Formule iz Osnova Elektrotehnike
koje se mogu koristiti na međuispitima

$$\epsilon_0 = 8.854 \cdot 10^{-12} \frac{As}{Vm}$$

$$\epsilon_r = \frac{\epsilon}{\epsilon_0}$$

$$F = \frac{Q_1 Q_2}{4\pi\epsilon d^2}$$

$$\vec{E} = \frac{\vec{F}}{Q}$$

$$\varphi_A = \frac{W_p}{Q}$$

$$\varphi(x) = -E \cdot x + \varphi_0$$

$$U_{AB} = \varphi_A - \varphi_B$$

$$A_{12} = W_1 - W_2 = QU_{12}$$

$$C = \frac{Q}{U}$$

$$C = \epsilon \frac{S}{d}$$

$$W_C = \frac{QU}{2} = \frac{Q^2}{2C} = \frac{CU^2}{2}$$

$$I = \frac{Q}{t}$$

$$J = NQv$$

$$J = \kappa E = \frac{I}{S}$$

$$R = \frac{U}{I} = \frac{1}{G}$$

$$R = \rho \frac{l}{S}$$

$$G = \kappa \frac{S}{l}$$

$$R_\vartheta = R_{20}[1 + \alpha(\vartheta - 20)]$$

$$W = I^2 R t$$

$$P = UI = I^2 R = \frac{U^2}{R}$$

$$\mu_0 = 4\pi \cdot 10^{-7} \frac{Vs}{Am}$$

$$\vec{F} = Q(\vec{v} \times \vec{B})$$

$$|\vec{F}| = IlB \sin(\alpha)$$

$$B = \mu_0 \frac{I}{2\pi r}$$

$$\Phi = \vec{B}\vec{S} = BS \cos(\alpha)$$

$$\Phi = \frac{NI}{\frac{l_{sr}}{\mu_0 S}}$$

$$u_i = Blv$$

$$e_{ind} = -N \frac{d\Phi}{dt}$$

$$L = N \frac{\Phi}{I}$$

$$M_{12} = N_2 \frac{\Phi_{12}}{I_1}$$

$$k = \frac{\Phi_{12}}{\Phi_1}$$

$$M = k\sqrt{L_1 L_2}$$

$$u_L(t) = L \frac{di(t)}{dt}$$

$$W_L = \frac{LI^2}{2}$$

$$u(t) = Ri(t) \quad i(t) = \frac{u(t)}{R}$$

$$u(t) = L \frac{di(t)}{dt} \quad i(t) = \frac{1}{L} \int u(t)dt$$

$$u(t) = \frac{1}{C} \int i(t)dt \quad i(t) = C \frac{du(t)}{dt}$$

$$p(t) = u(t)i(t)$$

$$w(t) = \int p(t)dt$$

$$\sum_n i_n = 0 \quad (\text{čvor})$$

$$\sum_n u_n = 0 \quad (\text{petlja})$$

$$R_s = R_1 + R_2$$

$$R_p = \frac{R_1 R_2}{(R_1 + R_2)}$$

$$U_{p.h} = I_{k.s} R_i$$

$$\eta_{naponski} = \frac{R_t}{R_t + R_i}$$

$$\eta_{strujni} = \frac{R_i}{R_t + R_i}$$