

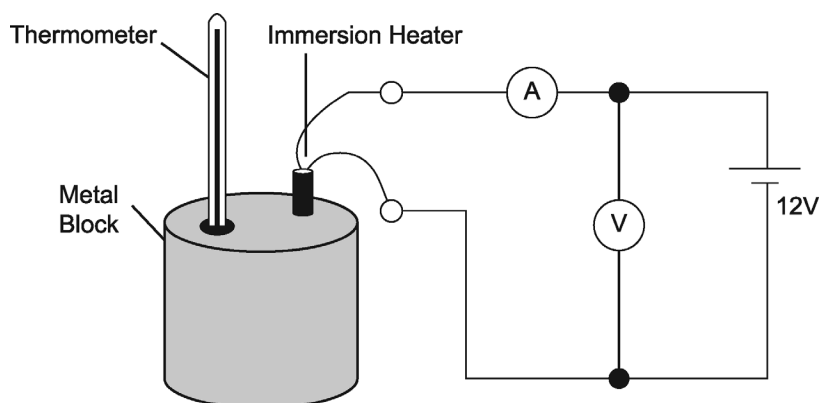
**Gateway Science Physics A**  
**J249/01** Paper 1 Foundation Tier

**Question Set 23**

16

A student does an experiment to find the specific heat capacity of a metal block.

The diagram shows the apparatus used.



- (a) (i) The student measures the voltage and current.

Suggest **three** other measurements he needs to take.

[3]

- (ii) Describe how these measurements could be used to find the specific heat capacity of the metal.

[2]

- (b) The specific heat capacity obtained from the experiment is much larger than expected.

- Suggest **two** reasons for this difference.
- Suggest **two** improvements to the method that might give a more accurate value for the specific heat capacity.

[4]

**Total Marks for Question Set 23: 9**

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