50. (a) Eq. 22-33 leads to $\tau = pE \sin 0° = 0$.

(b) With $\theta = 90°$, the equation gives

$$\tau = pE = \left(2\left(1.6\times10^{-19}\,\text{C}\right)\left(0.78\times10^{-9}\,\text{m}\right)\right)\left(3.4\times10^{6}\,\text{N/C}\right) = 8.5\times10^{-22}\,\text{N}\cdot\text{m}.$$

(c) Now the equation gives $\tau = pE \sin 180° = 0$.