

## Prehodni pojavi

### Kondenzator

Priklop

$$u_C = U(1 - e^{-\frac{t}{RC}})$$

$$i = \frac{U}{R} e^{-\frac{t}{RC}}$$

$$u_R = U e^{-\frac{t}{RC}}$$

Odklop

$$u_C = U e^{-\frac{t}{RC}}$$

$$i = -\frac{U}{R} e^{-\frac{t}{RC}}$$

$$u_R = -U e^{-\frac{t}{RC}}$$

### Tuljava

$$u_L = U e^{-\frac{t}{L/R}}$$

$$i = \frac{U}{R} (1 - e^{-\frac{t}{L/R}})$$

$$u_R = U(1 - e^{-\frac{t}{L/R}})$$

$$u_L = -U e^{-\frac{t}{L/R}}$$

$$i = \frac{U}{R} e^{-\frac{t}{L/R}}$$

$$u_R = U e^{-\frac{t}{L/R}}$$

## Trifazni sistemi

### Fazne napetosti

$$\underline{U}_{F1} = U_{F1} e^{j0^\circ}$$

$$\underline{U}_{F2} = U_{F2} e^{-j120^\circ}$$

$$\underline{U}_{F3} = U_{F3} e^{-j240^\circ}$$

### Medfazne napetosti

$$\underline{U}_{12} = U e^{j30^\circ}$$

$$\underline{U}_{23} = U e^{-j90^\circ}$$

$$\underline{U}_{31} = U e^{-j210^\circ}$$

$$\underline{U}_{12} = \underline{U}_{F1} \sqrt{3} e^{j30^\circ}$$

$$\underline{U}_{23} = \underline{U}_{F2} \sqrt{3} e^{-j90^\circ}$$

$$\underline{U}_{31} = \underline{U}_{F3} \sqrt{3} e^{-j210^\circ}$$

$$\underline{U}_{12} = \underline{U}_{F1} \sqrt{3} e^{j30^\circ}$$

$$\underline{U}_{23} = \underline{U}_{F2} \sqrt{3} e^{j30^\circ}$$

$$\underline{U}_{31} = \underline{U}_{F3} \sqrt{3} e^{j30^\circ}$$

### Fazni tokovi

$$\underline{I}_{F1} = \frac{\underline{U}_{F1}}{\underline{Z}_1}$$

$$\underline{U}_{12} = \underline{U}_{F1} - \underline{U}_{F2}$$

$$\underline{U}_{23} = \underline{U}_{F2} - \underline{U}_{F3}$$

$$\underline{U}_{31} = \underline{U}_{F3} - \underline{U}_{F1}$$

### Pretvarjanje (polarna $\leftrightarrow$ komponenti zapis)

$$\operatorname{tg} \varphi = \frac{\operatorname{Im}}{\operatorname{Re}}$$

$$|Z| = \sqrt{a^2 + b^2}$$

