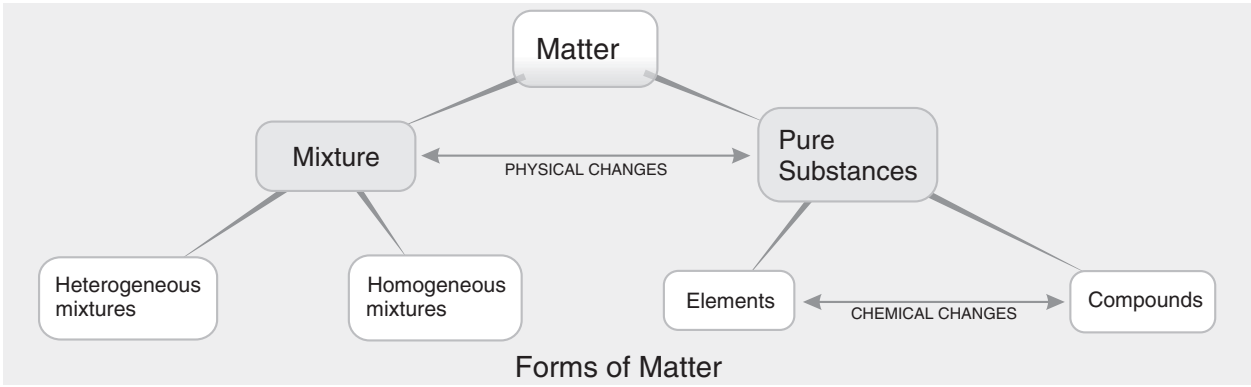
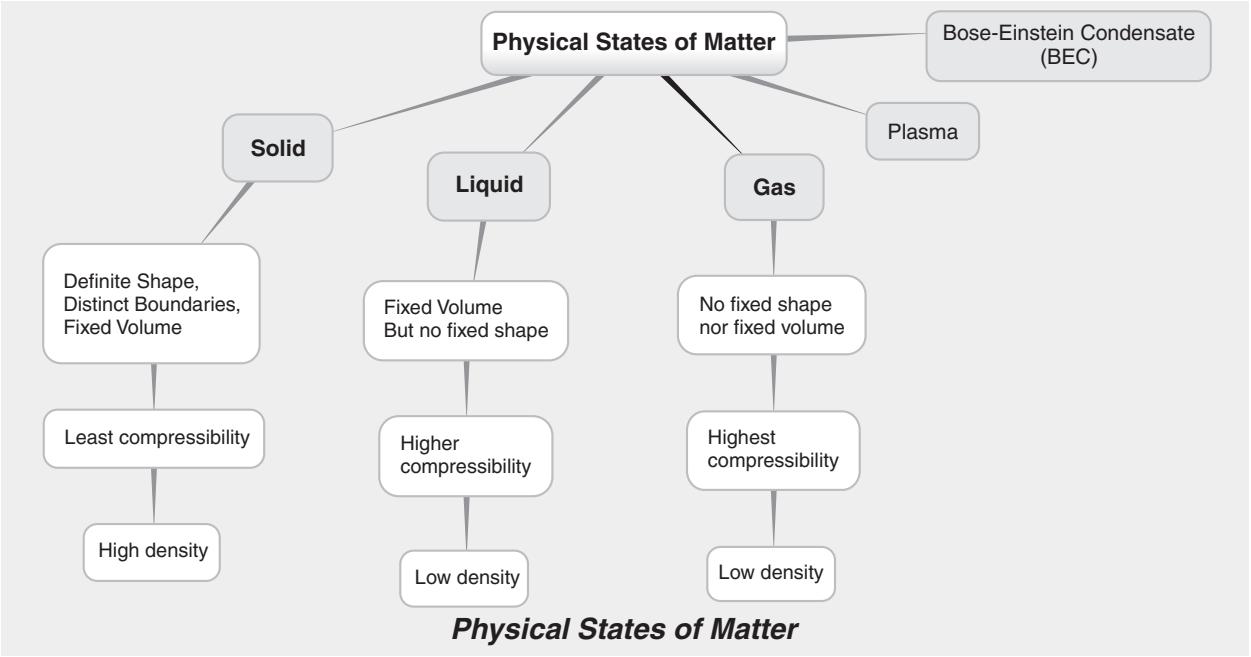
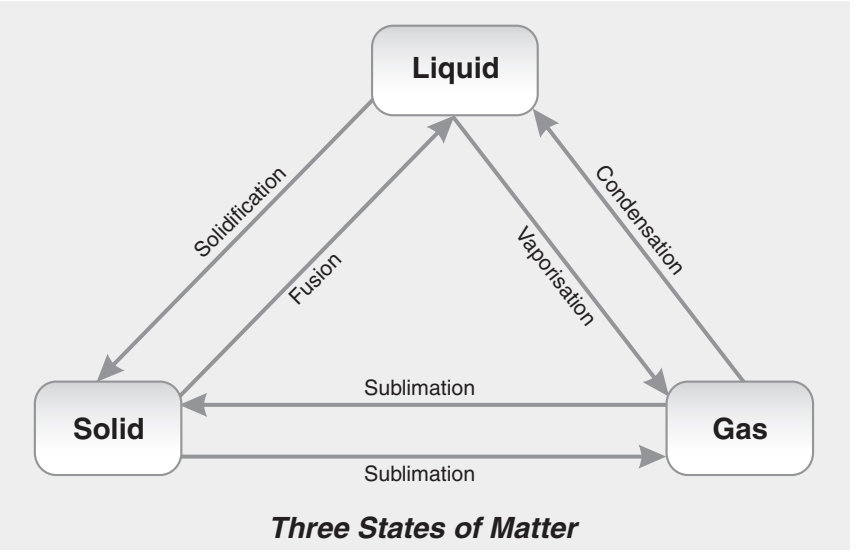



Forms of Matter

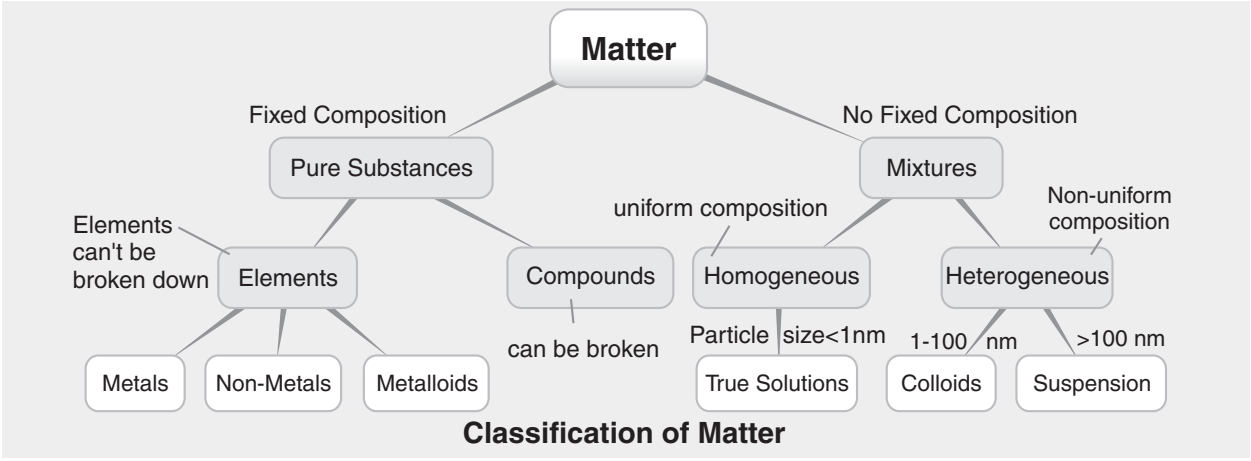



***Physical States of Matter***

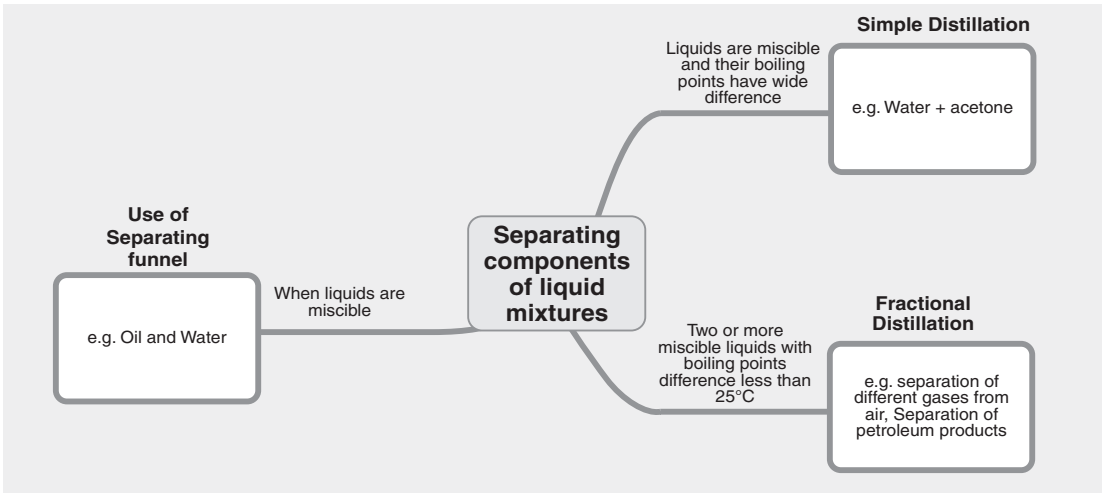


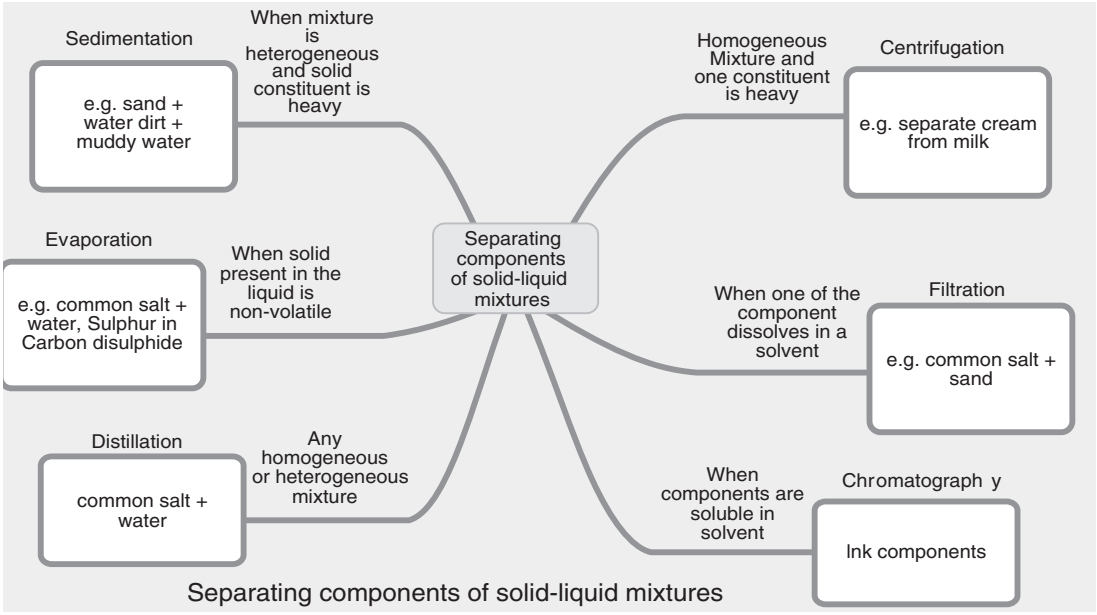

***Three States of Matter***

# Chapter - 2 : Is Matter Around Us Pure?

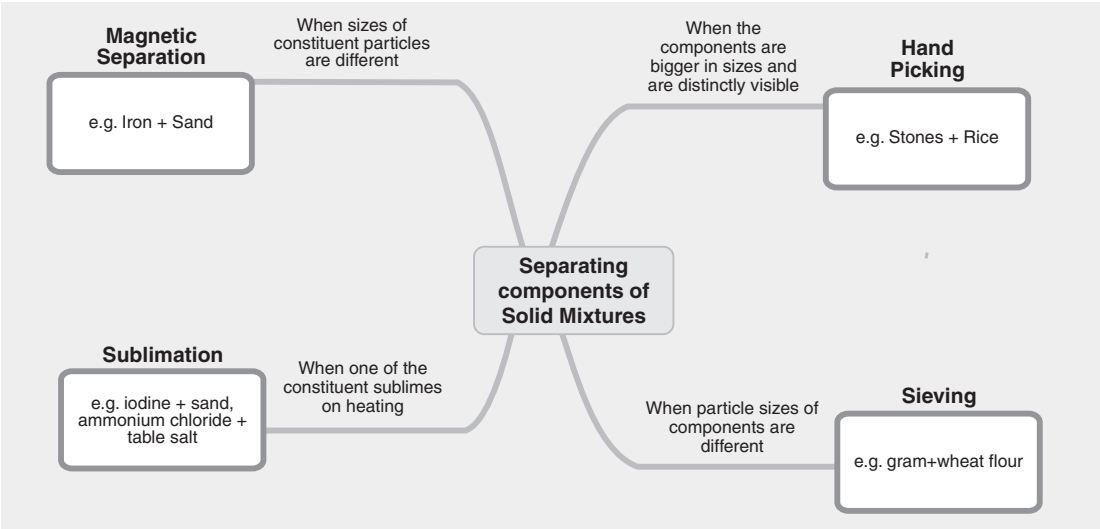



**Classification of Matter**

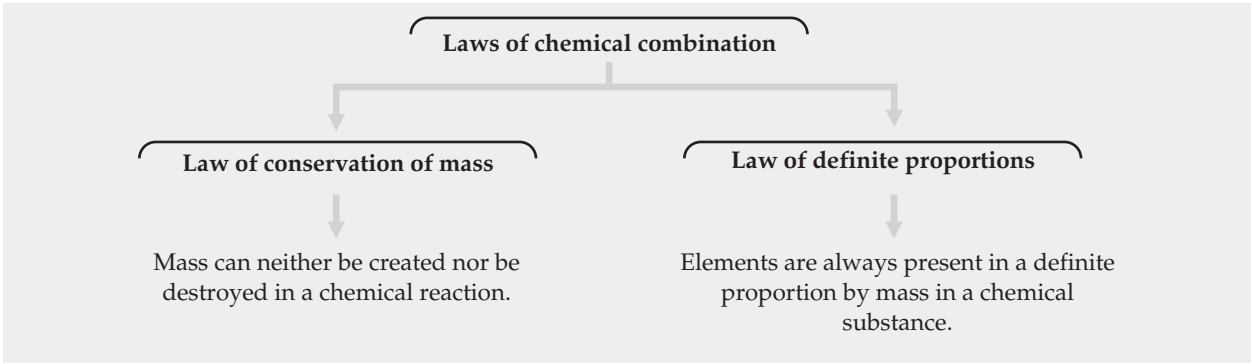


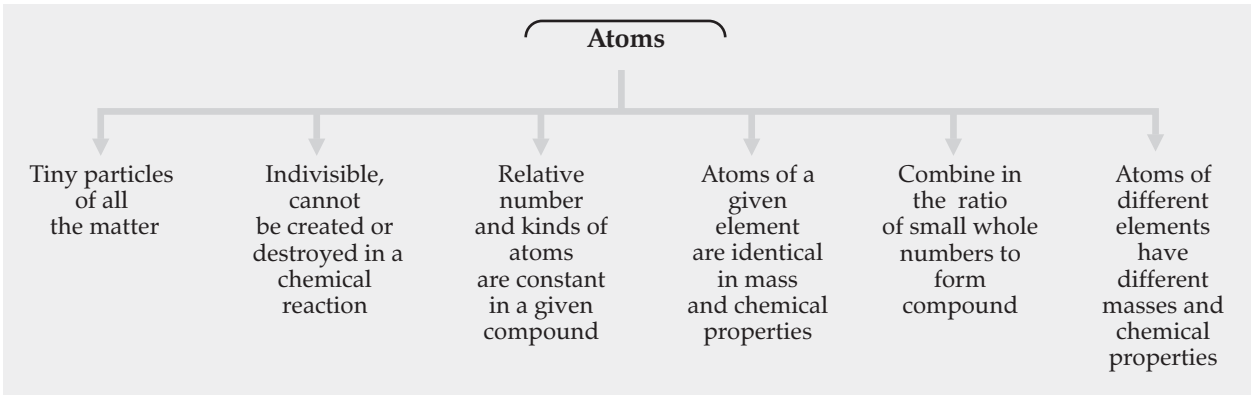



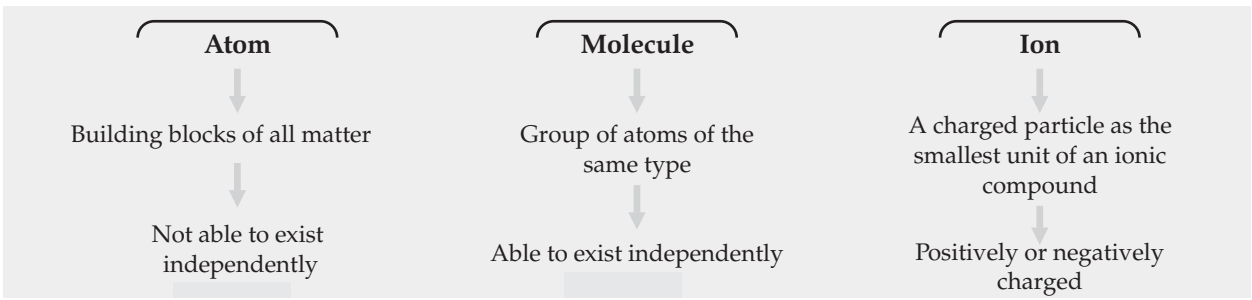

Separating components of solid-liquid mixtures




# Chapter - 3 : Atoms And Molecules



Atoms form molecules and ions

Molecule is the smallest particle of an element or a compound

Positively charged ions are cations and negatively charged ions are anions

Single charged atom or group of atoms having a net charge on them

Polyatomic ion or radical is a group of atoms carrying a fixed charge on them

1 mole of carbon atoms

- $6.022 \times 10^{23}$ atoms of C
- 12 g of carbon atoms

1 Mole of hydrogen atoms

- $6.022 \times 10^{23}$ atoms of H
- 1 g of H atoms

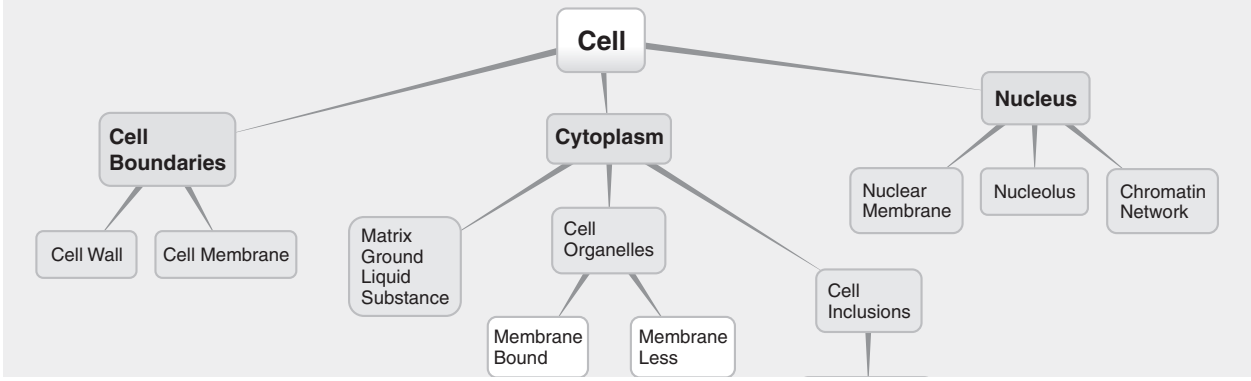
1 mole of any particle (atoms, molecules or ions)

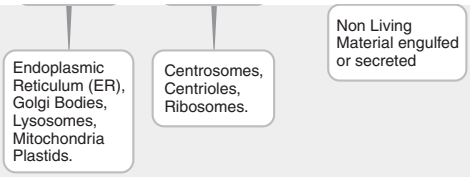
- $6.022 \times 10^{23}$ number of that particle
- Relative mass of those particles in grams

1 mole of molecules

- $6.022 \times 10^{23}$ number of molecules
- Molecular mass in grams

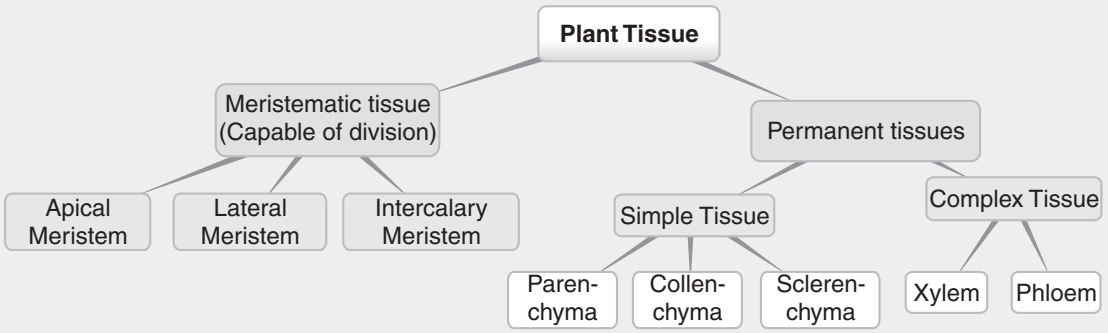
# Chapter - 5 : Cell—A Basic Unit Of Life



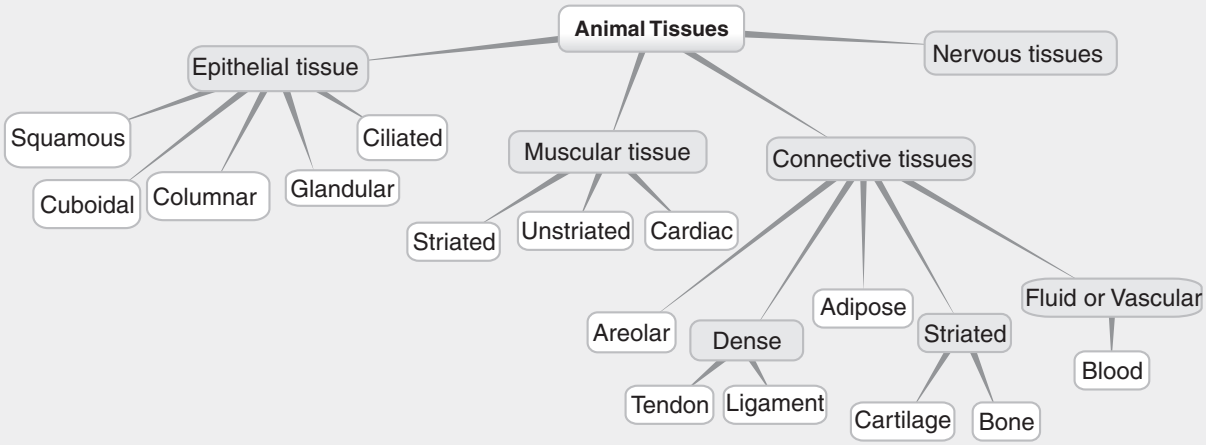



***Fundamental unit of Life : Cell***

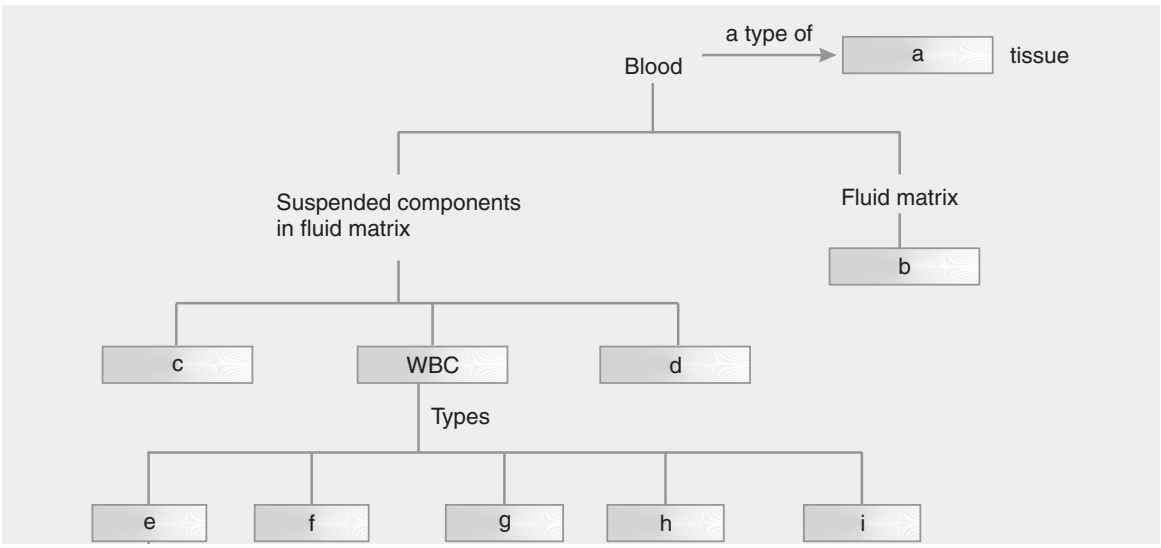
# Chapter - 6 : Tissues




**Plant Tissue**



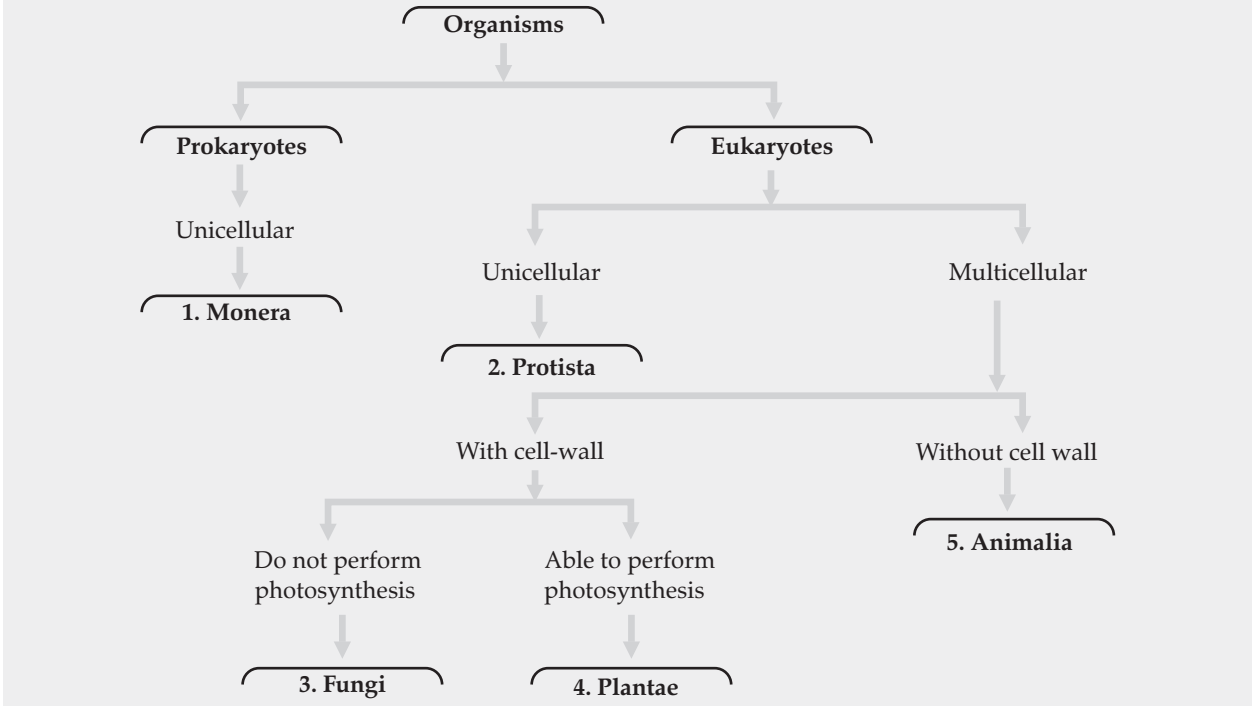

**Animal Tissue**



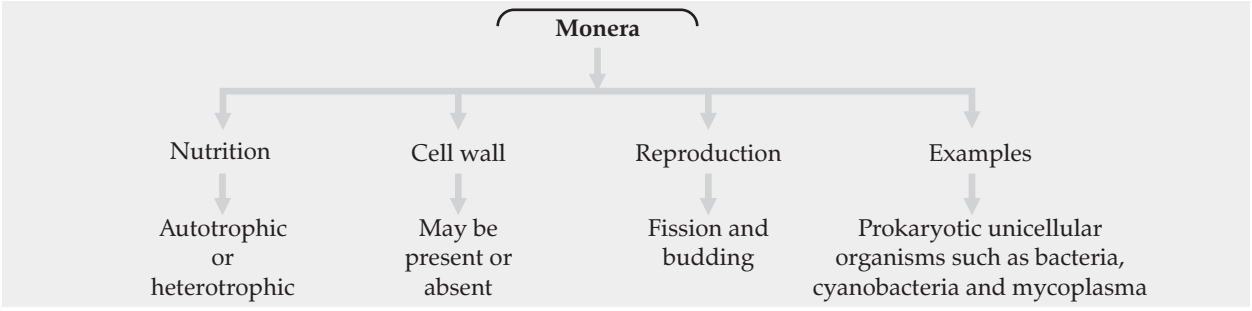
j Name one more type of connective tissue

# Chapter - 7 : Biological Diversity

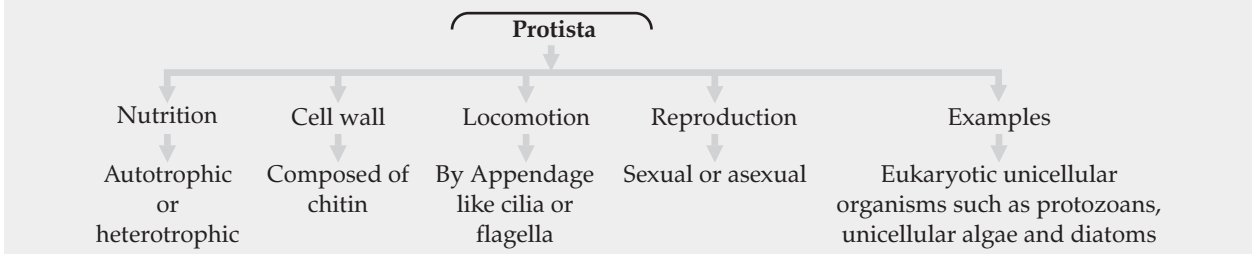
## Flowcharts



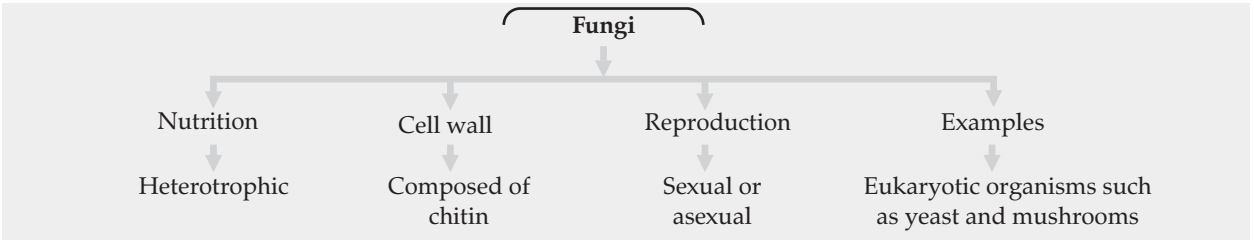

Flowchart 1 : Classification of organisms into five kingdoms




Flowchart 2 : Classification of Monera

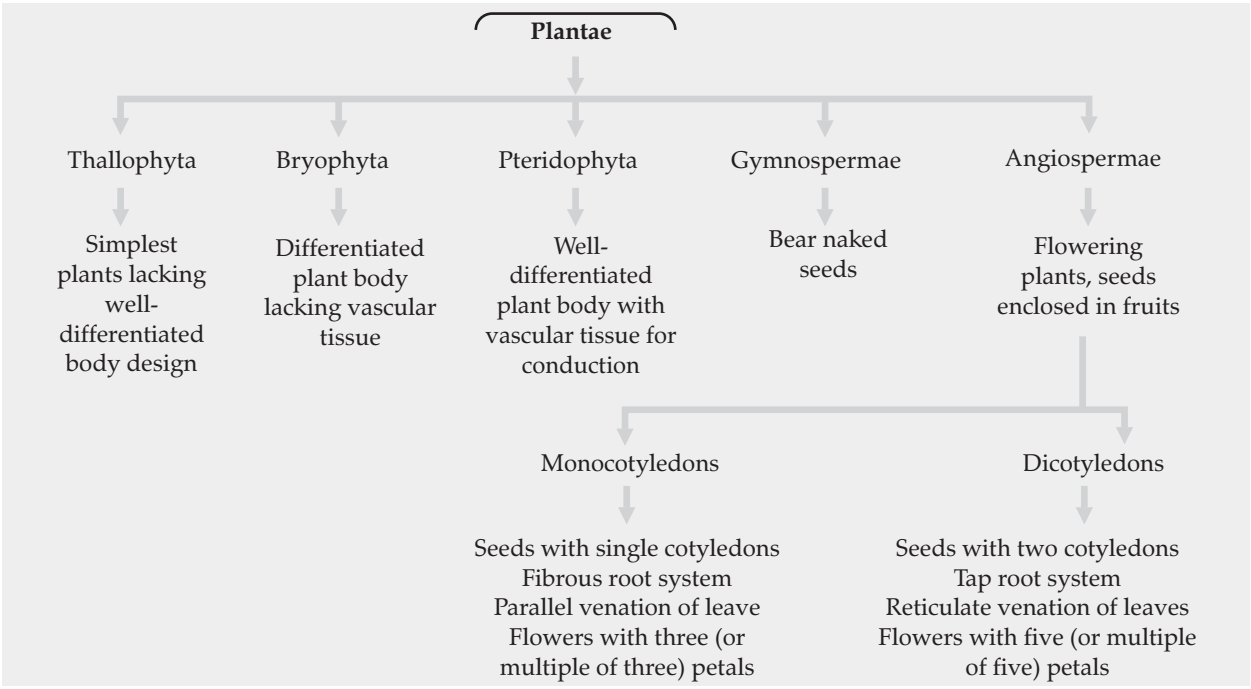



Flowchart 3 : Classification of Protista

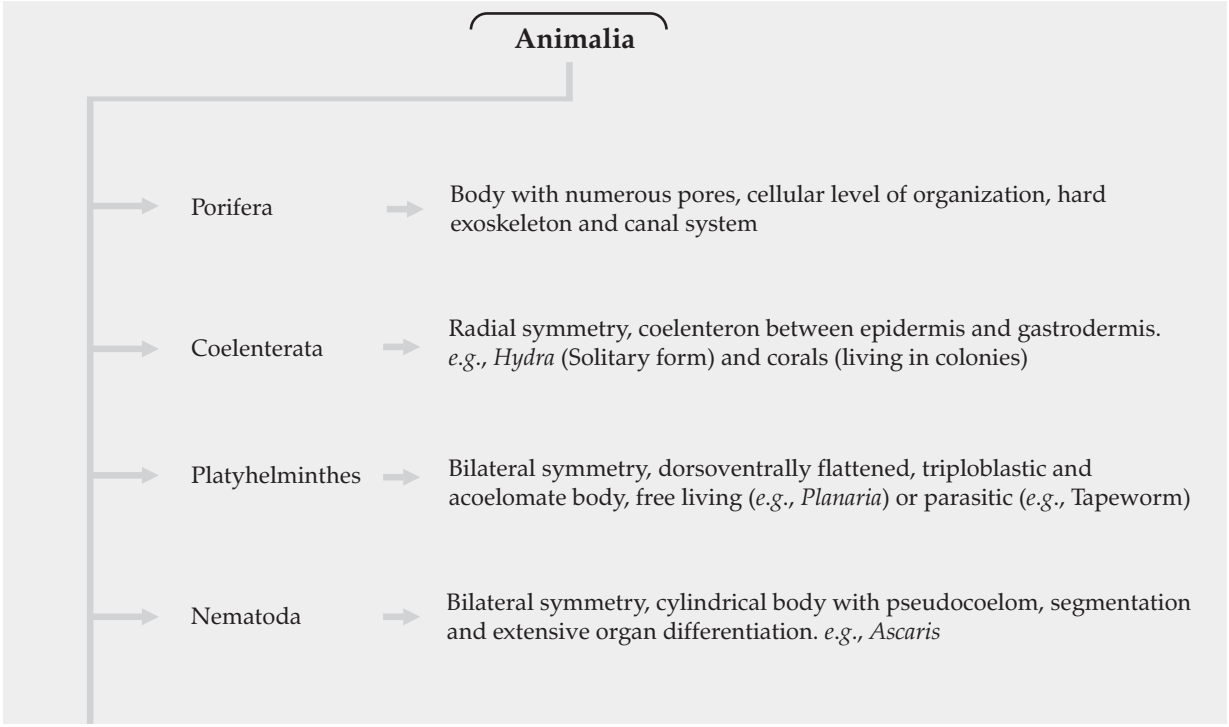


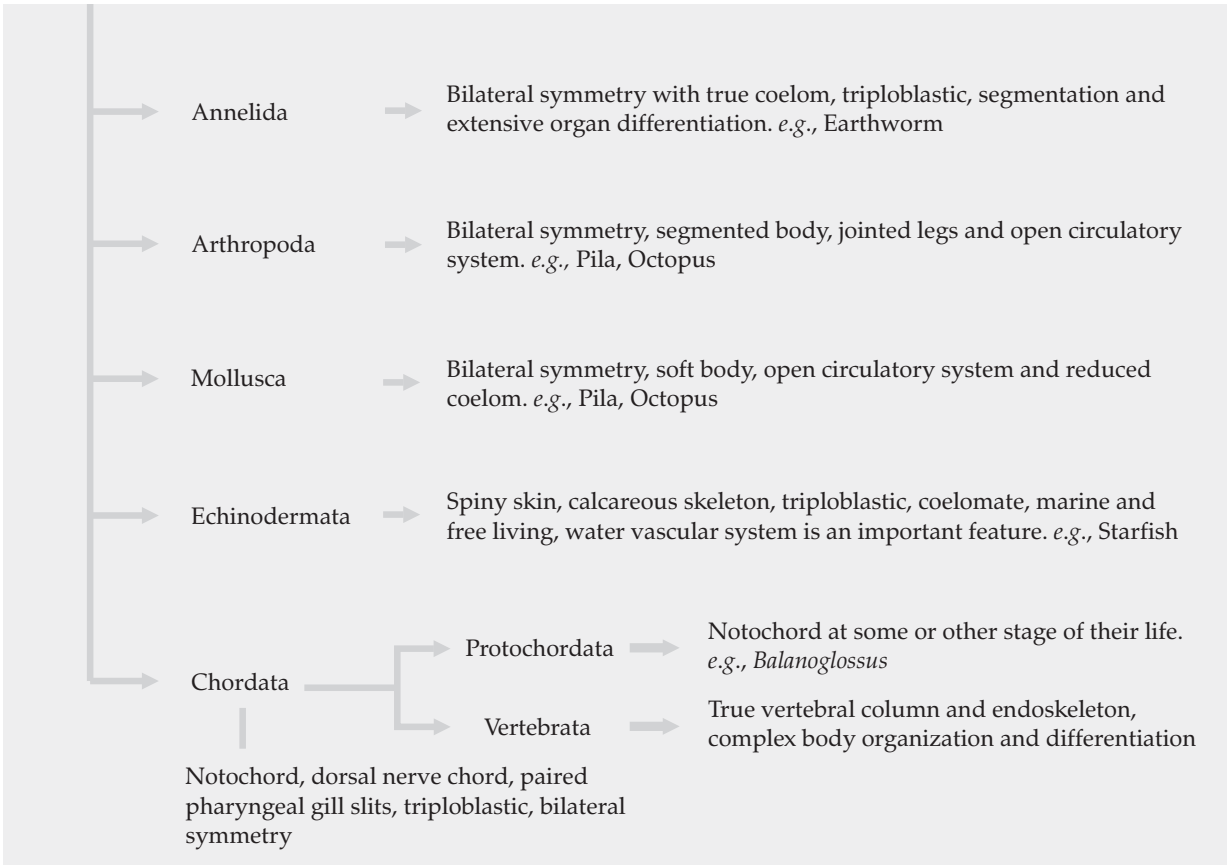

Flowchart 4 : Classification of Fungi

## Flowcharts



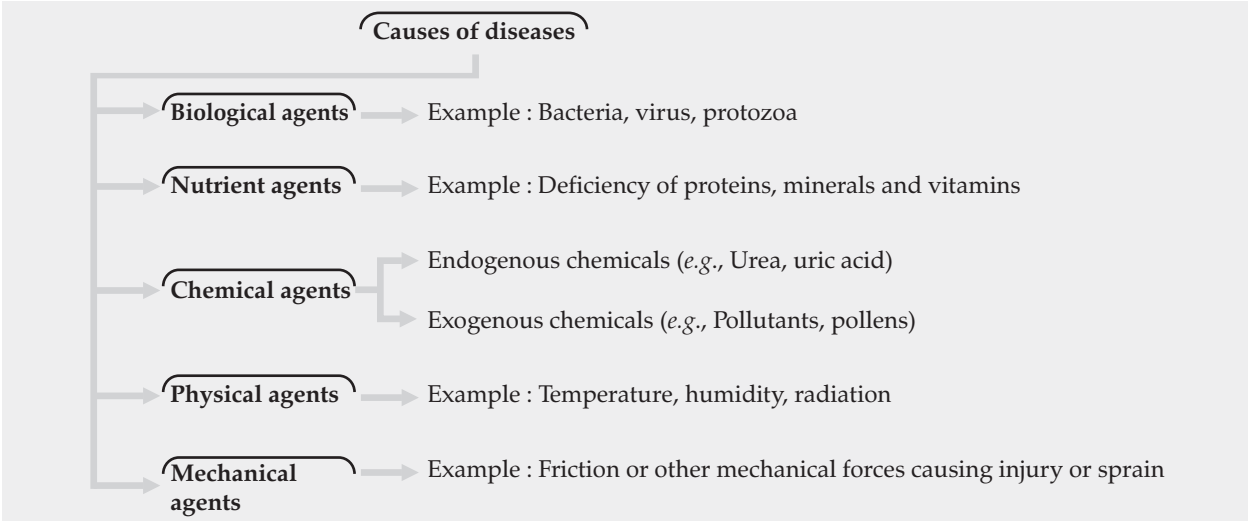

Flowchart 1 : Classification of Plantae



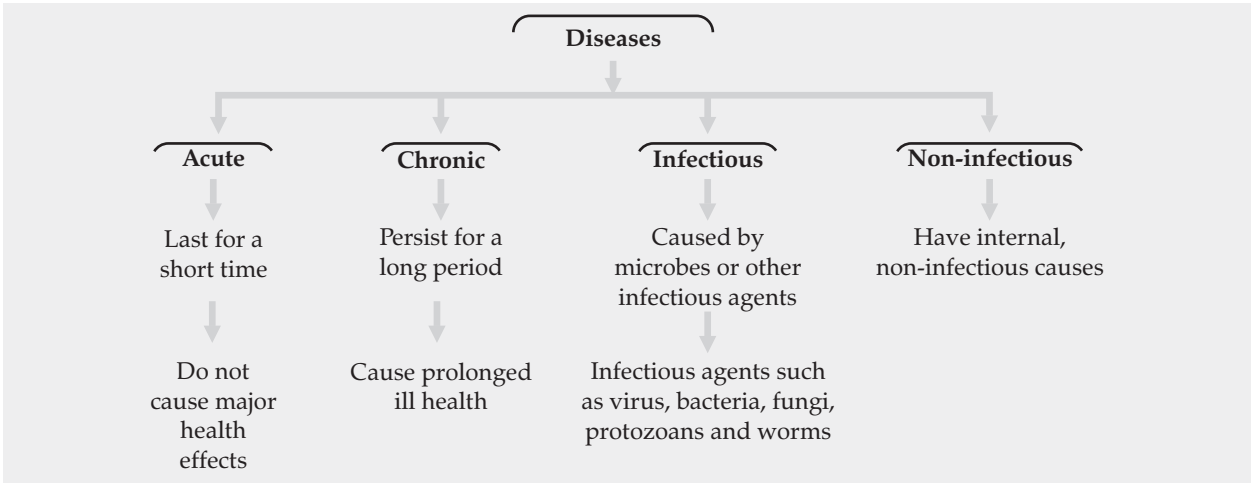



# Chapter - 8 : Health And Diseases

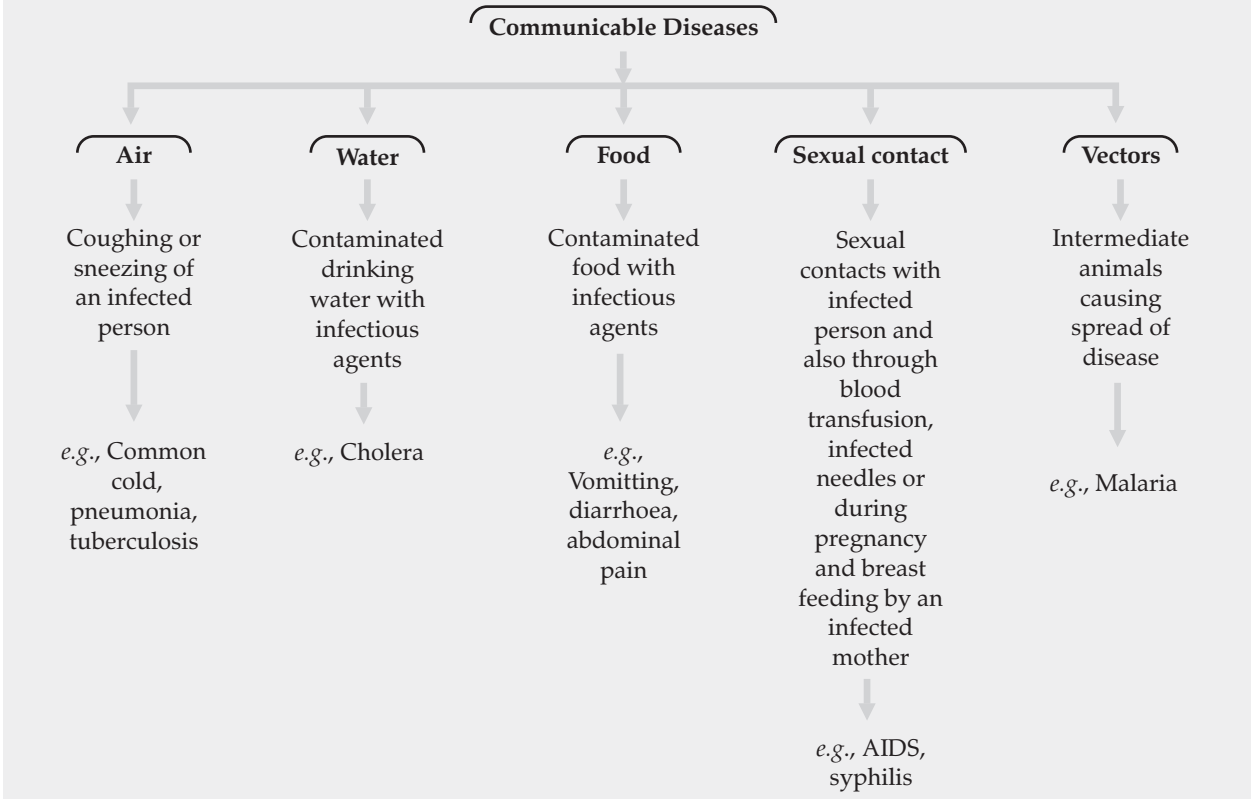
## Flowcharts




Flowchart 1 : Five Causes of Diseases.

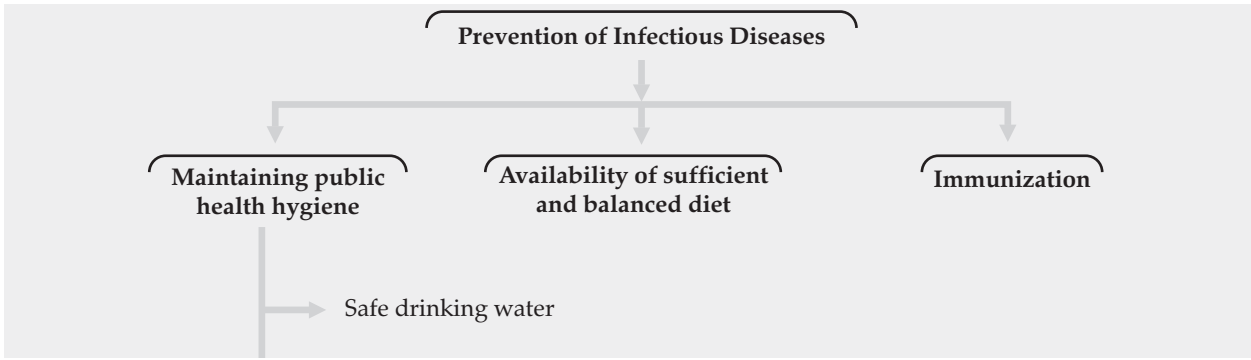


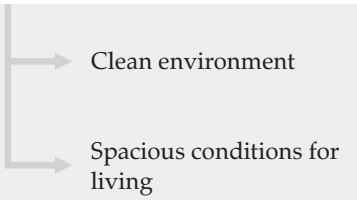

Flowchart 2 : Types of Diseases




Flowchart 3 : How do communicable diseases spread ?

## Flowcharts

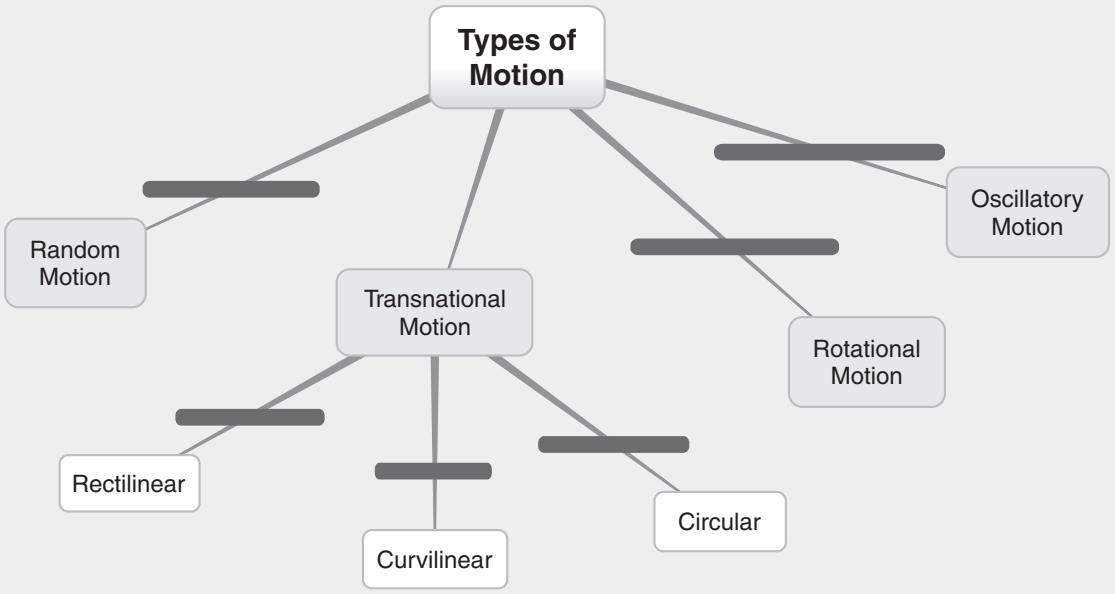





Flowchart : Prevention of infectious diseases

# Chapter - 9 : Motion

## Flowchart

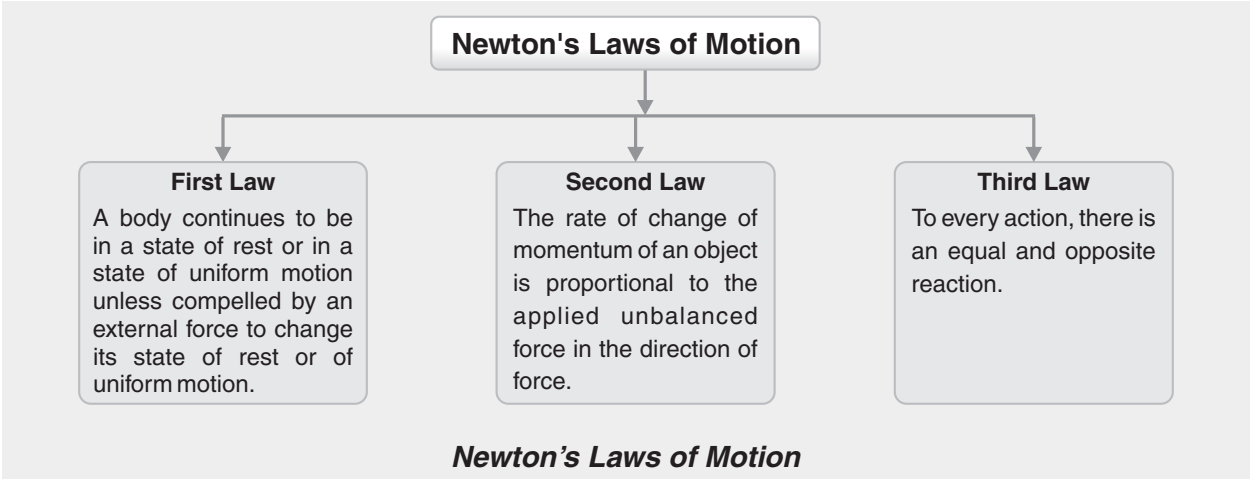



***Types of Motion***

# Chapter - 10 : Force And Laws Of Motion

## Flowcharts

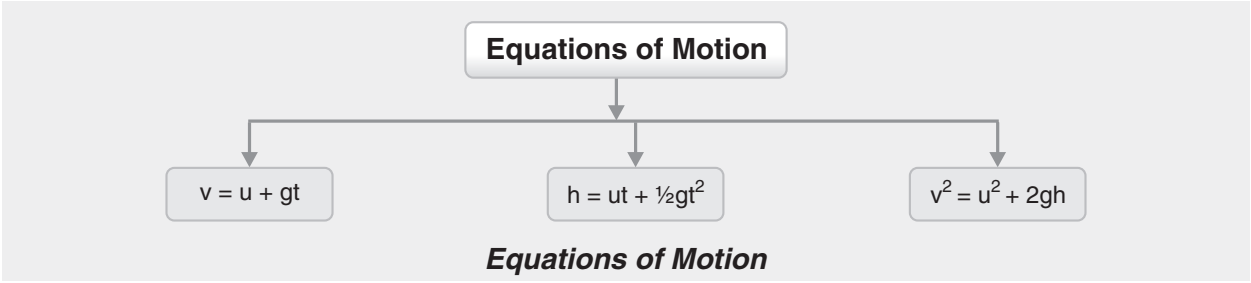
***Force***



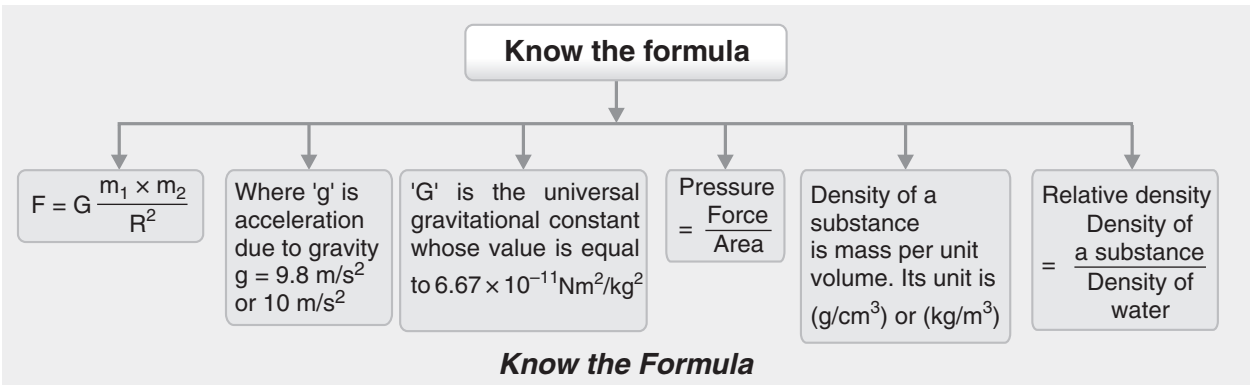

***Newton's Laws of Motion***

# Chapter - 11 : Gravitation

## Flowchart



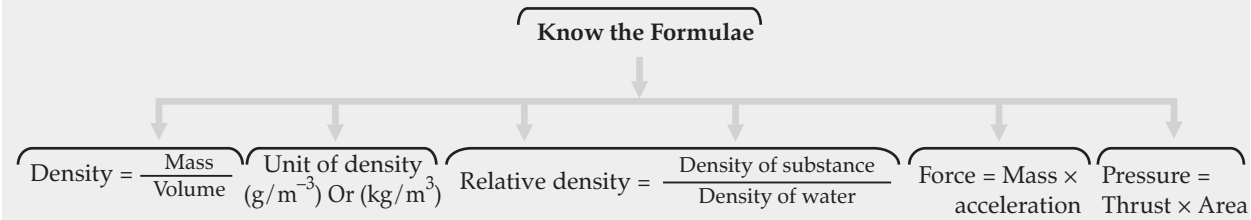

***Equations of Motion***

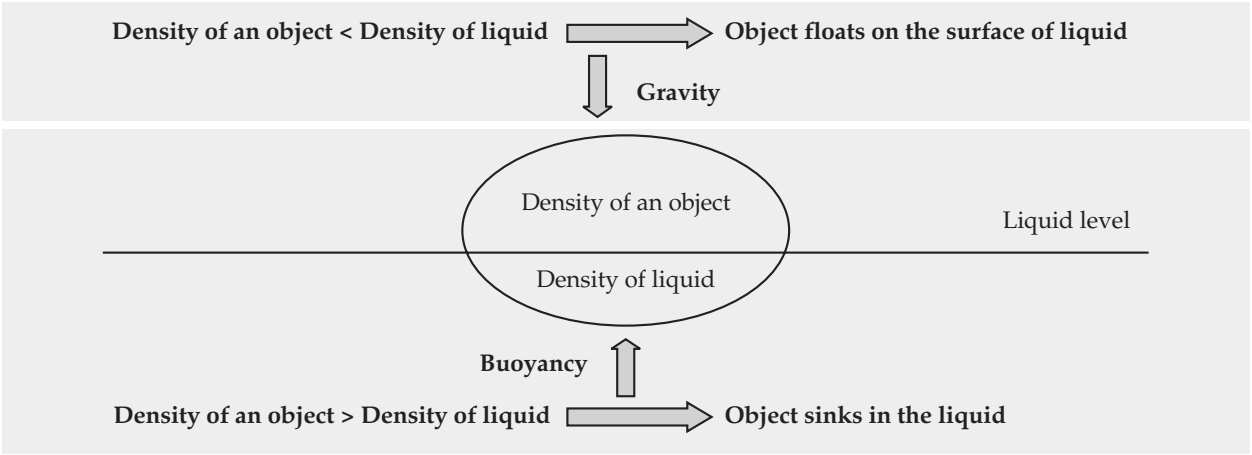



***Know the Formula***

# Chapter - 12 : Floatation

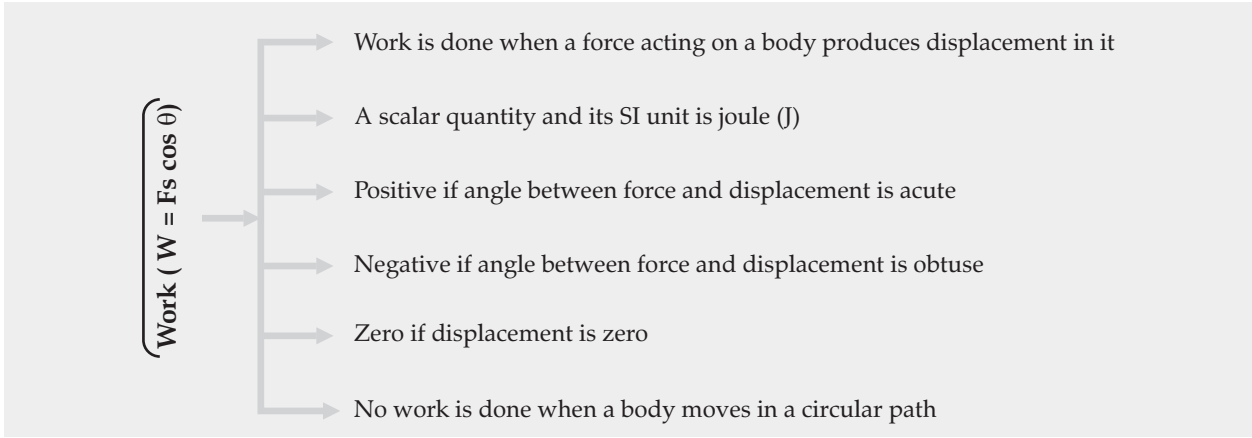
## Flowchart



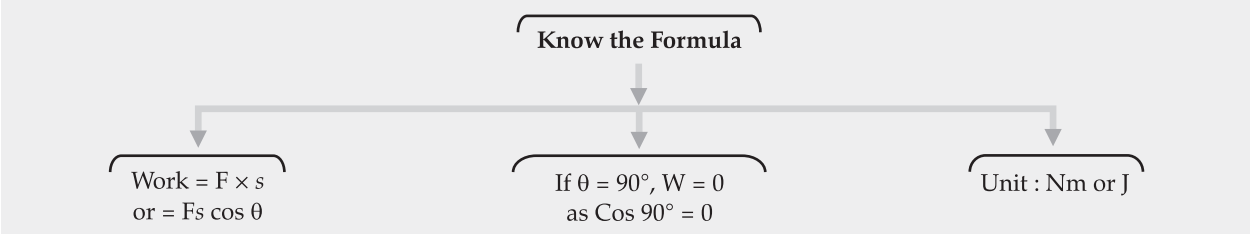



# Chapter - 13 : Work And Energy

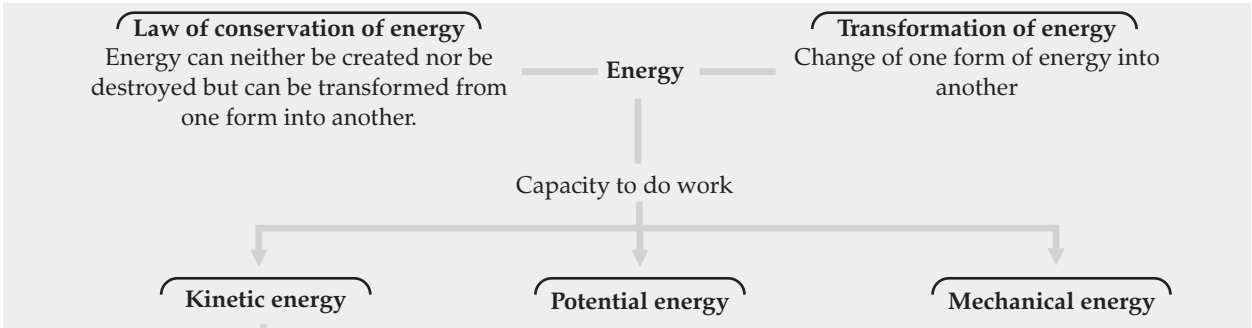
## Flowcharts




Flowchart 1 : Work




## Flowcharts



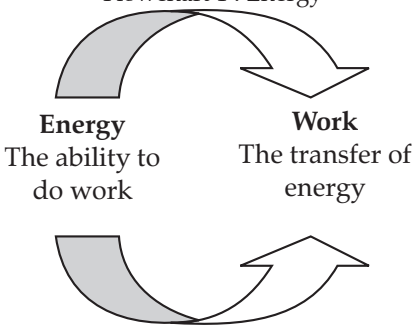
By virtue of motion of a body → K. E. = $\frac{1}{2}mv^2$

By virtue of position of a body or change in configuration → P.E. = $mgh$

M.E. = K.E. + P.E.

Flowchart 1 : Energy

Flowchart 1 : Energy




Flowchart 2 : Relation between work and energy

**Know the Formula**

- KE = $\frac{1}{2}mv^2$
- PE = $mgh$
- Law of conservation of energy = $\frac{1}{2}mv^2 + mgh$ = constant
- Unit = Joule; 1 kJ = 1000 J

## Flowchart

**Know the Formula**

- Power = $\frac{\text{Work}}{\text{Time}}$ = $\frac{w}{t}$
- Unit = Watt(W)
- 1 W = 1 $Js^{-1}$; 1 kilowatt = 1000 watts; 1 kW = 1000 W; 1 kW = 1000 $Js^{-1}$
- 1 K$wh$ = 1 kW × 1h = 1000 W × 3600 $s$ = 3600000 J = 3.6 × $10^6$ J

# Chapter - 14 : Sound

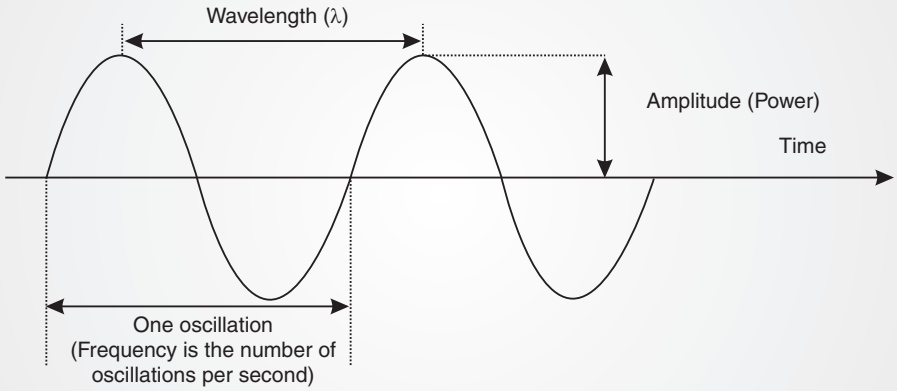
## Flowcharts

SOUND

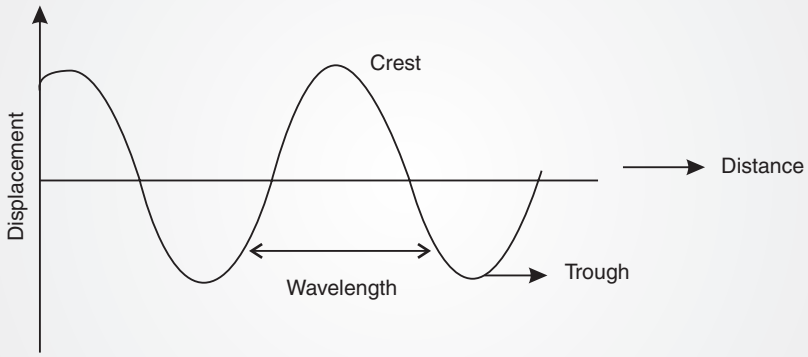
- Wave motion produced by a vibrating sound.
- Longitudinal wave as particles of medium move along the direction of wave
- Medium is necessary for propagation of sound wave
- Its speed depends on the nature and temperature of transmitting medium
- Travels faster in solids than in air

- Audible range for human being is 20 Hz to 20 kHz
- Infrasound - frequency < 20 Hz; Ultrasound - frequency > 20 kHz
- Gets reflected and follows the same law as the reflection of light

Flowchart 1 : Sound Waves




Flowchart 2 : Sound Wave



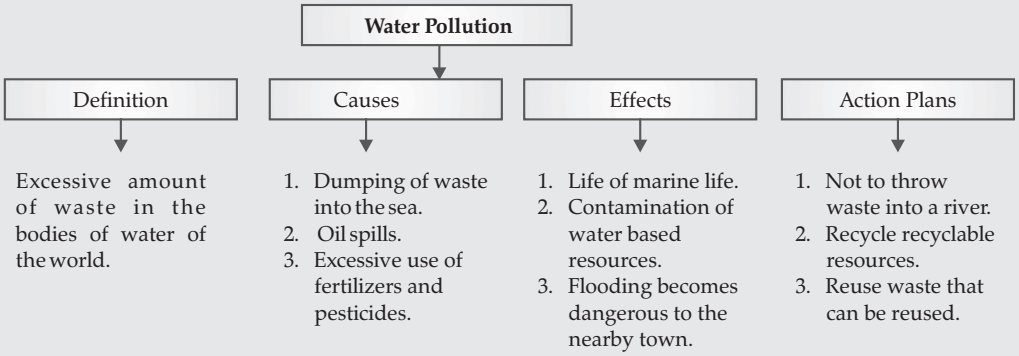

Flowchart 3 : Crest and Trough of a Transverse wave

**Know the Formula**

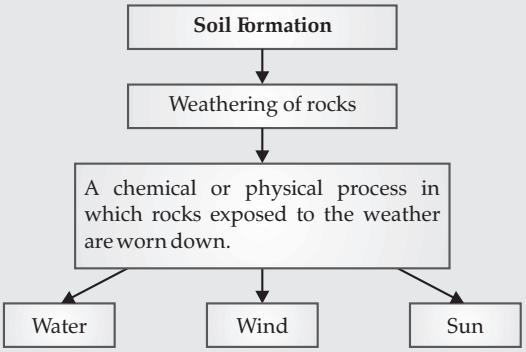
- Relation between frequency and time period: $\nu = \frac{1}{T}$
- Speed = $\frac{\text{Distance}}{\text{Time}}$; $\nu = \frac{\lambda}{T}$; $v = \lambda \nu \left(\because \nu = \frac{1}{T}\right)$
- Wave velocity $\nu = \upsilon\lambda$

# Chapter - 15 : Natural Resources

## Flowchar

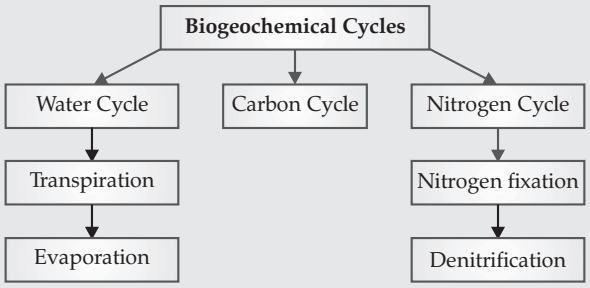



**Flowchart 1 : Water Pollution**

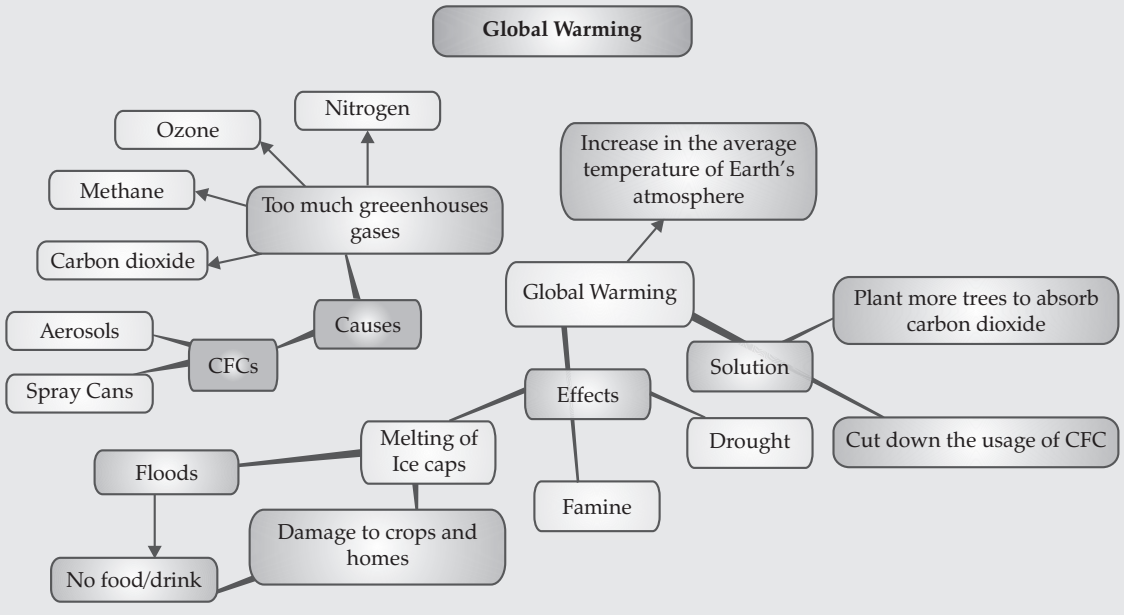



**Flowchart 2 : Soil Formation**

# Flowcharts



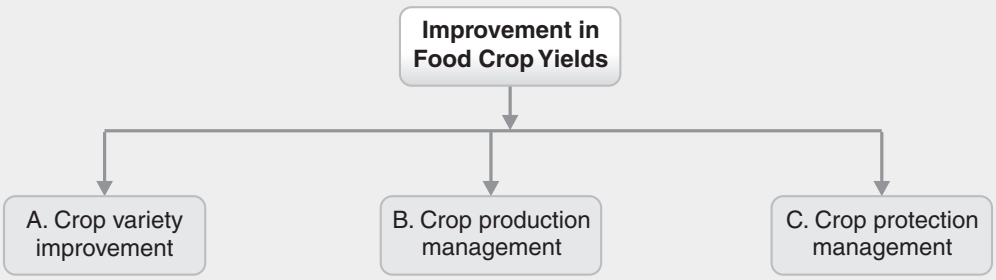

**Biogeochemical Cycles**



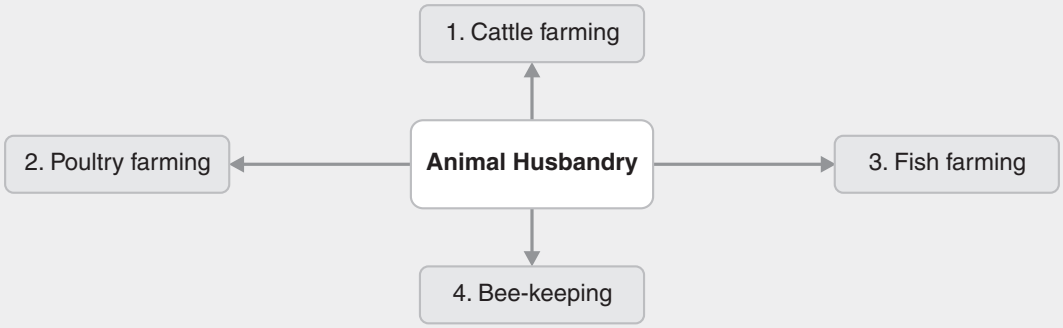

**Global Warming**

# Chapter - 16 : Improvement In Food Resources

## Flowcharts




***Improvement in Food Crop Yields***




***Animal Husbandry***