

CBSE Test Paper 03

Chapter 06 Tissues

1. Find out incorrect sentence: **(1)**

- A) Parenchymatous tissues have intercellular spaces.
- B) Collenchymatous tissues are irregularly thickened at corners.
- C) Apical & intercalary meristems are permanent tissues.
- D) Meristematic tissues, in its early stage, lack vacuoles.

- a. (C)
- b. (B)
- c. (B) and (C)
- d. (A) and (B)

2. Tendons help to connect **(1)**

- a. muscle to muscle
- b. muscle to bone
- c. bone to cartage
- d. bone to bone

3. Which one of the following is not visible in cheek cell? **(1)**

- a. cell wall
- b. nucleus
- c. cytoplasm
- d. cell membrane

4. In desert plants, rate of water loss gets reduced due to presence of- **(1)**

- a. Lignin
- b. Suberin
- c. Stomata
- d. Cuticle

5. Movement of passage of food in the intestine is caused by the contraction of :- **(1)**

- a. Cardiac muscles
- b. Nerve tissue
- c. Unstriated muscles
- d. Striated muscles

6. Name the tissue responsible for movement of our body. **(1)**
7. Name the tissue responsible for movement in our body. **(1)**
8. Which tissue in plants provides them flexibility? **(1)**
9. Name a plant tissue having dead cells. **(1)**
10. Mention types of simple tissues. **(1)**
11. What is the role of the epidermis in the plants? **(3)**
12. Write a short note on phloem. **(3)**
13. Name the following:- **(3)**
 - (a) Tissue that forms the inner lining of our mouth.
 - (b) Tissue that connects muscle to bone in humans.
 - (c) Tissue that transports food in plants.
 - (d) Tissue that stores fat in our body.
 - (e) Connective tissue with a fluid matrix.
 - (f) Tissue present in the brain.
14. Name the following:- **(3)**
 - (a) Tissue that stores fats in our body
 - (b) Tissue present in the brain
 - (c) Connective tissue with fluid matrix
 - (d) Tissue that connects muscles to bones in humans
15. What is a permanent tissue? Classify permanent tissues and describe them. **(5)**

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Answers

1. c. (C)

Explanation: Parenchyma serves as a packing tissue in plants therefore they have intercellular spaces.

Collenchymatous tissues are mechanical tissues in the plants and are characterised by deposition of cellulose at the corners of the cell, which leads to localised thickenings of the cell wall.

Apical and intercalary meristem bring primary growth (increase in height) and secondary growth (increase in diameter) respectively and are classified under meristematic tissues.

Meristematic tissue are dividing units of the plants and contain dense cytoplasm and large nucleus with few or no vacuoles at all.

So, statement A, B and D are correct statement and statement C are incorrect statement.

2. b. muscle to bone

Explanation: A tendon is a fibrous connective tissue which attaches muscle to bone. Tendons may also attach muscles to structures such as the eyeball.

3. a. cell wall

Explanation: The cells do not have a cell wall. However, each cell has a thin cell membrane. A large vacuole is present at the centre of each cell, and is surrounded by the cytoplasm. Lightly stained cytoplasm is observed in each cell. A deeply stained nucleus is observed at the centre of each cell.

4. d. Cuticle

Explanation: In desert plants, rate of water loss gets reduced due to presence of cuticle on leaves surface. Water is mostly lost in form of water vapour during transpiration.

5. c. Unstriated muscles

Explanation: Unstriated muscles also called involuntary or smooth muscles, do not work under our control. They secrete enzymes and digestive juices hence

perform digestion regularly .

6. Muscular tissue responsible for movement of our body.
7. Muscles/muscular tissues help in the movement of our body parts.
8. Collenchyma provides flexibility to the parts of the plants. It allows easy bending of leaves and stem without breaking.
9. Sclerenchyma (a simple permanent tissue) is composed of dead cells.
10. Three – parenchyma, collenchyma and sclerenchyma. (Meristematic tissue is also a simple tissue).
11. (i) Protection. (ii) Regulation of transpiration (iii) Formation of insulating stationary air layer with the help of hair. (iv) Exchange of gases.
12. Phloem is a complex permanent tissue. It is a conducting tissue found in plants. It is made up of four types of elements - sieve tubes, companion cells, phloem fibres and the phloem parenchyma. Sieve tubes are tubular cells with perforated walls. Companion cells are closely associated with the development and function of sieve-tubes. Phloem transports food (translocation) from the leaves to other parts of the plant. It can move materials in both directions. Except for phloem fibres, all the phloem cells are living.
13. (a) Tissue that forms the inner lining of our mouth: **Epithelial tissue**
(b) Tissue that connects muscle to bone in humans: **Tendons**
(c) Tissue that transports food in plants: **Phloem**
(d) Tissue that stores fat in our body: **Adipose tissue**
(e) Connective tissue with a fluid matrix: **Blood**
(f) Tissue present in the brain: **Nerve tissue**

14.

(a)	Tissue that stores fats in our body	Adipose tissue
(b)	Tissue present in the brain	Nervous tissue
(c)	Connective tissue with fluid matrix	Blood

(d)	Tissue that connects muscles to bones in humans	Tendons
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15. Permanent tissues are derived from meristematic tissue but their cells have lost the power of division and have attained their definite form.

Permanent tissues are classified into - Simple permanent tissue and Complex permanent tissue.

(i) Simple permanent tissues: These tissues are composed of cells which are structurally and functionally similar. Simple permanent tissues are further classified into the following three types:-

- Parenchyma:** Parenchyma forms the bulk of the plant body. Parenchyma cells are living and possess the power of division.
- Collenchyma:** Collenchyma tissue is also living. It is characterised by the deposition of extra cellulose at the corners of the cells.
- Sclerenchyma:** Sclerenchyma cells are dead cells and they are devoid of protoplasm. The cell walls of sclerenchyma are largely thickened due to deposits of lignin.

(ii) Complex permanent tissues: The complex tissues consist of more than one type of cells having a common origin. All these cells coordinate to perform a common function.

Complex permanent tissues are of the following two types:-

- Xylem:** Xylem is a vascular and mechanical tissue. It is a conducting tissue. Xylem is composed of four different types of cells: (i) Tracheids (ii) Vessels (iii) Xylem parenchyma (iv) Xylem sclerenchyma. Except xylem parenchyma, all other xylem elements are dead and bounded by thick lignified walls.
- Phloem:** Like xylem, phloem is vascular but has no mechanical function. Phloem is composed of the following four elements: (i) Sieve tubes (ii) Companion cells (iii) Phloem parenchyma (iv) Phloem fibres. Except phloem fibres, all other phloem elements are living.

Xylem and phloem are both conducting tissues and also known as vascular tissues; together, both of them constitute the vascular bundle.