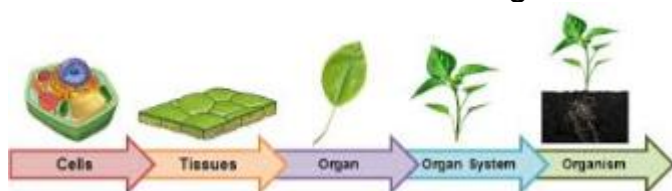


Class 9 - Science

Tissues

1. Read the text carefully and answer the questions: (1×5=5)

A few layers of cells beneath the epidermis are generally simple permanent tissue. Parenchyma is the most common simple permanent tissue. It consists of relatively unspecialized cells with thin cell walls. They are living cells. Collenchyma allows bending of various parts of the plant-like tendrils and stems of climbers without breaking. Sclerenchyma tissue makes the plant hard and stiff. We have seen the husk of a coconut. It is made of sclerenchymatous tissue. They are long and narrow as the walls are thickened due to lignin. The tissue is present in stems, around vascular bundles, in the veins of leaves and in the hard covering of seeds and nuts.



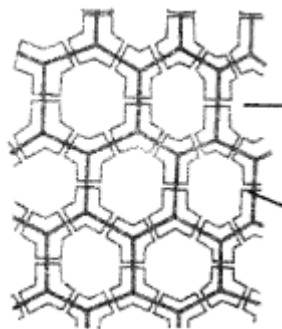
- i. The flexibility in plants is due to
 - a) chlorenchyma
 - b) collenchyma
 - c) parenchyma
 - d) aerenchyma
- ii. Function of aerenchyma:
 - a) It helps the aquatic plant to float
 - b) It performs photosynthesis
 - c) It provides mechanical support
 - d) none of these
- iii. Which of the given tissues has dead cells?

- a) Parenchyma
- b) Epithelial tissue
- c) Collenchyma
- d) Sclerenchyma

- iv. Which of the following statement is incorrect
- I. Parenchyma tissues have intercellular spaces.
 - II. Collenchymatous tissues are irregularly thickened at corners.
 - III. Apical and intercalary meristems are permanent tissues.
 - IV. Meristematic tissues, in its early stage, lack vacuoles, muscles

- a) (I) and (II)
- b) (III) and (I)
- c) (II) and (III)
- d) Only (III)

- v. Which of the following is the function of the tissue which is shown in the below diagram?

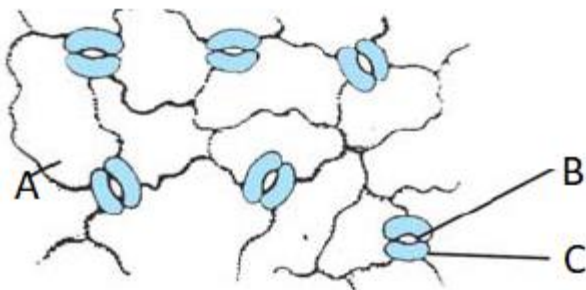


- a) Provides mechanical support
- b) Transpiration
- c) None of these
- d) Provides strength to the plant parts

- a) localized and dividing cells
 - b) localized and permanent
 - c) not limited to certain regions
 - d) growing in volume
3. Those organs of the body like oral cavity, oesophagus, etc., which are subjected to mechanical abrasions are lined by 1
- a) stratified cuboidal epithelium
 - b) simple squamous epithelium
 - c) simple columnar epithelium
 - d) stratified squamous epithelium
4. Vertical growth in plants takes place by 1
- a) Intercalary meristem
 - b) Lateral inversion
 - c) Lateral meristem
 - d) Apical meristem
5. The cell appear elongated, tapering at ends as observed under a microscope. It is 1
- a) sclerenchyma fibre
 - b) striped muscle
 - c) parenchyma
 - d) nerve cell
6. **Assertion (A):** 1-day Vinita went to see his brother's competition and he saw his brother in pain and not able to run comfortably.
Reason (R): Two bones can be connected to each other by another type of connective tissue called the ligament. This tissue is very elastic. It has considerable strength.

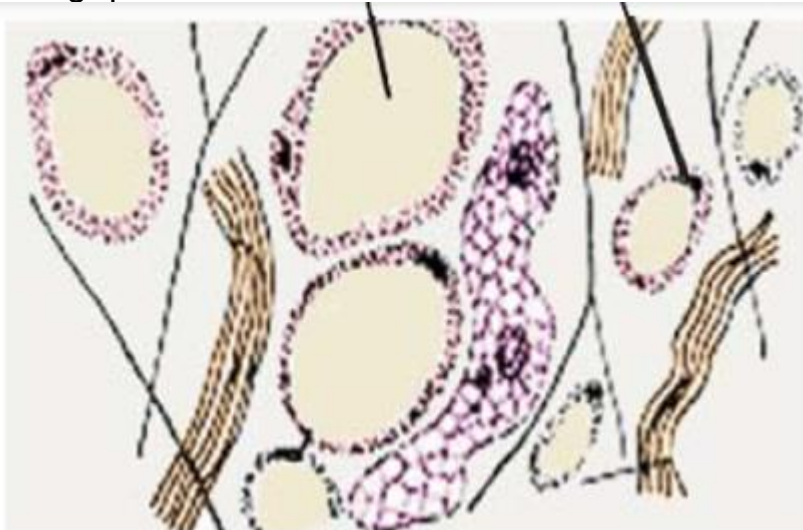
- a) Both A and R are true and R is the correct explanation of A.
- b) Both A and R are true but R is not the correct explanation of A.
- c) A is true but R is false.
- d) A is false but R is true. 1

7. In desert plants, how does the rate of loss of water get reduced? 2
8. What are the constituents of phloem? 2
9. Describe the functions of epithelium tissue. 2
10. Observe the given below diagram and answer the following questions: 4



- i. What does A represent in the given diagram? How does cell 'A' of root hairs cells help in water absorption?
- ii. How does B in the given diagram help the plants?

11. Observe the given below image of the tissue and answer the following questions: 2



- i. Identify the type of tissue shown in the given image.
- ii. Where is it found?

10. Give reasons for the following: 5
- i. Cells of sclerenchyma tissue have a narrow lumen.
 - ii. It is difficult to pull out the husk of the coconut.
 - iii. Muscles are able to contract and relax to bring about movements.
 - iv. We get a crunchy and granular feeling when we chew pear fruit.
 - v. Epidermal cells on the aerial parts of the plant often secrete a waxy, water-resistant layer on their outer surface.
11. Write differences between animal tissue and plant tissue. 3