YAKEEN-2022

Transport in plant
(Concept Worksheet -2)

Fill in the blanks

1. Transport of …..channel is always unidirectional
2. In early spring food move from ……..to ……
3. ……is organic form of nitrogen which is transported
4. Direction of food is……..in plants
5. ……type of short distance transport not occur through membrane and passive
6. Entry of mineral inside cell is by ……..and …….in plants
7. Cytoplasmic streaming is helped by……structure in cytoplasm
8. ……..molecule show simple diffusion across membrane
9. Simple diffusion is directly proportional to ……..
10. ……Type of transport across membrane destroy gradient
11. ……type of transport across membrane create gradient
12. ……and …….. ways by which c channel can be controlled
13. Inhibitor binds on channel at ……
14. Type of inhibition shown by channel due to inhibitor …… (competitive or non-competitive)
15. Number of aquaporins make water channel
16. --------are located in ……, …… And ……..
17. Saturation shown by ……and ……. Transport
18. ……..transport in short distance is uphill
19. NA^+, K^+ and glucose move by ……..and ……transport across cell
20. Transport of O_2, CO_2 and H_2O occur by……..
21. Direction of water due to water potential is……
22. Value of water potential can be ……..
23. Open beaker with pure water have solute potential ……and pressure potential equal to …….

24. When we add solute in open beaker (pure water) than Ψ_s become ……and Ψ_p …….
25. Value of solute potential is always ……
26. Direction of water according to solute potential is…….to ……
27. A solution having –ve solute potential can have zero Ψ_w it Ψ_p is……..
28. Cytoplasm mostly has Ψ_w value ……
29. Ψ_w measure in term of ……
30. Possible value of Ψ_p is ……, ……and…….
31. For transpiration pull Ψ_p is…….
32. ……and…….region of plant have impermeable membrane
33. Shrinkage of ……is called plasmolysis
34. ……..Type of plasmolysis is called plasmolysis
35. ……type of pressure s lowest in evident plasmolysed cell
36. When water enter into cell ……type of pressure develop inside cell
37. Direction of water through osmotic pressure is from……to……
38. Value of DPO of pure water is……
39. In plasmolysis water first move from …….to beaker
40. Osmotic pressure is equal to ……but direction is opposite
41. In R.O. value of Ψ_p is ……and Ψ_s is ……
42. During imbibitions ……is required between surface and liquid
43. ……and …….. show maximum imbibitions
44. Out of root and leaf which have highest O.P
45. If hydrophytes shift to mesophytic conditions water absorption ……

Answer Key

1. Xylem
2. Roots to buds (leaves)
3. Amino acid and related compounds
4. Source to sink (any required direction)
5. Apoplast
6. Passive and active transport
7. Cytoplasmic strands
8. Substances soluble in lipid (Hydrophobic/polar/lipophilic)
9. Concentration gradients / temperature
10. Channels (Facilitated diffusion)
11. Pumps (Active transport)
12. Chemical and electrical signals
13. Protein side chain
14. Non- competitive
15. 8
16. Porins, plastids, mitochondria and in some bacteria
17. Facilitated diffusion and active transport
18. Active
19. Channels in facilitated diffusion
20. Diffusion
21. Higher to lower water potential
22. Negative, zero and positive
23. Zero and zero
24. Negative and zero
25. Negative
26. Higher to lower
27. Equal to Ψ_s with opposite sign (positive)
28. Negative
29. Pascal
30. Positive, zero and negative
31. Negative
32. Endodermis (casparian strip) and cork layer
33. Protoplast
34. Evident
35. Turgor pressure
36. Turgor pressure

37. Low to high
38. Zero
39. Cytoplasm
40. Osmotic potential
41. Positive, negative
42. Affinity
43. Agar agar and protein
44. Leaf
45. Less

Note - If you have any query/issue

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