

Q1. (2018)

04.7		an answer of 100 000 000 scores 3 marks		AO2 6.3.2.3
	$L = 200\,000 \text{ (J/kg)}$		1	
	$E = 500 \times 200\,000$	allow $1 \times 10^8 \text{ (J)}$	1	
	$E = 100\,000\,000 \text{ (J)}$	allow correct calculation for incorrect conversion or no conversion of L for 2 marks	1	

Q3. (2019)

07.2		an answer of 0.0021(212121...) scores 3 marks		AO2.1 6.3.2.2 6.1.1.3	E
	$0.70 = m \times 330$ or $700 = m \times 330\,000$		1		
	$m = \frac{0.70}{330}$ or $m = \frac{700}{330\,000}$	allow correct rearrangement using converted value(s) of E to J and/or L to J/kg	1		
	$m = 0.0021 \text{ (kg)}$	allow 0.0021(212121...) allow correct calculation using converted value(s) of E and/or L 3 marks can only be awarded for $m = 0.0021(212121...) \text{ (kg)}$	1		

Q4. (2022)

04.5	$E = 0.0150 \times 334\,000$		1	AO2 6.3.2.3
	$E = 5010 \text{ (J)}$		1	

Q5. (2023)

03.9	$280\,000 = 4.0 \times L$		1	AO2 6.3.2.3
	$L = \frac{280\,000}{4.0}$		1	
	$L = 70\,000 \text{ (J/kg)}$		1	