



BIOLOGY

BOOKS - PSEB

TANSPORT IN PLANTS

Exercise

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



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



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



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4. Differentiate between the following:

Diffusion and Osmosis



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5. Differentiate between the following:

Transpiration and Evaporation



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6. Differentiate between the following:

Osmotic Pressure and Osmotic Potential



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7. Differentiate between the following:

Imbibition and Diffusion



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8. Differentiate between the following:
Apoplast and Symplast pathways of movement
of water in plants.



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9. Differentiate between the following:
Guttation and Transpiration



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



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11. What happens when a pressure greater than the atmospheric pressure is applied to pure water or a solution?



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12. With the help of well-labeled diagrams. Describe the process of plasmolysis in plants, giving appropriate examples.



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



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14. How is the mycorrhizal association helpful cell if it is kept in a solution having higher water potential.



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



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



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



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



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



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



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



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



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