



BIOLOGY

NCERT - NCERT BIOLOGY(ENGLISH)

TRANSPORT IN PLANTS

Exercise

1. What are the factors affecting the rate of diffusion?



Watch Video Solution

2. What are porins? What role do they play in diffusion?



Watch Video Solution

3. Describe the role played by protein pumps during active transport in plants.



Watch Video Solution

4. Explain why pure water has the maximum water potential.



[Watch Video Solution](#)

5. Differentiate between the following:

(a) Diffusion and Osmosis

(b) Transpiration and Evaporation

(c) Osmotic Pressure and Osmotic Potential

(d) Imbibition and Diffusion

(e) Apoplast and Symplast pathways of

movement of water in plants.

(f) Guttation and Transpiration.



[View Text Solution](#)

6. Briefly describe water potential. What are the factors affecting it?



[View Text Solution](#)

7. What happens when a pressure greater than the atmospheric pressure is applied to pure

water or a solution?



[Watch Video Solution](#)

8. (a) With the help of well-labelled diagrams, describe the process of plasmolysis in plants, giving appropriate examples.

(b) Explain what will happen to a plant cell if it is kept in a solution having higher water potential.



[View Text Solution](#)

9. How is the mycorrhizal association helpful in absorption of water and minerals in plants?



Watch Video Solution

10. What role does root pressure play in water movement in plants?



Watch Video Solution

11. Describe transpiration pull model of water transport in plants. What are the factors influencing transpiration? How is it useful to plants?



View Text Solution

12. Discuss the factors responsible for ascent of xylem sap in plants.



Watch Video Solution

13. What essential role does the root endodermis play during mineral absorption in plants?



Watch Video Solution

14. Explain why xylem transport is unidirectional and phloem transport bi-directional.



Watch Video Solution

15. Explain pressure flow hypothesis of translocation of sugars in plants.



View Text Solution

16. What causes the opening and closing of guard cells of stomata during transpiration?



Watch Video Solution