Q1. Give 5 major differences between elements and compounds.

Ans) 5 major differences between elements and compounds

Elements	Compounds
> It cannot be broken down to simpler substances e.g copper, oxygen, iron hydrogen, mercury etc.	* Have fixed composition can be broken down into elements by chemical or electrochemical reactions. eg. water, methane, sugar, salt
> An element represents only one type of atoms e.g. sulpher atoms.	* A compound represents only one type.

An element is made up of one type of atoms.	* A compound may be made of same or different atoms. e.g. oxygen molecule etc.
Elements have certain characteristics properties of their own	* constituting elements in a compound lose their own characteristics.
Can form different types of chemical bonds depending on electron configurations and stability	* Can have covalent bonds, ionic bonds or metallic bonds

8. Explain, why we say H_2O is a compound but H_2 and O_2 are elements?

a) In compounds the constituting elements loose their own properties during formation. So, that is the reason for which the properties of compound are very different from its constituting elements. The composition of pure water is same throughout. It always contains one part of hydrogen and eight parts of oxygen by weight. Water is formed only when an electric spark is passed through this mixture of hydrogen and oxygen. The properties of water thus formed are altogether different

from those of the constituent elements For example hydrogen is a combustible gas while oxygen is a supporter of combustion. Water on the other hand is neither combustible nor a supporter of combustion, it actually extinguishes the fire. So, we say H_2O is a compound but H and O_2 are elements