6. Plant Water Relation

1) Turbidity increase _____ pressure of cell.
(a) Wall pressure (b) Osmotic pressure
(c) Turgor pressure (d) Root pressure

2) Diffusion Pressure Deficit or Suction theory was coined by _____.
(a) B. S. Meyer
(b) Kramer, and Thimann
(c) Atkins, and pristle
(d) Bohem

3) The loss of water in the form of liquid is called _____
(a) Transpiration (b) Guttation
(c) Hadathodes (d) None of these

4) Osmosis is a property of .....
(a) Solute (b) Solvent
(c) Solution (d) Membrane

5) Due to low atmospheric pressure the rate of transpiration will .....
(a) Increase (b) Decrease rapidly
(c) Decrease slowly (d) Remains unaffected

6) Water constitutes almost _____of most plant cells, and tissues.
(a) 80 to 85% (b) 60 to 65%
(c) 90 to 95% (d) 50 to 55%

7) Water is the best transport medium for dissolved _____ and _____ molecules.
(a) Carbohydrates (b) Minerals
(c) Food (d) Both b and c

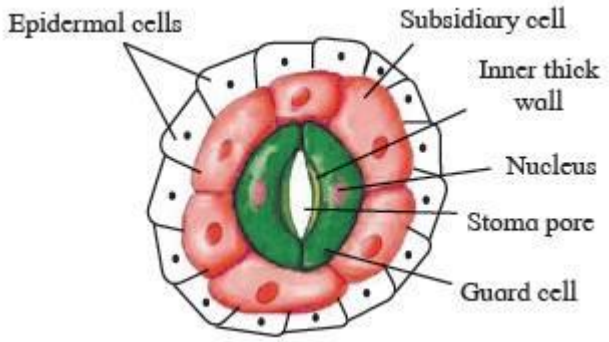
8) Water present in the form of hydrated oxides of silicon, aluminum is called _____
(a) Gravitational water
(b) Hygroscopic water
(c) Combined water
(d) Capillary water

9) Plant does not obtain variety of substances like _____
(a) Minerals (b) Water
(c) O_2 (d) None of these

10) Imbibition, diffusion, and osmosis are _____ methods of absorption.
(a) Biological (b) Mechanical
(c) Physical (d) Chemical

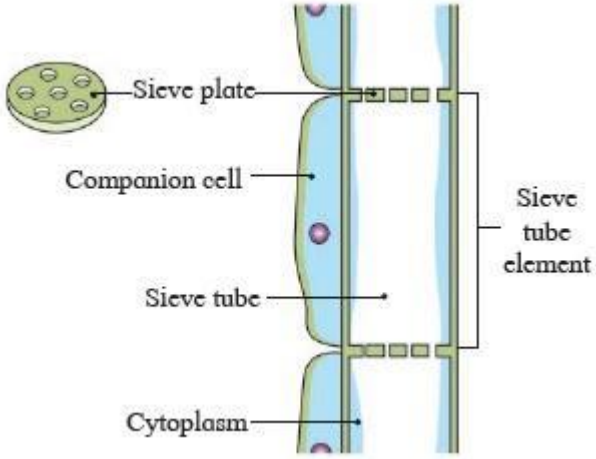
11) Stoma is an elliptical pore formed due to specific arrangement of _____.
(a) Accessory cells (b) Guard cells
(c) Subsidiary cells (d) Epidermal cells

12) The organ in the diagram helps in _____



(a) Transpiration (b) Diffusion
(c) Osmosis (d) None of these

13) Identify the below diagram.



(a) T. S. of sieve tube
(b) T. S. of companion
(c) L. S. of sieve tube
(d) L. S. of companion.

14) _____ in the given diagram helps in absorption of water.

(a) Root cap (b) Root hair zone
(c) Maturation zone (d) Root hair

15) Excessive _____ leads to wilting, and injury in the plant.
(a) Transportation (b) translocation
(c) Transpiration (d) turgor pressure

16) _____ are factors affecting water absorption.

(a) Temperature (b) Solute concentration
(c) Transpiration (d) All of these

17) In osmosis solvent from weaker solution enters into the cytoplasm of a cell through a _____
(a) Plasma membrane (b) Cell wall
(c) Plasmodesmata (d) Nucleus

18) The difference in the diffusion pressures of pure solvent, and the solvent in a solution is called _____
(a) Suction Pressure
(b) Water potential
(c) Diffusion Pressure Deficit
(d) both a, and c

19) During plasmolysis, protoplast of cell shrinks, and recedes from _____
(a) Plasma membrane (b) Cell wall
(c) Plasmodesmata (d) Nucleus

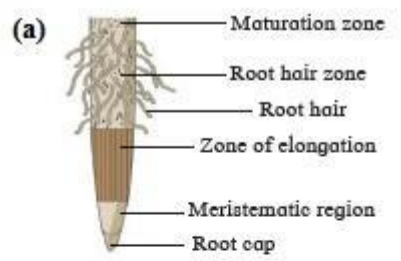
20) In guard cells, when sugar is converted into starch, the stomatal pore .....
(a) Closes almost completely
(b) Open partially
(c) Open fully
(d) Remains unchanged

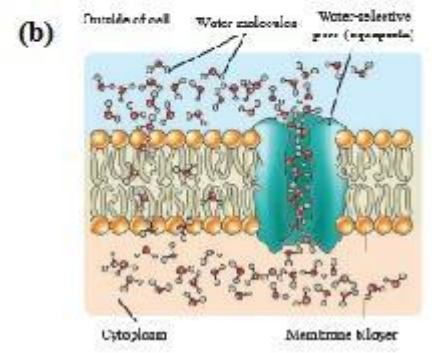
21) Surface tension is due to .....
(a) Diffusion (b) Gravitational force
(c) Cohesion (d) Osmosis

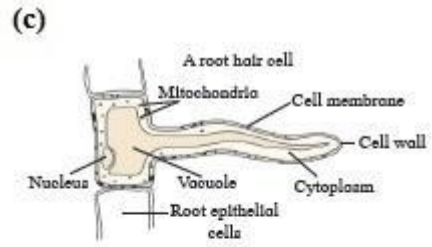
22) Which of the following type of solution has lower level of solutes than the solution?
(a) Isotonic (b) Hypotonic
(c) Hypertonic (d) An-isotonic

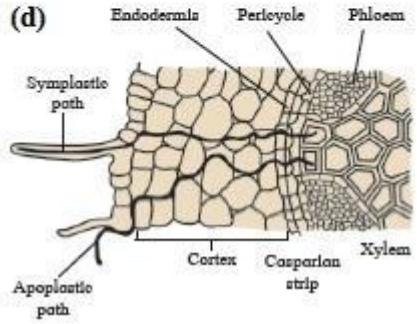
23) Water movement between the cells is due to .....
(a) T.P. (b) W.P.
(c) DPD (d) Incipient plasmolysis.

24) Which of the below diagram explains pathways for water uptake by the root.









25) The amphistomatic leaves contain stomata on _____
(a) Upper epidermis (b) lower epidermis
(c) None of these (d) both surface

26) The transport of food through phloem is _____
(a) Unidirectional (b) Bidirectional
(c) Tangential (d) Radial

27) Food is always translocated in the form of _____
(a) glucose (b) fructose
(c) sucrose (d) mannose

28) _____ is the cytoplasmic extension of epiblema cells.
(a) Root cap
(b) Root hair
(c) Zone of elongation

(d) Meristematic region

29) Outer layer cell wall of root hair is composed of _____
(a) Cellulose (b) Pectin
(c) Both a, and b (d) None of these

30) Epiphytic roots having special tissue called _____
(a) Vacuole (b) Velamen
(c) Epiblema (d) None of these.

31) Swelling up of hydrophilic colloids due to absorption of water is called _____
(a) Osmosis (b) Diffusion
(c) Imbibition (d) None of these

32) A strong force of attraction between water molecules is called _____
(a) Cohesive force (b) Adhesive force
(c) All of these (d) None of these

33) In a flaccid cell, T. P. is zero. Therefore DPD = _____
(a) TP (b) WP (c) DPD (d) OP

34) The part where food is synthesized is called _____
(a) Sink
(b) Source
(c) Translocation of food
(d) None of these

35) In stomal transpiration, on the lower epidermis is called as _____
(a) Epistomatic (b) Hypostomatic
(c) Amphistomatic (d) None of these

36) When food is translocated from phloem to pith is called _____
(a) Radial (b) Tangential
(c) Bidirectional (d) None of these

37) Food is translocated along the translocation gradient, passively is known as _____.
(a) Loading veins (b) Unloading veins
(c) All of these (d) None of these

38) Water absorption takes place through .....
(a) Lateral roots (b) Root cap
(c) Root hair (d) Primary root

39) The value of water potential for pure water is _____
(a) 1 (b) 2 (c) 3 (d) Zero

40) During rainy season wooden doors warp and become difficult to open or to close because of .....
(a) Plasmolysis (b) Imbibition
(c) Osmosis (d) Diffusion

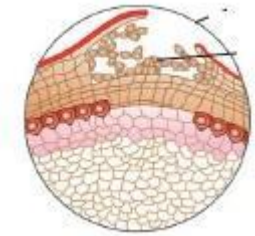
41) Translocation of water is also called as _____
(a) Ascent of sap (b) Active absorption
(c) Passive absorption (d) Both b, and c

42) During imbibition water molecules get tightly adsorbed without formation of _____
(a) Solvent (b) Solution
(c) Pressure (d) All of these

43) The most widely accepted theory for ascent of sap is ……...
(a) Capillary theory
(b) Root pressure theory
(c) Diffusion
(d) Transpiration pill theory

44) In soil, water available for absorption by root is .....
(a) Gravitational water (b) Capillary water
(c) Hygroscopic water (d) Combined water

45) Identify the following diagram.



(a) Bark (b) Root hair
(c) Lenticel (d) Phloem

-------- All the Best --------

6. Plant Water Relation Keys

1) Ans. (c)

2) Ans. (a)

3) Ans. (b)

4) Ans. (b)

5) Ans. (a)

6) Ans. (c)

7) Ans. (d)

8) Ans. (c)

9) Ans. (d)

10) Ans. (c)

11) Ans. (b)

12) Ans. (a)

13) Ans. (c)

14) Ans. (d)

15) Ans. (c)

16) Ans. (d)

17) Ans. (a)

18) Ans. (d)

19) Ans. (b)

20) Ans. (a)

21) Ans. (c)

22) Ans. (b)

23) Ans. (c)

24) Ans. (d)

25) Ans. (d)

26) Ans. (b)

27) Ans. (c)

28) Ans. (b)

29) Ans. (b)

30) Ans. (b)

31) Ans. (c)

32) Ans. (a)

33) Ans. (d)

34) Ans. (b)

35) Ans. (b)

36) Ans. (a)

37) Ans. (b)

38) Ans. (c)

39) Ans. (d)

40) Ans. (b)

41) Ans. (a)

42) Ans. (b)

43) Ans. (d)

44) Ans. (d)

45) Ans. (c)