

Assignment - 5 Class - IX

Subject - Science (Biology)

Chapter - 6 (Tissues)

Exercises

Question 1: Define the term 'tissue'

Solution: Group of cells that are similar in structure and are organized together to achieve a particular function is called tissue.

Question 2: How many types of elements together make up the xylem tissue? Name them.

Solution: The following four types of elements make up xylem tissue:

1. Xylem tracheids.
2. Xylem vessels.

3. Xylem parenchyma.

4. Xylem fibres.

Question 3:How are simple tissues different from complex tissues in plants?

Solution:

Simple Tissue

Made up of only one type of cells.

Mainly responsible for mechanical support and storage.

Examples : Parenchyma, collenchyma and sclerenchyma

Complex Tissue

Made up of more than one type of cells.

Mainly responsible for the transport of water, minerals, sugars and other metabolites.

Examples Xylem and phloem.

Question 4:Differentiate between parenchyma, collenchyma and sclerenchyma on the basis of their cell wall.

Solution:Differences between parenchyma, collenchyma and sclerenchyma

Parenchyma

These are living cells with thin walls.

Cells are uniformly thin.

The cells are loosely packed with large intercellular spaces.

Collenchyma

These are living cells with slightly thick walls.

Cells are elongated.

The cells are irregularly thickened at the corners with very little intercellular spaces.

Sclerenchyma

These are dead cells with thick cell walls.

Cells are long and narrow.

The cells are thickened due to lignin. These are so thick that there is no internal space inside the cell.

Question 5:What are the functions of the stomata?

Solution:Stomata are essential for gas exchange with the atmosphere and help in transpiration in the form of water vapour through leaves.

Question 6:Diagrammatically show the difference between the three types of muscle fibres.

Solution:The three type of muscles fiber are:

1. Streated muscle
2. Smooth muscle
3. Cardiac muscle



