

Respostas dos Exercícios - Lista VII

Física III

2º Semestre de 2015

1. a) $\vec{F}_{total} = \frac{\mu_o i I}{2\pi} \frac{a b}{d(d+a)} \hat{y}$

2. a) $B = \frac{\mu_o i L^2}{2\pi \left(\frac{L^2}{2} + z^2\right) \sqrt{\frac{L^2}{2} + z^2}}$

b) $B = \frac{\mu_o i}{2\pi z^2}$

3. a) $B(x) = \frac{\mu_o n i}{2} \left(\frac{\frac{L}{2} - x}{\sqrt{\left(\frac{L}{2} - x\right)^2 + a^2}} + \frac{\frac{L}{2} + x}{\sqrt{\left(\frac{L}{2} + x\right)^2 + a^2}} \right),$

4. $B(0) = \frac{\mu_o i}{a \left(\frac{5}{4}\right)^{3/2}}$

5. a) $T_1 = T_0 + \frac{\pi b^2 i B}{L}$

6.