

AQA, OCR, Edexcel

GCSE Science

GCSE Chemistry

**Chemical Bonds - Ionic
Questions**

M M E

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Total Marks: /41

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Chemical Bonds

Q1: What are the three types of chemical bonds?

(3 marks)

Q2: Describe each of the three types of bonds in terms of ions and electrons.

(3 marks)

Q3: When and where does each type of chemical bond occur?

(3 marks)

Ionic Bonds

Q4: What is an ion?

(1 mark)

Q5: Describe what has to happen for metals and non-metals to become ions.

Metals: _____

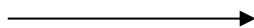
Non-metals: _____

(2 marks)

Q6: Choose an element from group 1 or 2 and draw its original electron arrangement. Then, draw its electron arrangement once it has become an ion.

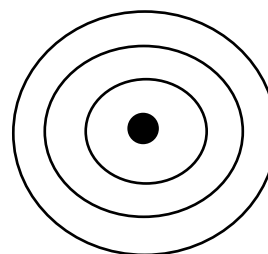
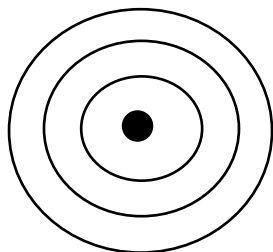
Element

Element: _____
Number of electrons: _____



Ion

Element: _____
Number of electrons: _____

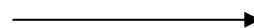


(6 marks)

Q7: Now do the same for an element in group 6 or 7.

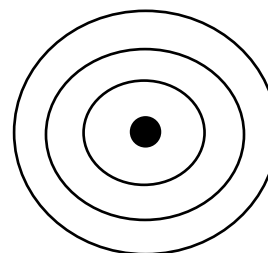
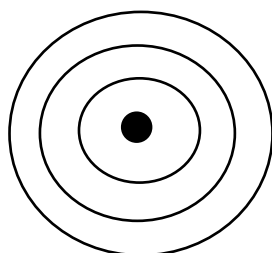
Element

Element: _____
Number of electrons: _____



Ion

Element: _____
Number of electrons: _____



(6 marks)

Q8: Which group of elements have a full outer shell?

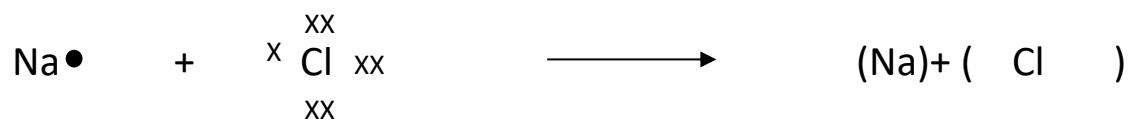
(1 mark)

Q9: What occurs when a metal forms an ionic bond with a non-metal?

(2 marks)

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Q10: The electrons in the outer shell of a metal can be represented as dots. The electrons in the outer shell of a non-metal, crosses. Complete the dot and cross diagram to represent an ionic compound NaCl



(4 marks)

Q11: Describe how the charge of an ion relates to its element's group in the periodic table.

(2 marks)

Ionic compounds

Q12: An ionic compound is a giant structure of ions. Describe how it is held together.

(3 marks)

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Q13: Discuss the properties of a giant ionic lattice.

(3 marks)

Q14. When melted or dissolved in water, ionic compounds conduct electricity. Describe how this occurs.

(2 marks)