

Answer the following questions.

1) How is sodium chloride different from its constituent elements, sodium and chlorine in its properties? Justify.

Ans- Sodium chloride is also known as common salt.

It is made up of sodium and chlorine. Sodium is a ~~gas~~ ^{metal} that reacts very fast ~~to~~ with ~~gas~~ air and water and is stored in kerosene oil.

Chlorine is a greenish-yellow reactive gas which is poisonous. When these two substances/elements chemically combine with each other, they form sodium chloride/common salt which is non-poisonous and adds taste and nutrition to food.

2) Name the elements which form water. State three characteristics of water to justify that it is a compound.

Ans- The elements which form water are hydrogen and oxygen.

* Characteristics to state that water is a compound -

* The hydrogen and oxygen molecules are uniformly distributed in water and cannot be separated by simple physical processes.

* Water's properties are completely different from those of its constituent elements hydrogen and oxygen.

Hydrogen burns, oxygen helps in burning but water puts off fire.

* When hydrogen and oxygen combine chemically they produce radiation and energy to form water.

3. What do you mean by electrolysis?

Ans- The process in which electric current is passed through a compound in liquid state to separate its constituent elements is called electrolysis.

4. Write - Mention 3 gaseous elements and write their molecular formulae.

Ans- 1) Chlorine (Cl_2)

2) Nitrogen (N_2)

3) Oxygen (O_2)

4) Hydrogen (H_2)

5) Helium (He)

5. Metals are ductile and malleable. What do you understand by this statement?

Ans- Metals are ductile which means that they can be stretched into wires and they are malleable which means that they can be beaten into thin sheets.