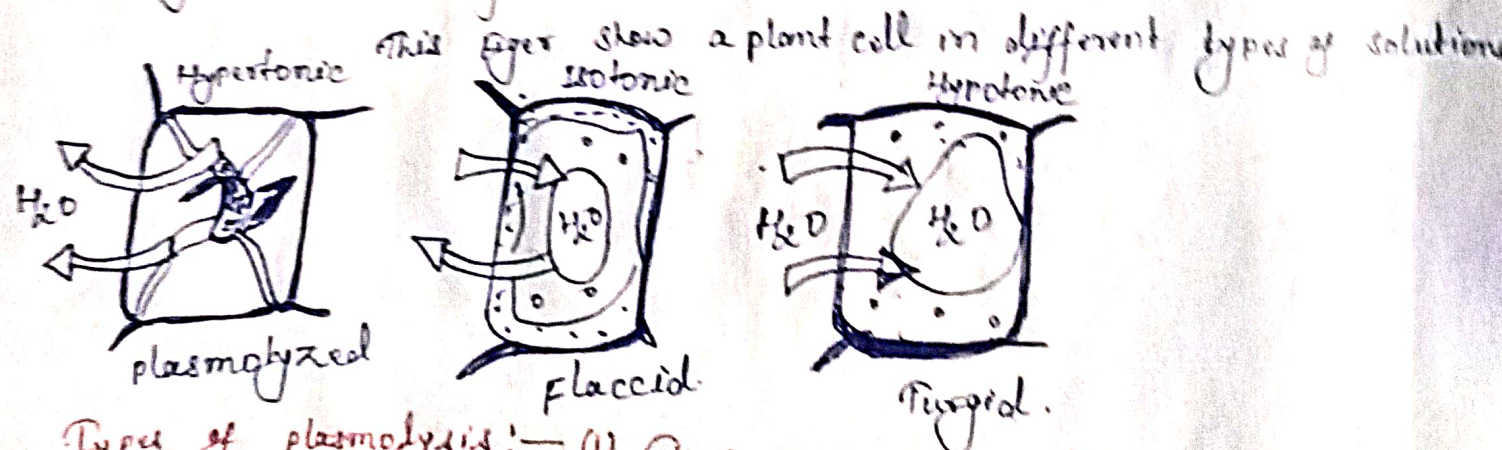


Plasmolysis:- Plasmolysis is when plant cells lose water after being placed in a solution that has a higher concentration of solution than the cell does. This is known as hypertonic solution. Water flows out of the cell and into the surrounding fluid due to the cell's osmosis. Osmosis is a process that requires no energy on the part of the cell and cannot be controlled, cell cannot stop plasmolysis from taking place.

Osmosis:- Osmosis is responsible for the occurrence of plasmolysis. Osmosis is a special type of diffusion that occurs when water flows into or out of a membrane such as a cell's plasma membrane. It occurs based on the type of solution that a cell is in. When a cell is placed into a hypotonic solution, there is a lower solute concentration outside the cell than inside, and water rushes into the cell. In an isotonic solution, solute concentrations are the same on both sides, so there is no net gain or loss of water.



Types of plasmolysis:- (1) Concave plasmolysis → Concave plasmolysis is a process that can usually be reversed. During concave plasmolysis, the protoplasm and the plasma membrane shrink away from the cell wall in places due to the loss of water, the protoplasm is then called protoplast. Once it has started to detach from the cell wall.

(2) Convex plasmolysis:- Convex plasmolysis is more severe than concave plasmolysis. When a cell undergoes convex plasmolysis, the plasma membrane and protoplast lose so much water that they completely detach from the cell wall.