P#K (de)

Ch 19

d) $F_B = 1.92 \times 10^{-15}\ N$

$q = 1.6 \times 10^{-19}\ C$

For $F_{net} = 0$: $F_B = F_e$ $\quad E = F_e/q$ so $F_e = E \cdot q$

$F_B = E \cdot q$

$(1.92 \times 10^{-15}\ N) = E \cdot (1.6 \times 10^{-19}\ C)$

$\boxed{E = 12{,}000\ N/C}$

e) e^- is deflected upwards.
so + charge would have F_B ↓

F_e ↑ to cancel F_B

E direction is same as F_e, so $\boxed{E = \uparrow}$