

the metallic model [6 marks]

1. [Maximum mark: 1]
Which of the following is most likely to be a transition metal?

	Melting point	Electrical conductivity	Ductility
A.	High	Good	Low
B.	High	Poor	Low
C.	High	Good	High
D.	Low	Good	High

[1]

2. [Maximum mark: 3]
Explain in terms of their metallic bonding why aluminium, Al and not calcium, Ca, can be used to make tent frames.

[3]

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3. [Maximum mark: 1]
Which best explains the malleability of metals?

- A. Delocalized electrons can move throughout the anion lattice.
- B. Layers of anions are held together by delocalized electrons.
- C. Non-directional bonds allow layers of cations to slide over each other.
- D. The attraction between the cations and the delocalized electrons is strong.

[1]

4. [Maximum mark: 1]

Which combination corresponds to a strong metallic bond?

	Charge on the metal ion	Radius of ion
A.	large	large
B.	large	small
C.	small	small
D.	small	large

[1]