

Focus Points:

- **A substance which cannot be broken down into two or more simpler substances by chemical reactions (by applying heat, light or electricity) is called an element.**
- **Every element is represented by a 'symbol'. All the elements have separate symbols. No two elements can have the same symbol.**
- **The smallest particle of an element is called 'atom'.**
- **The atoms of an element remain unaffected by the physical changes in the element.**
- **There are only 94 naturally occurring elements.**
- **An important classification of elements is in terms of metals, non-metals and metalloids.**
- **Generally, metals have the physical properties like malleability, ductility, sonorous, lustrous, conductance of heat and electricity. Non-metals do not have these physical properties.**
- **On burning, metals react with oxygen to produce metal oxides which are basic in nature. Non-metals react with oxygen to produce non-metallic oxides which are acidic in nature.**

- **Some metals react with water to produce metal hydroxides and hydrogen gas. Generally, non-metals do not react with water.**
- **Metals react with acids to produce metal salts and hydrogen gas. Generally, non-metals do not react with acids.**
- **Some metals react with bases to produce hydrogen gas.**
- **More reactive metals displace less reactive metals from their salt solutions. These chemical reactions are called displacement reactions.**
- **Metals and non-metals are used widely in everyday life.**
- **Metalloids are the elements which possess characters of both metals and non-metals.**

Ex. Silicon, Germanium, Arsenic etc.