



Transport in plant -DPP -06

1. The rupture and breakage do not usually occur in the water column in vessel/tracheid during the ascent of xylem sap because of
 - (1) Weak gravitational pull
 - (2) Transpiration pull
 - (3) Lignified thick walls
 - (4) Cohesion and adhesion
2. Guttation is the result of
 - (1) Diffusion
 - (2) Osmosis
 - (3) Transpiration
 - (4) Root pressure
3. In a flowering plant which is a mode of long distance transportation-
 - (1) Diffusion
 - (2) Cytoplasmic streaming
 - (3) Active transport
 - (4) Translocation
4. Xylem is associated with translocation of
 - (1) Water, mineral salts
 - (2) Some organic nitrogen
 - (3) Hormones
 - (4) All of these
5. Movement of sap in phloem and xylem are respectively:
 - (1) Bidirectional and unidirectional
 - (2) Unidirectional and bidirectional
 - (3) Unidirectional in both
 - (4) Bidirectional in both
6. Guttation suggests that:
 - (1) Plant is transpiring rapidly
 - (2) There is water logging around roots
 - (3) Rate of absorption is greater than rate of transpiration
 - (4) There is less absorption of water in plants
7. Exudation of xylem sap is an example of:
 - (1) Transpiration
 - (2) Etiolation
 - (3) Root pressure
 - (4) Imbibition
8. Guttation is performed through:
 - (1) Turgor operated valves
 - (2) Permanently opened pore
 - (3) Stomata
 - (4) Lenticels.
9. Which of the following statement is correct?
 - (1) Water is mainly absorbed by symplast and active process
 - (2) Water is mainly absorbed by apoplast and active process
 - (3) Water is mainly absorbed by apoplast and passive process
 - (4) Water is mainly absorbed by symplast and passive process
10. A specialized structure in leaves which excretes water droplets along with salt is called as
 - (1) Stomata
 - (2) Hydathodes
 - (3) Lenticels
 - (4) Bark
11. Which one gives the most valid explanation for Ascent of sap?
 - (1) Root pressure theory
 - (2) Starch hydrolysis theory
 - (3) Vital force theory
 - (4) cohesion-tension transpiration pull theory
12. Water absorption is mostly.....process and mineral absorption is mostlyprocess
 - (1) Passive, active
 - (2) Active, passive
 - (3) Passive, passive
 - (4) Active, active
13. The form of sugar transported through phloem is
 - (1) Glucose
 - (2) Sucrose
 - (3) Fructose
 - (4) Starch
14. Which of the following is correctly matched
 - (1) Root pressure – negative pressure
 - (2) Transpiration pull –negative pressure
 - (3) Dicot stomata –Equal number on both side
 - (4) Humidity – internal factor to control transpiration
15. Most researchers agree that water is mainly— through the plant, and that the driving force for this process is ——.
 - (1) Pulled, transpirational pull
 - (2) Pushed, root pressure
 - (3) Pulled, osmotic pressure
 - (4) Pushed, transpirational pull

16. Transpiration can create pressures sufficient to lift a xylem sized column of water to
 (1) Approx 13 metres high
 (2) Approx 130 metres high
 (3) Approx 30 metres high
 (4) Approx 130 centimetres high
17. In cell wall of guard cells, cellulose microfibrils are arranged
 (1) Transversely
 (2) Tangentially
 (3) Radially
 (4) Laterally
18. Guard cells show resemblance with mesophyll cells in having
 (1) Differentially thick cell wall
 (2) Uniformly thin cell wall
 (3) Dumb-bell shaped structure
 (4) Presence of chloroplast
19. Scotoactive stomata are found in:
 (1) All xerophytes
 (2) Succulent xerophytes
 (3) Mesophytes
 (4) Hydrophytes
20. Which of the following is true related to endodermis
 (A) Stem endodermis do not contain casparian strips
 (B) Root endodermis layer is lignosuberine which allow apoplastic movement
 (C) Stem endodermis contain lignin and suberin which allow active movement
 (D) Root endodermis contain lignosuberine thickening which allow symplastic movement
 (1) A & D (2) C & D
 (3) A, C & D (4) B, C & D
21. Which of the following ion helps in the opening and closing of stomata?
 (1) K^+ (2) Mn^{2+}
 (3) Mg^{2+} (4) Ca^{2+}
22. Which of the following lacks stomata?
 (1) Aquatic plants with floating leaves
 (2) Xerophytes
 (3) Aquatic submerged plants
 (4) Sciophytes
23. Phloem sap is mainlyand.... . Choose the correct pair of options?
 (1) water, sucrose
 (2) sugars, water
 (3) sucrose, sugars
 (4) amino acids, sugars
24. The accepted mechanism used for the translocation of from source to sink is called pressure flow hypothesis. Fill in the blank.
 (1) Sugars (2) Amino acids
 (3) Hormones (4) Water
25. At sink, incoming sugars are actively transported the phloem. Fill in the blank
 (1) Towards (2) Through
 (3) Out of (4) Into
26. Which one of the following acts as a barrier in an apoplastic pathway?
 (1) Epidermis (2) Plasmodesmata
 (3) Casparian strips (4) Metaxylem
27. In which of the following, movement of water and minerals occur from one cell to the other via plasmodesmata?
 (1) Non-vacuolar pathway
 (2) Apoplastic pathway
 (3) Symplastic pathway
 (4) ATP mediated pathway
28. Which of the following is wrong?
 (1) The movement of a molecule across a typical plant cell of about 50 μm takes approximately 2.5 seconds
 (2) Long distance transport of substances within a plant cannot be by diffusion alone
 (3) Active transport in plants mainly help in long distance transport
 (4) All of the above
29. Which of the following moves mainly by mass flow or bulk flow in a plant body?
 (1) Water (2) Minerals
 (3) Food (4) All of these
30. Water translocation was observed up to the top of a tree having a height of 35 metres. Which phenomenon is responsible for this translocation?
 (1) Root pressure (2) Transpiration pull
 (3) Adhesive force (4) Cohesive force



ANSWERS

1. (4)	12. (1)	23. (1)
2. (4)	13. (2)	24. (1)
3. (4)	14. (2)	25. (3)
4. (4)	15. (1)	26. (3)
5. (1)	16. (2)	27. (3)
6. (3)	17. (3)	28. (3)
7. (3)	18. (4)	29. (4)
8. (2)	19. (2)	30. (2)
9. (3)	20. (1)	
10. (2)	21. (1)	
11. (4)	22. (3)	



***Note* - If you have any query/issue**

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