

ICSE BIOLOGY 8

Chapter 1: Transport of Food and Minerals in Plants

Worksheet 1

1. Fill in the blanks.

- (i) Absorption of minerals by root hair takes place by _____ .
- (ii) _____ pull helps in drawing water from root to leaves of tall trees.
- (iii) Transport of material in unicellular plants takes place by _____ .
- (iv) Plants lose excess of water by the process of _____ .
- (v) Delayed flowering in plants is due to deficiency of _____ .

2. Define these elements.

- (i) Essential elements
- (ii) Root pressure
- (iii) Ascent of sap
- (iv) Osmosis
- (v) Phloem

3. Match the following.

Column A

- (i) Nitrogen
- (ii) Algae
- (iii) Xylem vessels
- (iv) Root hair
- (v) Egg membrane

Column B

- (a) Tubular cells
- (b) Proteins and nucleic acids
- (c) Semipermeable membrane
- (d) Cell-to-cell diffusion
- (e) Epidermal cell

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Worksheet 2

1. Tick the correct answer.

- (i) They contain sieve plates at their ends.
(a) xylem vessels (b) phloem vessels (c) companion cells (d) xylem parenchyma
- (ii) Root hair are extensions of
(a) epidermal cells (b) cortical cells (c) endodermal cells (d) xylem vessels
- (iii) Diffusion is movement of molecules from
(a) aerial parts of plant to roots
(b) lower concentration to higher concentration
(c) higher concentration to lower concentration
(d) roots to aerial parts of plant
- (iv) This process takes place by consuming energy.
(a) active transport (b) passive transport
(c) osmosis (d) diffusion
- (v) Premature leaf fall occurs due to deficiency of
(a) nitrogen (b) boron (c) zinc (d) phosphorus

2. Answer the following questions.

- (i) Why do cut flowers kept in water remain fresh?
- (ii) Why does transpiration produce cooling effect?
- (iii) What is the difference between diffusion and osmosis?
- (iv) Why are phloem vessels also called sieve tubes?
- (v) Which other membranes can be used as semipermeable membrane?

3. Draw the following.

- (i) Detailed structure of a root hair
- (ii) LS phloem showing structure of sieve tubes