Ķēžu teorija. Eksāmenā izmantojamo formulu lapa (30.05.2012. versija3)

$$\begin{cases}\dfrac{\partial u}{\partial x}=-iR_0-L_0\dfrac{\partial i}{\partial t};\\ \dfrac{\partial i}{\partial x}=-uG_0-C_0\dfrac{\partial u}{\partial t}\end{cases}\quad \begin{cases}\dfrac{d\dot U}{dx}=-\underline{Z_0}\dot I;\\ \dfrac{d\dot I}{dx}=-\underline{Y_0}\dot U\end{cases}\quad \frac{d^2\dot U}{dx^2}-\gamma^2\dot U=0$$

$$\begin{cases}\dot U=\dot A_1e^{-\gamma x}+\dot A_2e^{\gamma x}\\ \dot I\underline{z_c}=\dot A_1e^{-\gamma x}-\dot A_2e^{\gamma x}\end{cases}\quad \begin{cases}\dot U=\dot A_3e^{-\gamma y}+\dot A_4e^{\gamma y}\\ \dot I\underline{z_c}=\dot A_3e^{-\gamma y}-\dot A_4e^{\gamma y}\end{cases}\quad \begin{cases}\underline{Z_0}=R_0+j\omega L_0;\\ \underline{Y_0}=G_0+j\omega C_0;\end{cases}\quad \begin{cases}\gamma=\sqrt{\underline{Z_0}\,\underline{Y_0}}=\alpha+j\beta;\\ \underline{z_c}=\sqrt{\dfrac{\underline{Z_0}}{\underline{Y_0}}};\end{cases}\quad \begin{cases}v=\dfrac{\omega}{\beta};\\ \lambda=\dfrac{2\pi}{\beta}\end{cases}$$

$$\begin{cases}\dot U(x)=\dot U_1ch\gamma x-\dot I_1\underline{z_c}sh\gamma x;\\ \dot I(x)=-\dfrac{\dot U_1}{\underline{z_c}}sh\gamma x+\dot I_1ch\gamma x;\end{cases}\quad \begin{cases}\dot U(y)=\dot U_2ch\gamma y+\dot I_2\underline{z_c}sh\gamma y;\\ \dot I(y)=\dfrac{\dot U_2}{\underline{z_c}}sh\gamma y+\dot I_2ch\gamma y;\end{cases}\quad ;\ ;\ \underline{z_{ie}}=\underline{z_c}\frac{\underline{z_{sl}}+\underline{z_c}th\gamma l}{\underline{z_c}+\underline{z_{sl}}th\gamma l}\ ;$$

$$\begin{cases}sh(j\beta x)=j\sin\beta x;\\ ch(j\beta x)=\cos\beta x;\\ th(j\beta x)=jtg\beta x;\end{cases}\quad \begin{cases}\dot U(x)=\dot U_1\cos\beta x-j\dot I_1z_c\sin\beta x;\\ \dot I(x)=-j\dfrac{\dot U_1}{z_c}\sin\beta x+\dot I_1\cos\beta x;\end{cases}\quad \begin{cases}\dot U(y)=\dot U_2\cos\beta y+j\dot I_2z_c\sin\beta y;\\ \dot I(y)=j\dfrac{\dot U_2}{z_c}\sin\beta y+\dot I_2\cos\beta y;\end{cases}$$

$$\underline{z_{ie}}=z_c\frac{\underline{z_{sl}}+j\underline{z_c}tg\beta l}{z_c+j\underline{z_{sl}}tg\beta l};\quad \begin{cases}\underline{z_{iet}}=-jz_c ctg\beta l;\\ \underline{z_{\text{ieī}}}=jz_c tg\beta l;\end{cases}\quad \begin{cases}\underline{z_{sl}}=z_c\dfrac{k-jtg\beta x_0}{1-jktg\beta x_0};\\ k=\dfrac{U_{\min}}{U_{\max}}\end{cases}$$

Ķēžu teorija. Eksāmenā izmantojamo formulu lapa (30.05.2012. versija3)

$$\begin{cases}\dfrac{\partial u}{\partial x}=-iR_0-L_0\dfrac{\partial i}{\partial t};\\ \dfrac{\partial i}{\partial x}=-uG_0-C_0\dfrac{\partial u}{\partial t}\end{cases}\quad \begin{cases}\dfrac{d\dot U}{dx}=-\underline{Z_0}\dot I;\\ \dfrac{d\dot I}{dx}=-\underline{Y_0}\dot U\end{cases}\quad \frac{d^2\dot U}{dx^2}-\gamma^2\dot U=0$$

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$$\underline{z_{ie}}=z_c\frac{\underline{z_{sl}}+j\underline{z_c}tg\beta l}{z_c+j\underline{z_{sl}}tg\beta l};\quad \begin{cases}\underline{z_{iet}}=-jz_c ctg\beta l;\\ \underline{z_{\text{ieī}}}=jz_c tg\beta l;\end{cases}\quad \begin{cases}\underline{z_{sl}}=z_c\dfrac{k-jtg\beta x_0}{1-jktg\beta x_0};\\ k=\dfrac{U_{\min}}{U_{\max}}\end{cases}$$