# Resistivity

**Task 1:** Draw a graph of the results from the Resistivity Practical (given to you).

*X axis: Length of Wire /Metres*

*Y axis: Resistance /Ohms*

**Task 2:** How can you determine the resistivity of the metal wire from a graph of length and resistance?

**Task 3:** Answer the exam question below

**3.** (a) (i) Define electrical *resistivity*.

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[2]

(ii) Explain why the *resistivity* rather than the *resistance* of a material is given in tables of properties of materials.

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[1]

(b)



The diagram above shows a copper rod of length *l* = 0.080m, having a cross-sectional area *A* = 3.0 × 10–4 m2.

The resistivity of copper is 1.7 × 10–8 Ω m.

Calculate the resistance between the ends of the copper rod.

resistance = ........................ Ω

[2]

[Total 5 marks]