



INDIAN SCHOOL DARSAIT

DEPARTMENT OF BIOLOGY



Subject : Biology

Topic : Transport in Plants

Date of worksheet : 15 - 5 -2017

Resource Person: Zehra Fatima

Date of Submission : _____

Name of the Student : _____

Class & Division : XI B

Roll Number : ____

S.No.	Questions	Marks
1 .	Name the process by which raisins kept in water swell up.	1
2.	Define water Potential.	1
3.	What will happen to water potential when a solute is added to water?	1
4.	Which part of the root is related with the absorption of water?	1
5.	A plant cell when kept in a solution got plasmolysed. What was the nature of the solution ?	1
6.	Mention two ways of absorption of water in plants.	1
7.	A flowering plant is planted in an earthen pot and irrigated. Urea is added to make the plant grow faster, but after some time the plant dies. Give its possible reason.	1
8.	Give one example of imbibition.	1
9.	Why is energy required to develop root pressure ?	1
10.	A plant cell when kept in a solution got plasmolysed. What was the nature of the solution ?	1
11.	Do different species of plants growing in the same soil show the same rate of transpiration of a particular time ? Justify your answer.	2
12.	A well watered potted herbaceous plant shows wilting in the afternoon of a dry sunny day. Give reason.	2
13.	Xylem transport is unidirectional and phloem transport is bi-directional. why?	2
14.	What is casparian strip? Write its significance .	2
15.	How is transpiration different from guttation ? Give two points	2
16.	Plants show temporary and permanent wilting. Differentiate between the two. Do any of them indicate the water status of the soil ?	3

17. When any dry plant material or seeds are kept in water, they swell up. 3
 (a) Name the phenomenon involved in this change.
 (b) Define this phenomenon.
 (c) Give two conditions essential for the phenomenon to occur.
18. Give the scientific term for the following statements/processes : 3
 (a) Movement of water in roots through the cell wall exclusively.
 (b) The positive hydrostatic pressure developed inside the cell or cell wall.
 (c) A solution having relatively less concentration.
 (d) Loss of water vapour from the aerial parts of the plants in the form of water vapour.
 (e) Movement of a molecule across a membrane independent of other molecule.
 (f) Water loss in its liquid phase through the special openings of veins near the tip of leaves of many herbaceous plants.
19. What is mycorrhiza? How is the mycorrhizal association helpful in absorption of water and minerals in plants? 3
20. (a) Minerals are present in the soil in sufficient amount. Do plants need to adjust the types of solutes that reach the xylem ? 5
 (b) Which molecules help to adjust this?
 (c) How do plants regulate the type and quantity of solutes that reach xylem.
21. How do plants absorb water? Explain transpiration pull model in this regard. 5
22. (a) Describe the pressure flow hypothesis of translocation of sugar in plants. 5
 (b) Explain the mechanism of closing and opening of stomata.