

P #8

Ch 20 - Pg 644

$$r = 20 \text{ cm} = .20 \text{ m}$$

$$B = .20 \text{ T}$$

$$\Delta t = .30 \text{ sec}$$

$$A = \pi \cdot r^2 = \pi (.20 \text{ m})^2 = .126 \text{ m}^2$$

$$\begin{aligned}\Phi_1 &= B \cdot A \\ &= (.20 \text{ T})(.126 \text{ m}^2) \\ &= .025 \text{ T} \cdot \text{m}^2\end{aligned}$$

$$\Phi_2 = \text{zero}$$

$$\mathcal{E} = \frac{\Delta \Phi}{\Delta t} = \frac{(.025 \text{ T} \cdot \text{m}^2) - 0}{.30 \text{ sec}}$$

$$\mathcal{E} = 8.4 \times 10^{-2} \text{ V}$$