

DPP

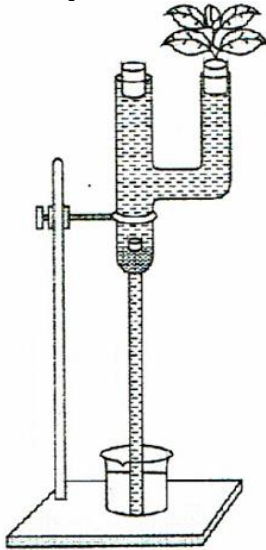
DAILY PRACTICE PROBLEMS

Class : XIth
Date :

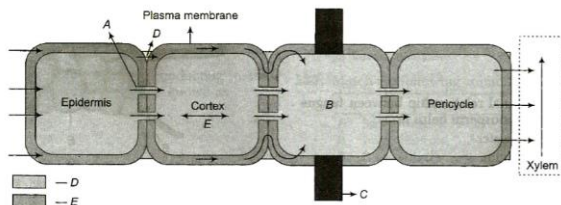
Subject : BIOLOGY
DPP No. : 3

Topic :- Transport in Plants

1. The experimental set up shown in the adjacent diagram is for



- a) The demonstration of development of suction force due to transpiration
 b) Measuring the rate of transpiration
 c) The demonstration of ascent of sap
 d) The demonstration of anaerobic respiration
2. Arrange the events of opening stomata in correct sequence and choose the correct option accordingly
- I. Lowering of osmotic potential of guard cells
 - II. Decline in guard cell solute
 - III. Rise of potassium ion level in guard cells
 - IV. Guard cells absorb water from neighbouring epidermal cells
 - V. Guard cells become flaccid
 - VI. Guard cells swells and make a pore between them
- a) III, I, IV, V b) I, II, III, IV, V, VI c) III, I, IV, VI d) III, I, IV, VI, II, V
3. In the given flow chart, the pathway of water movement is shown from soil to xylem. Identify A-E and choose the correct option accordingly



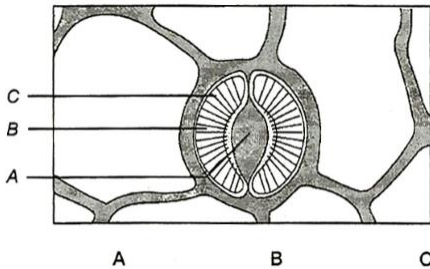
- a) A-Stomatal pore, B-Endodermis, C-Casperian strip, D- Symplast, E-Apoplast
 b) A-Plasmodesmata, B-Palisade, C-Medullary rays, D- Symplast, E-Apoplast
 c) A-Plasmodesmata, B-Endodermis, C-Casperian strip, D-Apoplast, E-Symplast
 d) A-Stomatal pore, B-Guard cell, C-Medullary rays, D-Apoplast, E-Symplast
4. Water potential increases due to
 a) Addition of solute
 b) Evaporation
 c) Addition of inorganic substances
 d) Increase in pressure
5. Why seeds imbibe and swell after keeping in water?
 a) OP inside the seed is low
 b) OP of water is high
 c) Water potential gradient develops between the seed coat and water
 d) Diffusion pressure deficit of seed is very high
6. If you are given a task to analyse phloem sap chemical, which of the following will be present in least concentration?
 a) Water
 b) Sugar
 c) Minerals and nitrogen
 d) Hormones
7. Some elements like calcium are not remobilised because they are
 a) Structural component
 b) Heavy metals
 c) Less charged
 d) Macromolecules
8. Movement of molecules in three forms of matter, from a region higher concentration to a region of lower concentration can be termed as
 a) Osmosis
 b) Passive transport
 c) Diffusion
 d) Active transport
9. In plants, water supply is due to
 a) Osmosis
 b) Imbibitions
 c) Guttation
 d) Adhesion force
10. Which part of root absorbs both water and minerals?
 a) Zone of cell differentiation
 b) Zone of cell formation
 c) Zone of cell elongation
 d) Terminal portion of root
11. Diffusion pressure deficit is also called
 a) Suction pressure
 b) Turgor pressure
 c) Osmotic pressure
 d) None of these
12. Which of the following transport induces conformational changes in proteins?
 a) Simple diffusion
 b) Osmosis
 c) Facilitated diffusion
 d) Plasmolysis
13. Diffusion, a process occur(s) along the concentration gradient is actively involved in
 a) Transpiration
 b) Respiration
 c) Photosynthesis
 d) All of these
14. Which of the following mechanism can explain the transport of sucrose from source to sink?

- a) Osmotic movement of water into sugar loaded sieve tube cells which create a higher hydrostatic pressure into the source than in the sink
- b) Tension created by differences in pressure potential between source and sink
- c) Active absorption of sucrose through sieve tube membrane driven by a specific pump
- d) Transpiration and active transport of sugar from source to sink

15. Which of the following cells are not related to the structure of stomata?

- a) Sclerenchymatous cells
- b) Epidermal cells
- c) Guard cells
- d) Accessory cells

16. Choose the correct option to label A-C in the given diagram of stomatal apparatus



- | A | B | C |
|----------------------------|------------------|--------------------------|
| a) Stomatal aperture | Subsidiary | Guard cells |
| b) Cellulose micro fibrils | Subsidiary cells | Stomatal aperture |
| c) Stomatal aperture | Guard cell | Epidermal cells |
| d) Stomatal aperture | Guard cell | Cellulosic micro fibrils |

17. Water lost in Guttation is

- a) Pure water
- b) Impure water
- c) In vapour form
- d) Either (A) or (B)

18. The approximate length of root hair zone in plants

- a) 1-10 cm
- b) 1-15 cm
- c) 1-6 cm
- d) 1-20 cm

19. When the conditions are dry, a grass leaf curls inward to minimize water loss due to the pressure of

- a) Thick cuticle
- b) Large xylem cavities
- c) Parallel venation
- d) Bulliform cells

20. Cell A has $\Psi_w - 3$ bars and cell B has $\Psi_w - 8$ bars. The movement of water will be from

- a) Cell A to cell B
- b) Cell B to cell A
- c) Data insufficient
- d) Water can not move in negative value of Ψ_w