DPP

DAILY PRACTICE PROBLEMS

Class : XIth **Subject : BIOLOGY**
Date : **DPP No. : 2**

Topic :- Transport in Plants

1. Water potential and osmotic potential of pure water is
   a) Zero and zero b) 100 and zero c) 100 and 100 d) Zero and 100

2. When pea seeds and wheat seeds are put in water, which of the two will imbibe more water?
   a) Wheat seeds b) Pea seeds
   c) Both will imbibe equal amount of water d) Pea seeds imbibe water only at alkaline pH

3. Nyctinasty and seismonasty in plants like bean and touch me not are produced due to
   a) Reversible osmotic potential in the cells
   b) Reversible turgor pressure in the cell of their pulvini
   c) Due to less pressure potential in the cells
   d) Presence of less turgidity in the cells

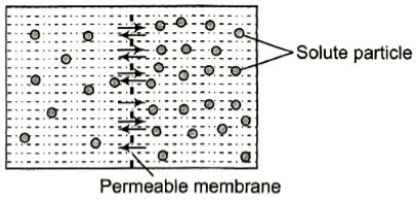
4. Following statements are related with the diffusion of coloured molecules across a membrane. Select the correct statement, which shows the fastest rate of diffusion?
   a) An internal concentration of 15% and external concentration of 10%
   b) An internal concentration of 25% and external concentration of 50%
   c) An internal concentration of 50% and external concentration of 25%
   d) Both (b) and (c) shows fastest rate of diffusion

5. Choose the false statement
   a) If bark of tree is girdled from main stem, the plant dies because ascent of sap is stopped
   b) If xylem is girdled from main stem, wilting of leaves tales place
   c) In the flowerering plant food is transported in the form of dissacharide sucrose
   d) In Girdling experiment, in a plant, root dies first

6. Sunken stomata is found in the leaves of
   a) *Trifolium* b) *Lemma* c) *Nerium* d) *Lilium*

7. Who proposed cohesion theory of water movement in plants?
   a) JC Bose b) Priestly c) Dixon and Jolly d) TV Englemann

8. Study the following picture and the statements given below and choose the correct option



I. The above diagram shows the net movement of water from the dilute to concentrated solution
II. The two solutions are separated by a differentially permeable membrane
III. Water molecule strikes the membrane randomly on both the sides and pass through the same
IV. Diffusion of water does not occur from its lower chemical potential to higher chemical potential

a) I, II, III and IV b) I, II and III c) I, II and IV d) I and IV

9. Read the following statements and choose the correct option given below
I. Major account of transpiration takes places through surface/margin of leaves
II. A little amount of water is lost through stem, this is reffered to cauline transpiration
III. Transpiration is comparatively a slow process then evaporation
IV. Transpiration driven ascent of sap does not depend on cohesion, adhesion and surface tension properties of water

a) I, II, III and IV b) I, III and II c) I, II and IV d) II, III and IV

10. Direction of translocation of organic food or solutes, is

a) Upward b) Downward c) Radial d) All of these

11. The water available to plants for absorption is

a) Gravitational water b) Hygroscopic water
c) Capillary water d) Chemically bound water

12. Which of the following theory gives the latest explanation for the closure of stomata?

a) ABA theory b) Munch theory
c) Starch glucose theory d) Active K^+transport theory

13. What will be the effect of accumulation of K^+ions in guard cells?

a) Water potential increases b) Water potential decreases
c) Loss of turgidity d) Exosmosis

14. Why all the minerals present in soil can not be passively absorbed by roots?

a) Mineral existence as ions is more than absorption
b) Due to less concentration of ion in root interior than soil
c) Due to more concentration of ions in root interior than in soil
d) None of the above

15. Which one is not the job of zone of cell differentiation in roots?
a) Mineral uptake b) Water uptake c) CO_2 uptake d) O_2 uptake

16. Which one is against the theory of ascent of sap given by Dixon and Jolly?
a) Pores in treachery elements b) Cohesion force of water molecules
c) Adhesion force of water molecules d) Requirement of ATP

17. Attraction of water molecules to polar surfaces is known as
a) Cohension b) Capillarity c) Surface tension d) Adhesion

18. The epidermal trichomes help in
a) Transpiration and exchange of gases b) Protection from desiccation
c) Protection and reduction of transpiration d) Exudes water drops from their tips

19. In land plants, the guard cells differ from other epidermal cells in having
a) Mitochondria b) Endoplasmic reticulum
c) Chloroplasts d) Cytoskeleton

20. The values of osmotic potential (π) and pressure potential (ρ) of cells A, B, C and D are given below.

Cell	π	ρ
A	-1.0	0.5
B	-0.6	0.3
C	-1.2	0.6
D	-0.8	0.4

Identify the correct sequence that shows the path of movement of water from among the following.
a) D→C→A→B b) B→D→A→C c) B→C→D→A d) C→B→A→D