

Lattice Enthalpy

1. Which enthalpy change(s) is/are endothermic?

- 1 The bond enthalpy of the C–H bond
- 2 The second electron affinity of oxygen
- 3 The standard enthalpy change of formation of magnesium

- A** 1, 2 and 3
B Only 1 and 2
C Only 2 and 3
D Only 1

Your answer

[1]

2. Which equation matches the enthalpy change of atomisation of iodine?

- A** $\text{I}_2(\text{g}) \rightarrow 2\text{I}(\text{g})$
B $\frac{1}{2}\text{I}(\text{g}) \rightarrow \text{I}(\text{g})$
C $\text{I}_2(\text{s}) \rightarrow 2\text{I}(\text{g})$
D $\frac{1}{2}\text{I}_2(\text{s}) \rightarrow \text{I}(\text{g})$

Your answer

[1]

3. The lattice enthalpy of calcium chloride can be calculated using **three** of the enthalpy changes below.

Which enthalpy change is **not** required?

- A. enthalpy change of solution of calcium chloride
B. enthalpy change of hydration of Cl^- ions
C. enthalpy change of formation of calcium chloride
D. enthalpy change of hydration of Ca^{2+} ions

Your answer

[1]

END OF QUESTION PAPER

Mark scheme – Lattice Enthalpy (MCQ)

Question			Answer/Indicative content	Marks	Guidance
1			B	1 (AO 1.1)	<p><u>Examiner's Comments</u></p> <p>D was the common distractor given as the answer by many candidates, suggesting confusion with the first electron affinity and second electron affinity of oxygen.</p>
			Total	1	
2			D	1	
			Total	1	
3			C	1	
			Total	1	