34. (a) From Eq. 32-34,

$$\begin{aligned} i_d &= \varepsilon_0 \frac{d\Phi_E}{dt} = \varepsilon_0 A \frac{dE}{dt} = \varepsilon_0 A \frac{d}{dt}\left[(4.0\times 10^5) - (6.0\times 10^4 t)\right] \\ &= -\varepsilon_0 A(6.0\times 10^4\,\mathrm{V/m\cdot s}) \\ &= -\left(8.85\times 10^{-12}\,\frac{\mathrm{C}^2}{\mathrm{N\cdot m}^2}\right)(4.0\times 10^{-2}\,\mathrm{m}^2)(6.0\times 10^4\,\mathrm{V/m\cdot s}) \\ &= -2.1\times 10^{-8}\,\mathrm{A}\ . \end{aligned}$$

(b) If one draws a counterclockwise circular loop s around the plates, then according to Eq. 32-42

$$\oint_s \vec{B}\cdot d\vec{s} = \mu_0 i_d < 0\ ,$$

which means that $\vec{B}\cdot d\vec{s} < 0$. Thus $\vec{B}$ must be clockwise.