

New  
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# CHEMISTRY

## Elements, Compounds, symbols and formulae

Answer the following

Q1) How is sodium and chloride different from its constituents elements, sodium and chlorine in its properties? Justify.

Ans Sodium is a metal that is stored in kerosene oil as it reacts very fast with air and water. Chlorine is a reactive greenish yellow gas which is poisonous. When these two element combine chemically they form common salt sodium chloride which is non poisonous colourless solid substance that we use in our food to add taste and to obtain some nutrition.

Q2) Name the elements which form water. State three characteristics of water to justify that is a compound.

Ans The elements which form water are i) Hydrogen and oxygen.

Some of the characteristics of water are:

- i) we can not separate the constituents of water by simple physical means.
- ii) Energy is needed to form water on combining  $O_2$  with  $H_2$ .
- iii) Water is less dense as a solid than as a liquid.

Justification : water has entirely different properties (i.e. is a liquid, extinguishes fire) from the elements it is made up of i.e. Hydrogen a gas catches fire oxygen a gas supporter of combustion.

Q3) What do you mean by electrolysis?

Ans Electrolysis is <sup>the</sup> process by which electric current is passed through a substance to effect a chemical change. The chemical change is one in which ~~the~~ the substance lose or gains an electron (oxidation or reduction.)

Q4) Mention three gaseous elements and write their molecular formulae.

<u>The gaseous Elements</u>	<u>molecular formulae</u>	<u>Atoms in one molecule</u>
Hydrogen	$H_2$	2
oxygen	$O_2$	2
Chlorine	$Cl_2$	2

Q5) Metals are ductile and malleable. what do you understand by this statement?

Ans Metals are ductile, i.e., they can be drawn or stretched into thin wires. They are malleable, i.e., they can be beaten into thin sheets.

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