STRUCTURE & BONDING (A)

1 Give the formula of the following ions.

Bromide **Br^-** sulfate **SO_4^{2-}** silver(I) **Ag^+**

2 Give the formula of the following ionic compounds.

potassium sulfide **K_2S** sodium carbonate **Na_2CO_3**

calcium hydroxide **$Ca(OH)_2$** aluminium nitrate **$Al(NO_3)_3$**

3 Potassium fluoride is an ionic compound containing K^+ and F^- ions.

a Give the electron structure of the K^+ ions. **2,8,8**

b Give the electron structure of the F^- ions. **2,8**

c Potassium fluoride melts at 858°C. Explain why potassium fluoride has a high melting point.

strong attraction between positive and negative ions
that takes a lot of energy to overcome

d Explain why potassium fluoride conducts electricity when molten.

ions can move
to carry charge through the substance

e Explain why potassium fluoride does not conduct electricity as solids.

ions cannot move
so cannot carry charge through the substance