Formulário 3 Física Geral 3:

$$W = \vec{F}\cdot\vec{d} \qquad \vec{F_B} = q\vec{v}\times\vec{B} \qquad F_c = \frac{mv^2}{r} \qquad f = \frac{qB}{2\pi m} \qquad \vec{F}_B = i\vec{L}\times\vec{B} \qquad \vec{F}_B = i\int_a^b \vec{dL}\times\vec{B}$$

$$\tau = (NiA)Bsen\theta \qquad \vec{\mu} = NiA \qquad \vec{\tau} = \vec{\mu}\times\vec{B} \qquad U = -\vec{\mu}\cdot\vec{B} \qquad d\vec{B} = \frac{\mu_0}{4\pi}\frac{i\,d\vec{s}\times\vec{r}}{r^3}$$

$$\mu_0 = 4\pi\times10^{-7}\ \mathrm{T\cdot m/A} \qquad F_{ba} = \frac{\mu_0 i_a i_b L}{2\pi d} \qquad \oint \vec{B}\cdot d\vec{s} = \mu_0 i_{enc} \qquad B = \mu_0 in \qquad B = \frac{\mu_0 iN}{2\pi}\frac{1}{r}$$

$$\Phi_B = \int \vec{B}\cdot\vec{dA} \qquad \varepsilon = -N\frac{d\Phi_B}{dt} \qquad P = Fv \qquad V_f - V_i = -\int_i^f \vec{E}\cdot d\vec{s} \qquad V = \frac{1}{4\pi\varepsilon_0}\frac{q}{r} \qquad dV = \frac{1}{4\pi\varepsilon_0}\frac{dq}{r}$$

$$i = \frac{dq}{dt} \qquad i = \int \vec{J}\cdot\vec{dA} \qquad R = \frac{V}{i} \qquad P = Vi \qquad P = \frac{dU}{dt} \qquad F = \frac{1}{4\pi\varepsilon_0}\frac{q_1 q_2}{r^2} \qquad E = \frac{1}{4\pi\varepsilon_0}\frac{q}{r^2} \qquad dE = \frac{1}{4\pi\varepsilon_0}\frac{dq}{r^2}$$

$$\rho = \frac{q}{V} \qquad \sigma = \frac{q}{A} \qquad \lambda = \frac{q}{l} \qquad K = \frac{mv^2}{2} \qquad \vec{F} = q_0\vec{E} \qquad \varepsilon_0 = 8.85\,\mathrm{x}\,10^{-12}\,\mathrm{C^2/Nm^2} \qquad f = 10^{-15}$$

$$m_p = 1.67\,\mathrm{x}\,10^{-27}\ \mathrm{kg} \qquad m_e = 9.11\,\mathrm{x}\,10^{-31}\ \mathrm{kg} \qquad e = 1.60\,\mathrm{x}\,10^{-19}\ \mathrm{C} \qquad g = 9.81\,\mathrm{m/s^2} \qquad \mu = 10^{-6}$$

$$n = 10^{-9} \qquad p = 10^{-12}$$

$$\int \frac{dx}{(x^2+a^2)^{3/2}} = \frac{x}{a^2\sqrt{x^2+a^2}} \qquad \int \frac{x^2dx}{(x^2+a^2)^{3/2}} = \frac{-x}{\sqrt{x^2+a^2}} + \ln(x+\sqrt{x^2+a^2}$$