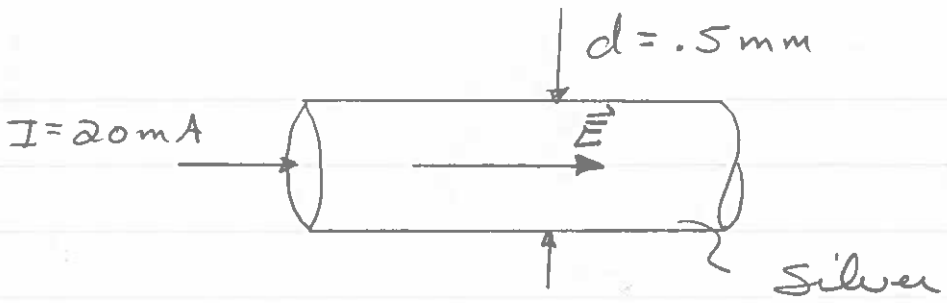

a.) $J = \sigma E = \frac{I}{A}$

So: $E = \frac{I}{\sigma A} = \frac{I}{\sigma \pi (\frac{d}{2})^2} = 1.643 \times 10^{-3} \frac{V}{m}$

where $\sigma = 6.2 \times 10^7 \, \Omega^{-1} m^{-1}$ for Silver

b.) $J = \frac{I}{A} = n_e e v_d$

So $v_d = \frac{I}{n_e e \pi (d/2)^2} = 1.098 \times 10^{-5} \frac{m}{s}$

where $n_e = 5.8 \times 10^{28} \, m^{-3}$ for Silver