Question number	Answer	Mark
10(a)	• Increment in volume smaller/more precise (1) • Avoids refilling the measuring cylinder (1)	2

Question number	Answer	Additional guidance	Mark
10(b)	thermometer reading at end/°C: (26.8) thermometer reading at start/°C: 18.7 temperature rise/°C: 8.1	1 mark for temperature at start 1 mark for temperature rise consequential on readings	2

Question number	Answer	Mark
10(c)(i)	29.5	1

Question number	Answer	Mark
10(c)(ii)	20.8	1

Question number	Answer	Mark
10(d)	• Calculation of volume/mass of mixture • Calculation of temperature increase • Substitution of values into $q=mc\Delta T$ • Calculation of heat energy released with unit Example calculation: 20.0 + 20.0 = 40.0 (cm^3) (1) 30.0−18.5 = 11.5 (°C) (1) q = 40.0 × 4.2 × 11.5 (1) q = 1900J (1) (accept 1932 J)	4

Question number	Answer	Mark
10(e)	• Setting out of ΔH calculation • Division by 1000 to obtain answer in kJ/mol Example calculation: 1600 ÷ 0.040 (1) = −40 (kJ/mol) (1)	2

Total for Question 10 = 12 marks