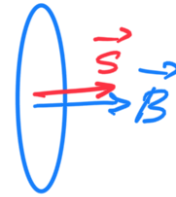


EXERCÍCIO F2BE2440:

a) $R = 0,075 \text{ m}$

$$B(t) = 0,3 \cdot \cos\left(\frac{t^2}{\pi}\right)$$



$$\phi(t) = \vec{B} \cdot \vec{S} = B \cdot S \cdot \cos 0^\circ = B(t) \cdot S =$$

$$= 0,3 \cdot \cos\left(\frac{t^2}{\pi}\right) \cdot \pi \cdot 0,075^2 =$$

$$\phi(t) = 1,69 \cdot 10^{-3} \pi \cdot \cos\left(\frac{t^2}{\pi}\right) \text{ Wb}$$

b) $\mathcal{E}(t) = - \frac{d\phi(t)}{dt} = - \frac{d\left[1,69 \cdot 10^{-3} \pi \cdot \cos\left(\frac{t^2}{\pi}\right)\right]}{dt} =$

$$= -1,69 \cdot 10^{-3} \pi \cdot \frac{2t}{\pi} \cdot \left[-\text{sen}\left(\frac{t^2}{\pi}\right)\right] =$$

$$\mathcal{E}(t) = 3,38 \cdot 10^{-3} t \cdot \text{sen}\left(\frac{t^2}{\pi}\right) \text{ V}$$