

Ch 12 – Transportation of materials in Plants and Animals

1. In what ways are xylem and phloem important for transportation of materials in plants?

Ans: Plants have a transport system consisting of xylem and phloem. Xylem carries water and minerals from the roots to the stem and leaves whereas phloem carries food from leaves to all parts of the plant.

2. Differentiate arteries and veins

S. No	Arteries	Veins
1.	They have thick walls	They have thin walls
2.	They are situated deep under the skin	They \
3.	They have no valves	Valves are present
4.	Blood moves with high pressure	Blood is not under high pressure
5.	They transport oxygenated blood	They carry deoxygenated blood
6.	They carry blood from the heart to other parts of the body	They bring blood from different organs of the body to the heart.

3. Define the term ascent of sap.

The fluid containing water and dissolved nutrients is called sap. The movement of sap through the xylem is called ascent of sap.

4. Assertion: Clot is produced as an action of platelets.

Reason: Platelets fight against the infection or germs in the body.

Ans: Assertion is true but reason is false.

5. Assertion: urea is produced by the liver from excess amino acids.

Reason: Urea is the main nitrogenous excretory product of humans.

Ans: Assertion is false but reason is true.

6. Plants do not use all the water they absorb from the soil. Much of it is given off by transpiration. Why then do the plants absorb so much water?

Ans: Plants absorb so much water because the evaporation of excess water from the leaves produces a pulling force that causes the water to move upwards in the plant.

7. Xylem transports sap upwards only whereas phloem transports food in both directions. Why do you think there is a difference?

Ans: Xylem transports water and minerals and this takes place from the roots to all parts of the plant, mostly leaves. So, this transportation is in only one direction, upward. Food has to be reached to all parts of the plant including roots and top most shoot. So the transport of the food in phloem takes place in both directions.