

Q1. Name the plant tissue which are responsible for transportation in plants. Why they are known as complex permanent tissue.

Ans- Plants have two transport systems - xylem and phloem. Xylem transports water and minerals. Phloem transports sugars and amino acids dissolved in water. Xylem and phloem are an example of complex permanent tissues. These tissues are named so because they are made up of more than one type of cells and all these different types of cells coordinate to perform the same function.

Q2. Differentiate between xylem and phloem tissue structurally.

Ans-

Xylem	Phloem
* Xylem tissues are the tubular-shaped structure with the absence of cross walls. This tissue resembles the shape of a star.	* Phloem tissues are tubular-shaped, elongated structures with the presence of walls with thin sieve tubes.
* It is located in the center of the vascular bundle.	* It is located on the outer side of the vascular bundle.
* Xylem fibres are smaller.	* Phloem fibres are larger.

Q3. Transportation in xylem is bidirectional. Explain.

Ans- Xylem transport is unidirectional because the water column flows only upwards due to two major forces i.e. the transpiration pull and the positive root pressure. Transpiration causes a negative pressure whereas root pressure is positive which sends the water upwards towards the shoot region from the roots.