PROPERTIES OF AIR & WATER

AIR

- Air is the natural resource of the environment. Air is present all around us. We need Air for many purposes in daily life. Air is not only required for humans to breathe but animals and plants also need Air to live.

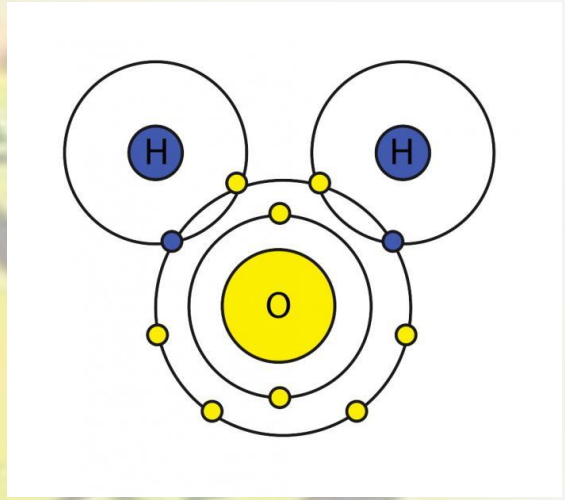
- Air is a mixture of gases, 78% nitrogen and 21% oxygen with traces of water vapor, carbon dioxide, argon, and various other components.

- We usually model air as a uniform (no variation or fluctuation) gas with properties that are averaged from all the individual components.

Properties of Air

1. Air is a mixture of many gases, water vapors and dust particles.
2. Air exerts pressure.
3. Air has mass.
4. Air occupies space.
5. Air is colorless and odorless.

- Water is the chemical substance with the chemical formula H_2O, one molecule of water has two hydrogen atoms covalently bonded to a single oxygen atom.
- The major part of the earth is covered with water. We need water for almost everything, for example- drinking, bathing, cooking, etc.



- 65 % human body is composed of water. Water is distributed unevenly on the earth's surface. It forms a major solvent and dissolves almost every polar solute. So, let us have a look at its properties and understand the reason for its significance:

Physical properties of water

1. Water is a colorless and tasteless liquid.
2. The molecules of water have extensive hydrogen bonds resulting in unusual properties .
3. This also leads to high melting and boiling points.
4. As compared to other liquids, water has a higher specific heat, thermal conductivity, surface tension, dipole moment, etc.
5. Water is an excellent solvent and therefore it helps in the transportation of ions and molecules required for metabolism.
6. It has a high latent heat of vaporization which helps in the regulation of body temperature.

Amphoteric nature:

Water can act as both acid and base, which means that it is amphoteric in nature.

Chemical formula	H_2O
Molar mass	18.01528(33) g/mol
Odour	None
Density	**Liquid**: 0.9970474 g/mL at 25 °C
Boiling point	99.98 °C (211.96 °F; 373.13 K)
Melting point	0.00 °C (32.00 °F; 273.15 K)