

IONIC BONDING – what you have to know

1 positive ions are formed when atoms electrons

negative ions are formed when atoms electrons

2 Give the charges on the ions followed by the following atoms:

Na	Al	Br	O	Mg	N

3 Give the formulae of the following ions:

Sulfide	Hydroxide	Nitrate	Sulfate	Nitride	Carbonate	Ammonium	Silver	Iron(II)

4 (a) Explain in terms of electrons what happens when sodium oxide is formed from sodium and oxygen atoms.

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(b) Draw a dot-and-cross diagram for sodium oxide using **x** to represent electrons from sodium and **o** to represent electrons from oxygen.

5 Work out the formulae of the following compounds:

Magnesium oxide	Calcium chloride	Magnesium nitrate	Sodium hydroxide	Ammonium carbonate	Lead sulfate	Silver nitrate	Iron(III) oxide

6 Fill in the missing words

Ionic bonding is a electrostatic attraction between
..... ions

7 Ionic compounds have high melting points because...

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8 **Explain** under what circumstances ionic compounds conduct electricity

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9 Fill in the missing words

An ionic crystal is a three-dimensional structure
held together by the attraction between

11 Write an equation for the reaction of potassium with water.

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Explain why potassium is more reactive than lithium

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12 Explain why noble gases are unreactive.

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