



ST. LAWRENCE HIGH SCHOOL



A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTIONS – 30

Class: IX

Sub: Life science

Date: 08.06.2020

Topic: Ascent of sap - Adhesive cohesive force theory

and translocation of food by phloem F.M. : 15

Choose the correct option:

(1x15=15)

1. The force of attraction among the water molecule which forms a continuous chain is called :-
a) Hydrostatic force b) Hydrophilic force c) Cohesive force d) Adhesive force

Answer : Cohesive force (c)

2. The force of attraction between water molecules cells and xylem is called :-
a) Cohesive force b) Xylem pressure c) Wall pressure d) Adhesive force

Answer : Adhesive force (d)

3. The pull which is developed due to the Transpiration is called :-
a) Transpiration pull b) Cohesive pull c) Adhesive pull d) All of these

Answer :Transpiration pull (a)

4. The Transpiration pull results in the:-
a) Formation of suction pressure b) Partial vacuum in the plant leaf c) Suction pressure in the roots d) All of these

Answer : All of these (d)

5. Ascent of sap is combined effect of the following :-
a) Root pressure b) Adhesive cohesive force c) Transpiration pull d) All of these

Answer :All of these (d)

6. The continuity of water column in xylem is due to :-
a) Adhesive force b) Cohesive force c) Adhesive-cohesive force both d) Root pressure

Answer :Adhesive and cohesive force (c)

7. The water enters the cortical cells, by cell to cell _____.
a) Active transport b) Osmosis c) Diffusion d) Both (b) and (c)

Answer : Both (b) and (c) (d)

8. Adhesive - cohesive transpiration pull theory was _____ proposed by :-
a) Stephen and Hales b) Dixon and Jolly c) Edward Jenner d) None of these

Answer :Dixon and Jolly (b)

9. The transport of food through phloem is called :-
a) Translocation b) Active transport c) Passive transport d) Transportation

Answer :Translocation (a)

10. The bulk flow hypothesis of translocation of food was proposed by :-

- a) Curtis b) Munch c) Fensom and Williams d) None of these

Answer : Munch (b)

11. According to Munch's hypothesis the leaves acts as _____ and roots acts as _____.

- a) Source and sink respectively b) Sink and source respectively c) Transportation centre and absorption center respectively d) None of these

Answer : Source and sink respectively (a)

12. Curtis proposed the concept of _____ which helps in translocation of food.

- a) Mass flow b) Bulk flow c) Cytoplasmic streaming d) All of these

Answer : Cytoplasmic streaming (c)

13. According to Fensom and Williams, contraction and relaxation of _____ cause translocation of food.

- a) Plasmodesmata b) P-proteins c) Phloem fibres d) Sieve tubes

Answer : P-proteins (b)

14. The most legitimate theory support of ascent of sap is :-

- a) Adhesive-cohesive Transpiration pull theory b) Root pressure theory
c) Pulsation theory d) None of these

Answer : Adhesive-cohesive Transpiration pull theory (a)

15. Munch's bulk flow hypothesis was proposed in the year :-

- a) 1974 b) 1935 c) 1942 d) 1930

Answer : 1930 (d)