



YAKEEN-2022

Transport in plant (Concept Worksheet -1)

1. Mark the true and false

- a. Transport of water is unidirectional
- b. Transport of mineral occur through both xylem and phloem
- c. Transport through xylem is unidirectional
- d. Transport of nitrogen in organic form is Ammonia
- e. Source of carbohydrate in plants is leaf in normal time
- f. All mineral in soil absorb in non-ionic form
- g. Root absorb water passively
- h. Mineral absorption occur both active and passive from root
- i. Movement through cell wall is symplast
- j. Water absorbed by zone of elongation also in root
- k. Water can cross plasma membrane by diffusion known as osmosis

2. Fill in the blanks

- a. Solution with no external pressure has water potential
.....
- b. Solute potential is always.....
- c. In fully turgid cell value of turgor pressure is
- d. In plasmolysed cell value of turgor pressure is
- e. Water always move from water potential to low water potential

- f. If two cell have water potential value $A = -10$ and $B = -5$, if placed in pure water than which cell absorb water
- g. If solute potential value is $\Psi_s = -15$ than value of osmotic pressure is
- h. Imbibition occur for solid and
- i. Unit of water potential is.....
- j. Value of atmospheric pressure is considered as.....
- k. Which of the following vascular bundle have negative pressure (xylem/phloem)
- l. In sieve tube(positive/negative/zero) pressure present
- m. Inner wall of guard cell thick and
- n. Outer wall of guard cell becomewhen water enter
- o. When water move out from leaf surface thantemperature decrease
- p. Increase in CO_2 Concentration inside leaf, stomata will..... (close/open)
- q. Unloading of mineral from fine veins of leaf is
- r. Mesophyll cell transport sucrose first intocell
- s. When companion cell load sucrose in sieve tube osmotic pressure will.....
- t. Direction of water in terms of osmotic pressure is from.....
- u. Movement of water in xylem vessels is.....
- v. Cellulose microfibril in guard cell arrange.....

3. Mark the true statement

- a. Water potential is measured in terms of pressure
- b. Channel , carrier and pump all transport polar molecule
- c. Mineral transport not occur by bulk flow



- d. Substomatal cavity have concentration of vapour is lower than outer atmosphere for transpiration
- e. Osmotic pressure and solute potential both are function of solute
- f. Transport of water is unidirectional
- g. Osmotic pressure of sink is lower than source during food transport
- h. DPD of pure water is zero
- i. Surface tension is high in vapour phase
- j. Hydrilla leaf show cytoplasmic streaming

Answer key

1-

- a. true
- b. true
- c. true
- d. false
- e. true
- f. false
- g. true
- h. true
- i. false
- j. false
- k. true

2-

- a. Negative
- b. Negative



- c. Positive
- d. Negative
- e. High
- f. Both cell
- g. osmotic pressure = +15
- h. colloid
- i. pascal
- j. zero
- k. xylem
- l. positive
- m. elastic
- n. buldge out
- o. 10 to 15° C
- p. Close
- q. Active and passive
- r. Companion cell
- s. Increases
- t. High osmotic pressure to low osmotic pressure
- u. Apoplast
- v. Radially

3.

- a. true
- b. true
- c. false
- d. false
- e. true



f. true

g. true

h. true

i. false

j. true



Note - If you have any query/issue

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