68. The \textit{escape speed} may be calculated from the requirement that the initial kinetic energy (of \textit{launch}) be equal to the absolute value of the initial potential energy (compare with the gravitational case in chapter 14). Thus,

\[
\frac{1}{2} m v^2 = \frac{e q}{4\pi \varepsilon_o r}
\]

where \( m = 9.11 \times 10^{-31} \, \text{kg} \), \( e = 1.60 \times 10^{-19} \, \text{C} \), \( q = 10000e \), and \( r = 0.010 \, \text{m} \). This yields the answer \( v = 22490 \, \text{m/s} \approx 2.2 \times 10^4 \, \text{m/s} \).