

Answer the following questions:

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

A) The properties of sodium chloride are completely different from those of sodium and chlorine. Sodium is soft, highly reactive metal. Chlorine is a poisonous non-metallic gas while sodium chloride is a very useful non-poisonous compound which is added to our food to get minerals and also to add taste to it.

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

A) Water is formed from two elements namely oxygen and hydrogen. Two hydrogen atoms and one oxygen atom combine to give one molecule of water.

Characteristics are:

\* ) Elements in a compound are present in a definite proportion. Two atoms of hydrogen combine with one atom of oxygen to give one molecule of water. ( $H_2 + O \rightarrow H_2O$  (water))  
So, it is a compound.

\* ) Compounds have a definite set of properties.

\* ) The properties of the compound water are different from the properties of the elements hydrogen and oxygen in the water.

3) What do you mean by electrolysis?

A) The chemical process which can be used to separate hydrogen and oxygen from water molecule is called electrolysis.

4) Mention 3 gaseous elements and write their molecular formulae.

~~A) 3 gaseous elements Molecular formula~~

elements	Molecular formula	Atoms in 1 molecule
* Hydrogen	$H_2$	2
* Oxygen	$O_2$	2
* Chlorine	$Cl_2$	2

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

A) Metals are ductile ~~and~~ that means it can be drawn or stretched into thin wires.

Metals are malleable which means ~~it can be be~~ they can be beaten into thin sheets.