

| 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) | substitution into $\Delta Q = mc\Delta T$; rearrangement; correct evaluation to 2 or more s.f.; | answer of 2.9, 1.6, 1.0 gets 1 mark for showing rearrangement allow 3.77... | 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