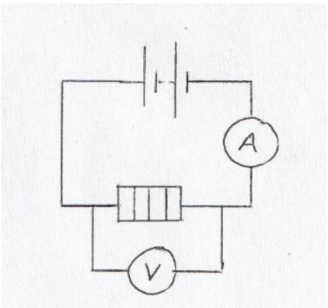
<table>
<tr><th>Question number</th><th>Answer</th><th></th><th>Mark</th></tr>
<tr><td>2(a)</td><td>Correct circuit diagram including a d.c. power supply, voltmeter and ammeter [Accept joulemeter or wattmeter in series for voltmeter and ammeter]
<u>Example of circuit diagram</u>
 

[Accept circuit drawn on diagram]

Wait until the water begins to boil
Record values of m
at times t with a stopwatch
Or
at energies E with a joulemeter

Plot appropriate graph for the measurements made
Correct gradient for the graph to obtain L
[Accept a labelled sketch graph]
<u>Examples of appropriate graphs</u>
<table><tr><th>y</th><th>x</th><th>gradient</th></tr><tr><td>m</td><td>t</td><td>VI/L or P/L</td></tr><tr><td>m</td><td>VIt or Pt or E</td><td>1/L</td></tr><tr><td>m</td><td>Vt</td><td>I/L</td></tr><tr><td>m</td><td>It</td><td>V/L</td></tr></table></td><td>(1)

(1)
(1)

(1)

(1)
(1)</td><td>6</td></tr>
<tr><td>2(b)</td><td>A significant source of error is energy transfer to the surroundings
Decreases the energy transferred to the water (per second)
Hence the value of L will be too large [dependent MP1 or MP2]
[Accept a reasonable source of error related to the experiment]</td><td>(1)

(1)
(1)</td><td>3</td></tr>
<tr><td colspan="4">Total mark for Question 2 = 9</td></tr>
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