

APOLLO

The ionic model

SL

Chemistry

First assessment 2025

7 questions | questions

7. Which row shows the correct formula and electron configuration of the species in calcium nitride?

	Formula	Electron configuration of the Ca species	Electron configuration of the N species
A.	Ca_2N_3	[Ar]	[Ne]
B.	Ca_2N_3	[Ar] $4s^2$	[He] $2s^2 2p^3$
C.	Ca_3N_2	[Ar] $4s^2$	[He] $2s^2 2p^3$
D.	Ca_3N_2	[Ar]	[Ne]

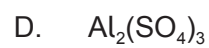
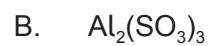
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10. Which compound has the weakest ionic bond?

- A. MgO
- B. MgS
- C. CaO
- D. CaS

6. What is the formula of the compound formed by aluminium ions and sulfate(VI) ions?



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Turn over
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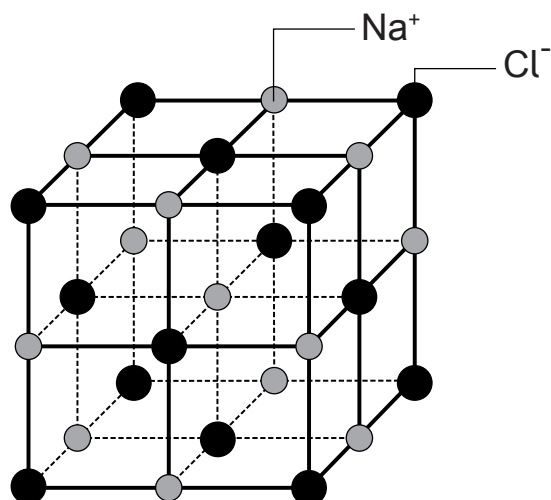
7. A substance has the following properties:

Melting point (°C)	Electrical conductivity	
714	When solid	When molten
	poor	good

What is the most probable structure of this substance?

- A. Simple molecular
- B. Ionic lattice
- C. Covalent network
- D. Metallic lattice

6. An expanded view of the NaCl lattice is given in the figure.



Which statement is correct for the lattice structure of NaCl?

- A. The ions are held together in the lattice by covalent bonds.
- B. The forces of attraction in the lattice are very weak.
- C. Each sodium ion is surrounded by four chloride ions.
- D. The structure breaks apart when dissolved in water.

Turn over
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12. Which two elements form a compound with the strongest ionic attraction?

- A. Li and O
- B. Li and Se
- C. K and O
- D. K and Se

6. What is the formula of the compound formed between magnesium ions and hydrogencarbonate ions?
- A. MgHCO_3
 - B. $\text{Mg}(\text{HCO}_3)_2$
 - C. $\text{Mg}(\text{HCO}_3)_3$
 - D. $\text{Mg}_3(\text{HCO}_3)_2$