

- 1 (a)** Express the unit of resistivity in SI base units.

SI base units = [2]

- (b)** Estimate the current flowing into a smartphone while it is being charged by a standard phone charger.

current = A [1]

(c) Fig. 1.1 shows a circuit set up to measure the resistance R of a resistor.

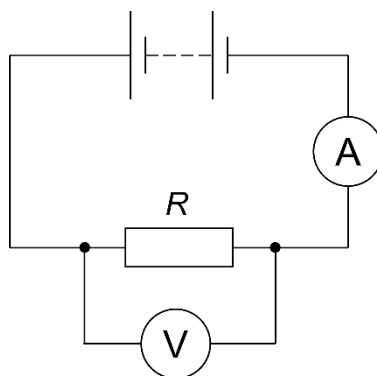


Fig. 1.1

The following readings are obtained:

voltmeter: $V = (5.02 \pm 0.01) \text{ V}$

ammeter: $I = (0.038 \pm 0.001) \text{ A}$

Determine the value of R together with its actual uncertainty.

$R = \dots\dots\dots \pm \dots\dots\dots \Omega$ [3]