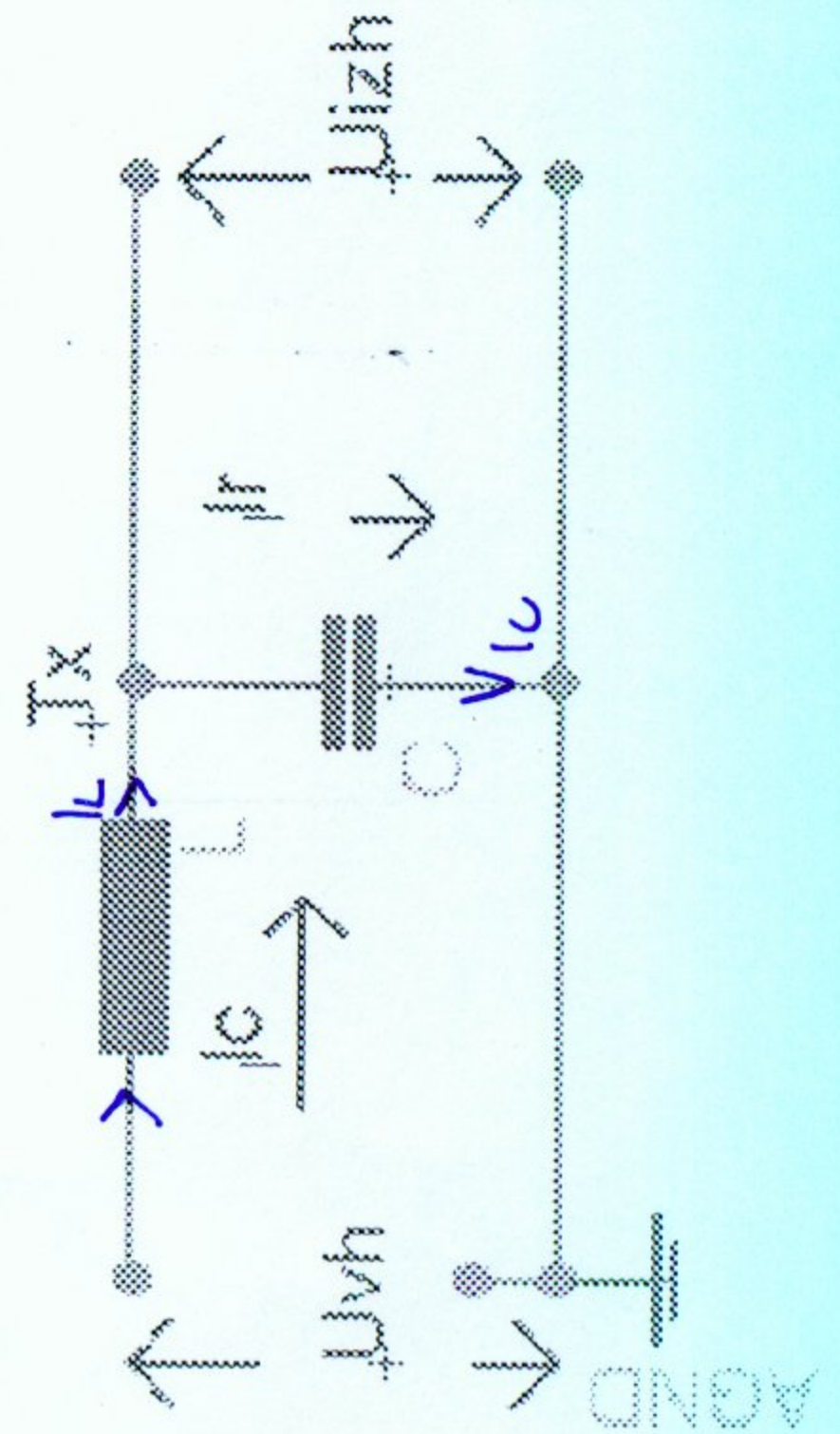
$$H(\omega) = \frac{U_{izh}}{U_{vh}} = \frac{\frac{1}{j\omega C} / j\omega C}{j\omega L + \frac{1}{j\omega C} / j\omega C} = \frac{1}{1 - \omega^2 CL}$$

$R_{eq}(H(\omega)) = \frac{1}{1 - \omega^2 CL}$

$|H(\omega)| = \frac{1}{1 - \omega^2 CL}$

50/50

$\ln(H(\omega)) = /$



2. Frekvenčna odvisnost (50%) 4. Sklop

Izpelji $H(\omega)$ in absolutno vrednost $|H(\omega)|$ vezja po sliki

1. Kirchofov zakon

$$I_C = I_{R1} = I_{R2} = I_L$$

$$I_{C, R1} = \frac{U_{vh}}{R_1 + R_2 + \frac{1}{j\omega C} + j\omega L}$$

$$I_{R2, L} = \frac{U_{izh}}{R_2 + j\omega L}$$

OHMOV ZAKON $R = \frac{U}{I}$
 $I = \frac{U}{R}$

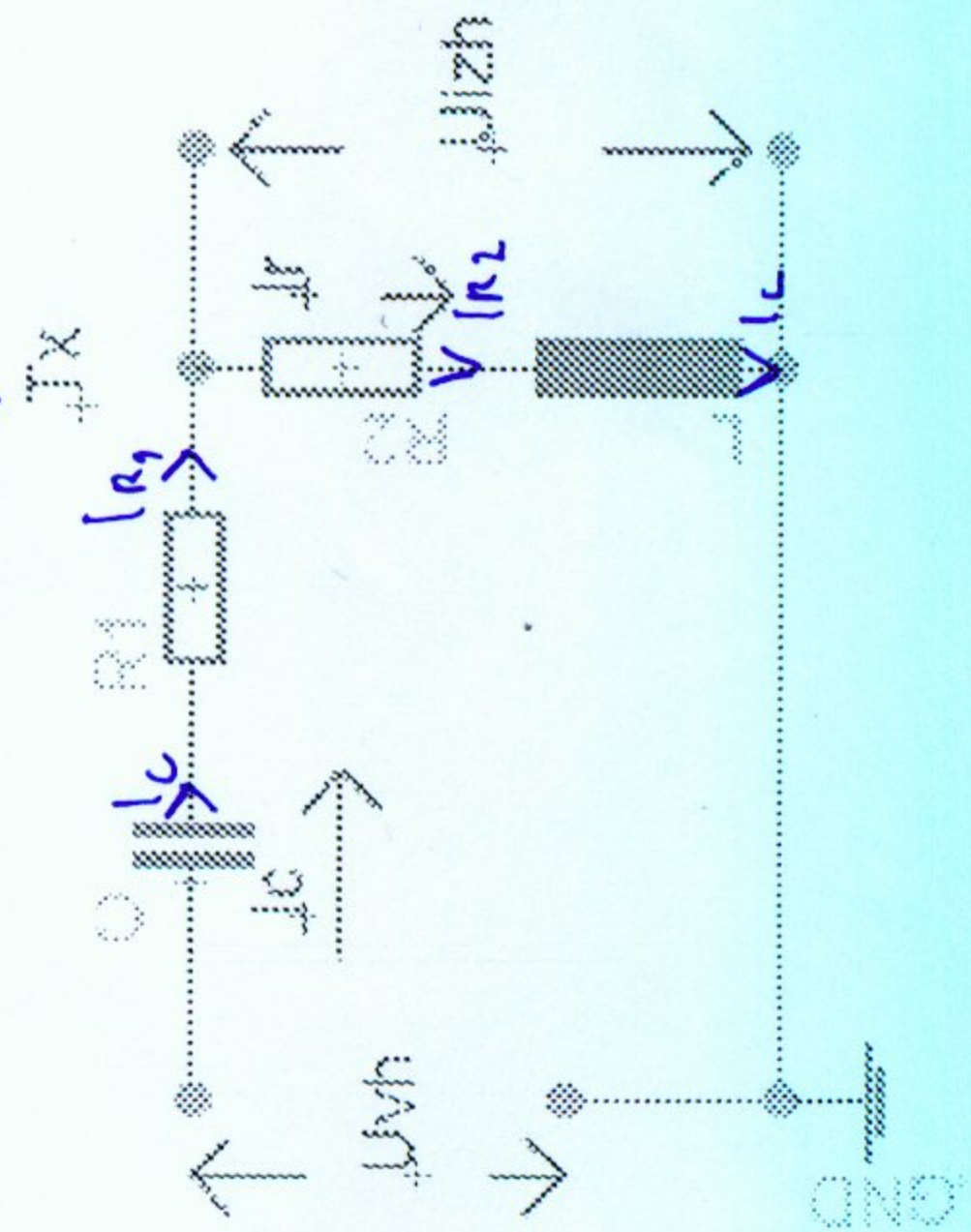
~~$H(\omega) = \frac{U_{izh}}{U_{vh}} = \frac{R_2 + j\omega L}{2R + \frac{1}{j\omega C} + j\omega L}$~~

25/50

~~$\ln(H(\omega)) = /$~~

$H(\omega) = \frac{U_{izh}}{U_{vh}} = \frac{R_2 + j\omega L}{R_1 + R_2 + \frac{1}{j\omega C} + j\omega L}$

$= \frac{R_2 + j\omega L}{2R - \frac{1}{\omega C} + j\omega L}$



SE NE DA REŠITI DO KONCA