

Chemistry Study Materials for Class 9 (NCERT Based notes of Chapter -03)

Ganesh Kumar

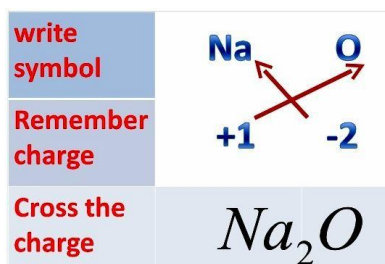
Date:- 23/06/2021

Atoms and Molecules

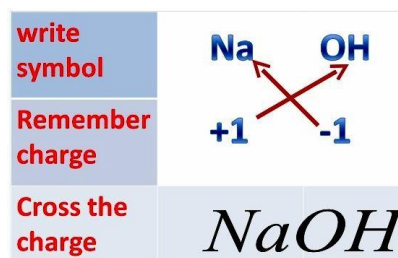
The formulae of ionic compounds are simply the whole number ratio of the positive to negative ions in the structure. For magnesium chloride, we write the symbol of cation (Mg^{2+}) first followed by the symbol of anion (Cl^-). Then their charges are criss-crossed to get the formula.

EXAMPLES

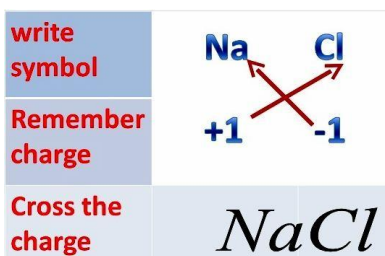
Formula of Sodium oxide



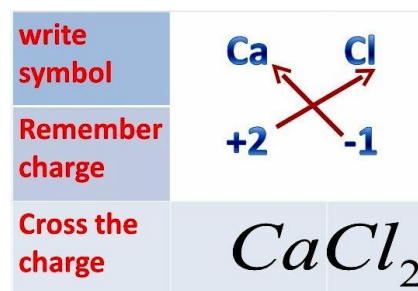
Formula of Sodium hydroxide



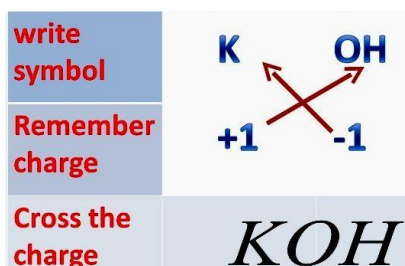
Formula of Sodium Chloride



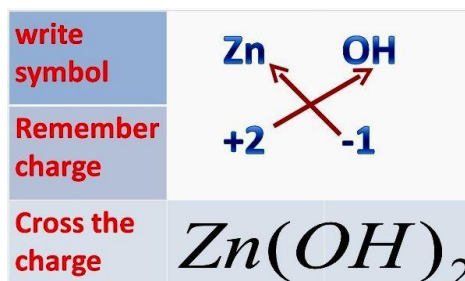
Formula of Calcium chloride



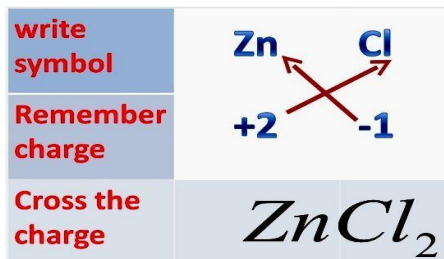
Formula of Potassium hydroxide



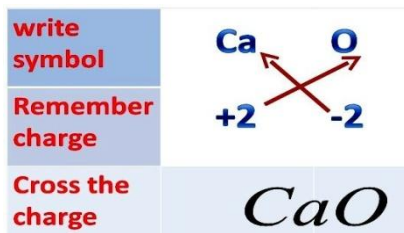
Formula of Zinc hydroxide



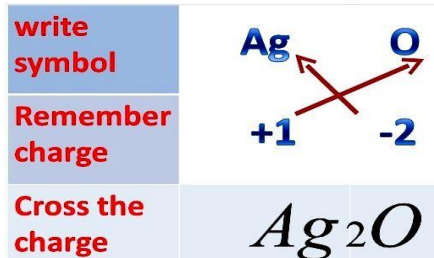
Formula of Zinc chloride



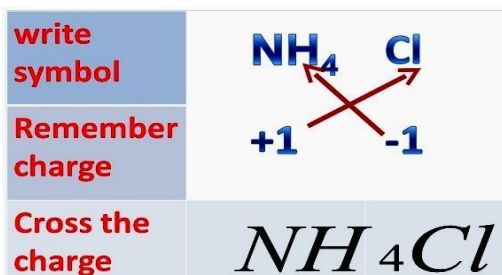
Formula of Calcium oxide



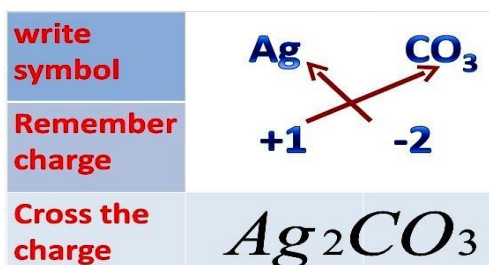
Formula of Silver oxide



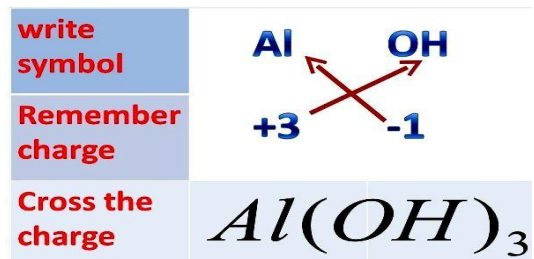
Formula of Ammonium Chloride



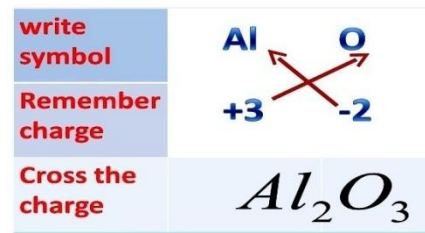
Formula of Silver Carbonate



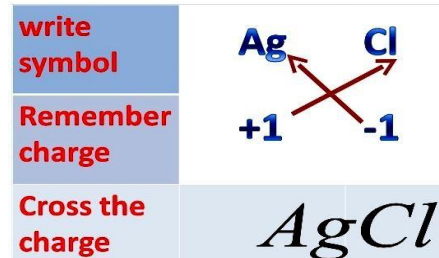
Formula of Aluminium hydroxide



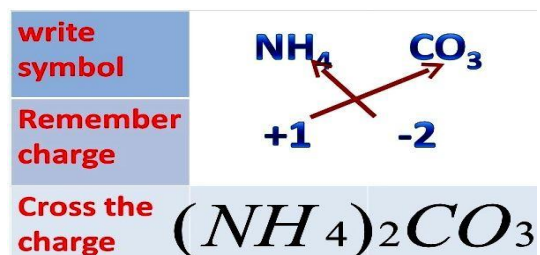
Formula of Aluminium oxide



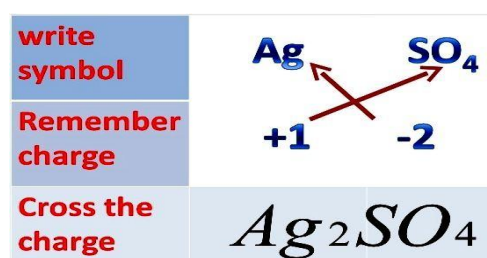
Formula of Silver chloride



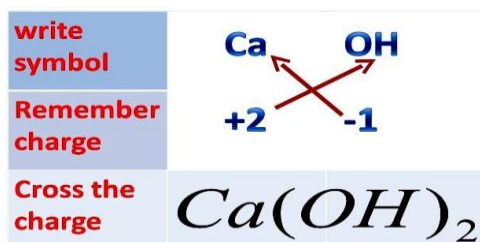
Formula of Ammonium carbonate



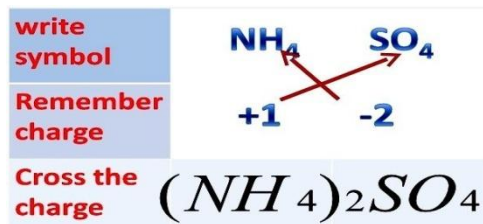
Formula of Silver Sulphate



Formula of Calcium hydroxide



Formula of Ammonium sulphate



INTEXT QUESTIONS PAGE NO. 39

Q1. Write down the formulae of

(i) Sodium oxide

(ii) Aluminium chloride

(iii) Sodium sulphide

(iv) Magnesium hydroxide

Answer:

(i) Sodium oxide → Na₂O (ii) Aluminium chloride → AlCl₃

(iii) Sodium sulphide → Na₂S (iv) Magnesium hydroxide → Mg(OH)₂

Q2. Write down the names of compounds represented by the following formulae:

(i) Al₂(SO₄)₃

(ii) CaCl₂

(iii) K₂SO₄

(iv) KNO₃

(v) CaCO₃.

Answer:

(i) Al₂(SO₄)₃ → Aluminium Sulphate

(ii) CaCl₂ → Calcium Chloride

(iii) K₂SO₄ → Potassium sulphate

(iv) KNO₃ → Potassium nitrate

(v) CaCO₃. → Calcium carbonate

Q3. What is meant by the term chemical formula?

Answer:

The chemical formula of a compound means the symbolic representation of the composition of a compound. From the chemical formula of a compound, we can know the number and kinds of atoms of different elements that constitute the compound.

For example, from the chemical formula CO_2 of carbon dioxide, we come to know that one carbon atom and two oxygen atoms are chemically bonded together to form one molecule of the compound, carbon dioxide.

Q4. How many atoms are present in a

(i) H_2S molecule and

(ii) PO_4^{3-} ion?

Answer:

(i) In an H_2S molecule, three atoms are present; two of hydrogen and one of sulphur.

(ii) In a PO_4^{3-} ion, five atoms are present; one of phosphorus and four of oxygen.
