

Question number	Answer	Notes	Marks
5 (a)	energy required;  for a unit mass / per gram (of mass) / per kilogram (of mass); to change per unit temperature / change by 1°C / change by 1 K;	ignore equations ignore heat for energy  allow other statements that imply changing e.g. increasing, raising, heat up, decreasing etc.	3
(b) (i)	<b>substitution into <math>\Delta Q = mc\Delta T</math>;</b> rearrangement; correct evaluation to 2 or more s.f.;	answer of 2.9, 1.6, 1.0 gets 1 mark for showing rearrangement  <b>allow 3.77...</b>	3
(ii)	any one from:  MP1. <u>energy</u> also heating boiling tube;  MP2. <u>energy</u> is being transferred/lost to/gained from surroundings; MP3. stearic acid may be impure;	ignore suggestions of human error allow thermometer, support allow alternatives to surroundings e.g. air	1

Total for Question 5 = 7 marks