$d = 15.0 \text{ cm} = .15 \text{ m}$

$r = d/2 = (.15 \text{ m})/2 = .075 \text{ m}$

$A = \pi \cdot r^2 = \pi \cdot (.075 \text{ m})^2 = .0177 \text{ m}^2$

$t = 2.77 \text{ ms} = 2.77 \times 10^{-3} \text{ sec}$

$n = 500 \text{ turns}$

$\varepsilon = .166 \text{ V}$

Find $\Delta\phi$: $\varepsilon = n \cdot \dfrac{\Delta\phi}{t}$

$$(.166 \text{ V}) = (500) \cdot \frac{\Delta\phi}{(2.77 \times 10^{-3} \text{ sec})}$$

$$\Delta\phi = 9.196 \times 10^{-7} \text{ T} \cdot \text{m}^2$$

Find B: $\Delta\phi = \phi_1 - \phi_2$

$$= B \cdot A - \text{zero}$$

$$9.196 \times 10^{-7} \text{ T} \cdot \text{m}^2 = B \cdot (.0177 \text{ m}^2) - 0$$

$$\boxed{B = 5.2 \times 10^{-5} \text{ T}}$$