

Section A

Answer **all** questions in the spaces provided.

- 1 (a)** Define the term *lattice enthalpy of dissociation*.

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(2 marks)

- 1 (b)** Lattice enthalpy can be calculated theoretically using a perfect ionic model.

Explain the meaning of the term *perfect ionic model*.

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(1 mark)

(Extra space)

- 1 (c)** Suggest **two** properties of ions that influence the value of a lattice enthalpy calculated using a perfect ionic model.

Property 1

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Property 2

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(2 marks)



| Enthalpy change | Value / kJ mol ⁻¹ |
|---|------------------------------|
| Enthalpy of atomisation for silver | +289 |
| First ionisation energy for silver | +732 |
| Enthalpy of atomisation for chlorine | +121 |
| Electron affinity for chlorine | −364 |
| Enthalpy of formation for silver chloride | −127 |

[illegible]

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