Ans 8. Ohm's law states that the current through a conductor between two points is directly proportional to the voltage across the two point.

Given: $R = 2\,\Omega$, $l = 2.5\,m$, $d = 0.7\,mm$

$mm = 0.0007\,m$

Cross section area of wire $A = \frac{\pi d^2}{4}$

$\Rightarrow \frac{\pi \times (0.0007)^2}{4} = 3.8 \times 10^{-7}\,m^2$

~~Resisto~~

Resistivity of the material : $\rho = \frac{RA}{l}$

$\therefore \rho = \frac{2 \times 3.8 \times 10^{-7}}{2.5} = 3.04 \times 10^{-7}\,\Omega m$