Answer on Question 42655, Physics, Electric Circuits

For given single copper wire, $R=\frac{\rho L}{\pi r_1^2}$, where $R=10$ is resistance, L is the length of the wire, $r_1=6\,mm$ is the radius of the wire. From last formula, $L=\frac{\pi R r_1^2}{\rho}$.

For one wire out of five of the same length as given single copper wire, resistance is $R_2=\frac{\rho L}{\pi r_2^2}$, where $r_2=2\,mm$ is the radius.

Substituting formula for length L into last formula, obtain $R_2=R\frac{r_1^2}{r_2^2}$. This is the resistance of one wire.
Since 5 wires are insulated, they are connected in parallel, and total resistance is
$R=\frac{R_2}{5}=\frac{R}{5}\frac{r_1^2}{r_2^2}=\frac{90}{5}\Omega=18\,\Omega$.
Hence, the answer is C).