

WORKSHEET

1) Give five differences between elements and compounds.

Ans → Elements

→ Elements composed of one type of Atoms

→ It is represented using Symbols.

→ Elements cannot be broken down into simpler substances by chemical reactions.

→ The atoms of elements exist independently.

→ Eg - Water (H_2O), sodium chloride ($NaCl$), sodium carbonate ($NaHCO_3$) etc.

Compounds

→ When two or more elements chemically combine by a definite proportion by mass, they form compounds.

→ It is represented using its chemical formula that represents the symbols of its constituent elements and the number of atoms of each element in one molecule of the compound.

→ A compound can be separated into simpler substances by chemical methods/reactions.

→ The components when combined chemically in a definite proportion can exist independently.

→ Hydrogen (H), oxygen (O), sodium (Na), chlorine (Cl), Carbon (C), Iron (Fe), Copper (Cu) etc.

2) The constituents of compounds can't be separated by physical means only by certain chemical means. Justify this statement.

Ans- Compounds differ from mixtures in that the elements in a compound are held together by chemical bonds and cannot be separated by differences in their physical properties. Compounds can be separated into their components only by chemical change.