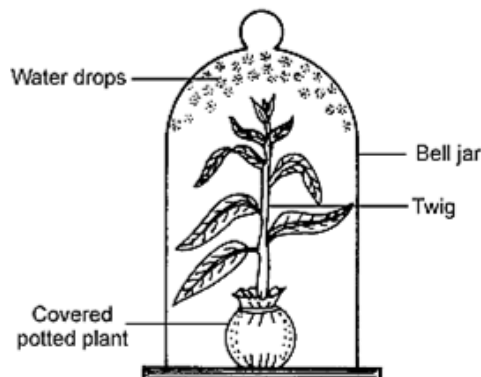


Board – ICSE

Class – 10

Topic – Transpiration

1. What is wilting?
2. Transpiration is a necessary evil. Comment.
3. Mention the significance of transpiration.
4. Mention various adaptations by which the plants tend to reduce transpiration.
5. Describe an experiment to demonstrate weight loss due to transpiration.
6. Give suitable explanations for the following:
  - (a) A higher rate of transpiration is recorded on a windy day rather than on a calm day.
  - (b) Excessive transpiration results in the wilting of the leaves
  - (c) Water transpired is the water absorbed.
  - (d) More transpiration occurs from a lower surface of a dorsiventral leaf.
7. The figure below represents an experiment performed to demonstrate certain phenomenon in plants. The set-up was kept in sunlight for about two hours.
  - (i) What is the aim of this experiment?
  - (ii) Define the process mentioned in (i).
  - (iii) What do you observe in the experiment as an evidence of the process stated in (i) and (ii)?
  - (iv) What precautions would you take for proper results in the experiment?
  - (v) Suggest a suitable control experiment for comparison.



8. Complete the following statements by choosing the correct alternative out of those given within brackets.
- (i) Transpiration rate is the highest during (summer / winter / rainy season).  
\_\_\_\_\_
  - (ii) Potometer is an instrument for measuring the rate of (flow of blood in an artery / photosynthesis / transpiration). \_\_\_\_\_
  - (iii) Most transpiration in a herbaceous plant occurs through (xylem / lenticle / stomata). \_\_\_\_\_
  - (iv) Leaves modified into needles, as in pine, is (to increase photosynthesis / to increase transpiration / to control excessive transpiration). \_\_\_\_\_
  - (v) A dry cobalt chloride paper is (blue / pink / purple) in colour. \_\_\_\_\_
  - (vi) Lenticels are openings on the (stem / leaf tips / leaf margins). \_\_\_\_\_
9. Multiple choice question:
- I. Rate of transpiration is increased with increase in:
    - a. Light
    - b. Temperature
    - c. Wind
    - d. All of Above
  - II. Water transpiration is done 90% by process of
    - a. Cuticular transpiration
    - b. Lenticular transpiration
    - c. Stomatal transpiration
    - d. Sweating
10. Do different species of plants growing in the same area show the same rate of transpiration at a particular time? Justify your answer.
11. Explain the internal factors that affects rate of transpiration in plants.
12. Explain the difference between guttation summing up bleeding.
13. How is transpiration affected by climate?
14. Explain the weighing method to measure transpiration.
15. List any three adaptations in xerophytes to reduce transpiration.
16. Name the following:
- Suction pressure generates by transpiration. \_\_\_\_\_
  - Guttation takes place by which structures. \_\_\_\_\_
  - Waxy layer on leaf reduces transpiration. \_\_\_\_\_

Seed absorb water during germination by which process. \_\_\_\_\_

17. Enlist any four advantage of transpiration.
18. Explain the various forces through which plant absorb water.