Plant Physiology:Lab(4)

Plasmolysis

The third stage

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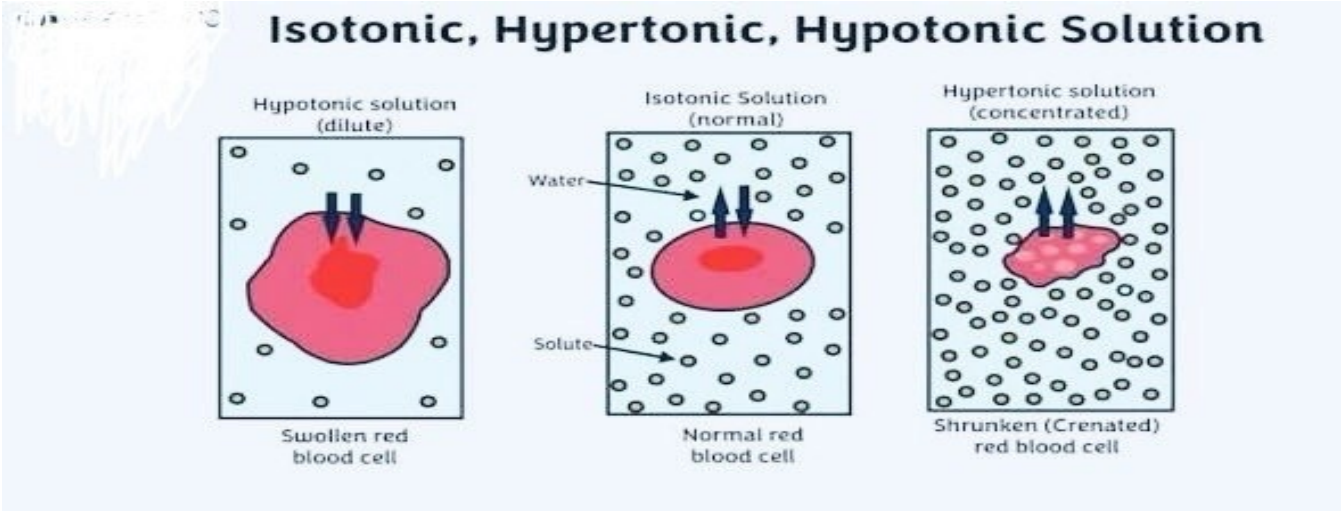
Plasmolysis

- The process in which cells lose water in a hypertonic solution,causing the cell to shrink due to diffusion of water out of thecell.
- **Type of solution regarding to the concentration of:-**
- solutes
- HypertonicIsotonic
- Hypotonic



- **Types of plasmolysis:-**
- **1-Incipient plasmolysis:-** the stage of plasmolysis at whichthe first sign of shrinkage of cell contents from cell wallbecomes delectable. it take place if the cell is putted inisotonic (approximately) solution and the water willcontinue to move inside and outside the cell.
- **2-Evident plasmolysis:-** stage when the cell wall hasreached its limit of contraction and cytoplasm hasdetached from cell wall attaining spherical shape. Thistype of plasmolysis happens when the cell is putted inhypertonic solution leading the water inside the cell to getout to the surrounding solution.

Experiment of (falling drop) grad kg rove.

- 1- Prepare 2 solution, hypertonic and hypotonic.
- 2- Prepare 3 tubes, hypertonic, isotonic (distill water),hypotonic.
- 3- Prepare a piece of onion or potato add one piece in eachtube for 5-10 min.,
- and add a drop of methylene blue stainto each tube.
- 4- Prepare anther 3 tubes like in 2 (group B).
- 5- Taken a drop from each tube of group A, then add it oneach tube of group B.
- 6- See the movement or diffuse of each drop in the solution.

