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Passive Transport

Passive transport is the mode of movement of molecules or substances across the membrane without any requirement of energy.

It can be further of following three types

- (a) Osmosis It is the process by which water molecules pass through a membrane from a region of higher concentration to a lower concentration.
- (b) Simple Diffusion In this process, neutral molecules move across the membrane along the concentration gradient (from higher to lower concentration), e.g., Gases and small molecules.
- (c) Facilitated Diffusion In this process, the molecules are transported along concentration gradient by the help of ion channels and permeases. Energy is not required in this process.

Differences between Active and Passive Transport

Active Transport	Passive Transport
In this process, energy is required.	Energy is not required.
It is a rapid process.	It is comparatively slower process.
It occurs usually against the concentration gradient.	It occurs along the concentration gradient.
It is highly selective.	It is non-selective.
It requires carrier proteins.	It occurs without carrier proteins.

Functions

Cell membrane possess the following functions

- (i) It is a selectively permeable or semi-permeable membrane, allows only selected substances to pass inwardly.
- (ii) It protects the cell from injury.
- (iii) Membranes have carrier proteins for active transport.
- (iv) Cell membrane contain enzymes which perform certain reaction on their surface, e.g., ATPase, phosphatase, etc.