IN-TEXT QUESTIONS SOLVED

NCERT TEXTBOOK PAGE 69

Q. 1. *What is a tissue?*

Ans. A group of cells that are similiar in structure and work together to do a peculiar function is called tissue.

Q. 2. *What is the utility of tissues in multi-cellular organisms?*

Ans. Tissues provide structural strength, mechanical strength, show division of labour.

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Q. 1. *Name types of simple tissues.*

Ans. The types of simple tissues are parenchyma, collenchyma, sclerenchyma, and Aerenechyma.

Q. 2. *Where is apical meristem found?*

Ans. Apical meristem is found at the tip of root or shoot of the plant

Q. 3. *Which tissue makes up the husk of coconut?*

Ans. The husk of coconut is made of sclerenchymatous tissue.

Q. 4. *What are the constituents of phloem?*

Ans. Phloem is made up of 4 types of elements sieve tube, companion cells, phloem fibres and phloem parenchyma.

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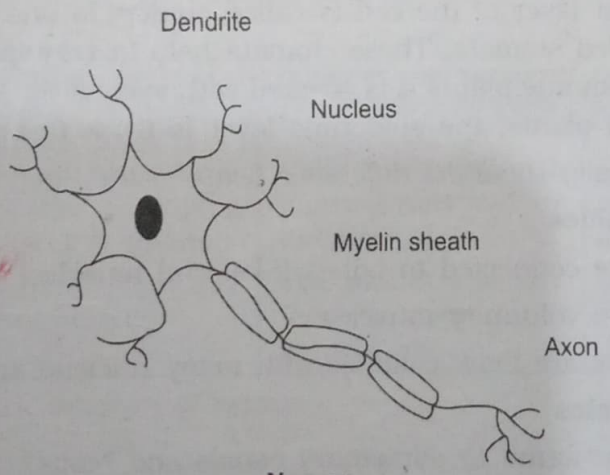
Q. 1. *Name the tissue responsible for movement in our body.*

Ans. 1. Muscular tissue, 2. Nervous tissue, combination of both the tissues are responsible for movement in our body.

Q. 2. *What does a neuron look like?*

Ans. A neuron consists of a cell body with a nucleus and cytoplasm, from which long thin hair like parts arise. Each neuron has a single long part called the axon, and many small, short branched parts called dendrite.

An individual nerve cell is called neuron, it may be upto a metre long.



Neuron

Q. 3. *Give three features of cardiac muscles.*

Ans. **Feature of cardiac muscles**

(1) Heart muscles (cardiac muscles) are cylindrical, branched and uninucleated

(2) They are striated muscle fibres.

(3) They are involuntary muscles, cannot be controlled by us.

Q. 4. *What are the functions of areolar tissue?*

Ans. Areolar tissue are connective tissues found in animal. It is found between skin and muscles, around blood vessels and nerves in the bone marrow.

It fills the space inside the organs, supports internal organs and helps in the repair of tissues.

QUESTIONS FROM TEXTBOOK

Q. 1. *Define the term "tissue".*

Ans. Group of cells that are similar in structure and perform same functions is called a tissue.

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

Ans. The xylem is made up of vessels, trachieds, xylem fibres and xylem parenchyma.

Q. 3. *How are simple tissues different from complex tissues in plants?*

Ans. Simple Tissues: are made up of **one type of cells** which coordinate to perform a common function.

Complex Tissues: are made up of **more than one type of cells.** All these coordinate to perform a common function.

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

Ans. **Parenchyma:** The cells have thin cell walls made up of cellulose.

Collenchyma: The cells have cell walls thickened at the corners due to pectin deposition.

Sclerenchyma: Their walls are thickened due to lignin deposition.

Q. 5. *What are the functions of stomata?*

Ans. The outermost layer of the cell is called epidermis and is very porous. These pores are called stomata. These stomata help in **transpiration** and **exchange of gases.** In aquatic plants it is covered with waxy layer to protect it from water and in desert plants, the epidermis layer is thick to prevent loss of water.

Q. 6. *Diagrammatically show the difference between the three types of muscle fibres.*

Ans. **Striated muscles**

(1) They are connected to bones (Skelectal muscles)

(2) They are voluntary muscles

(3) The cells are long, cylinder with many nucleus and are unbranched.

Smooth muscles

(1) They are found in alimentary canals and lungs.

(2) They are involuntary muscles.

(3) They are spindle in shape and are involuntary and have single nucleus.

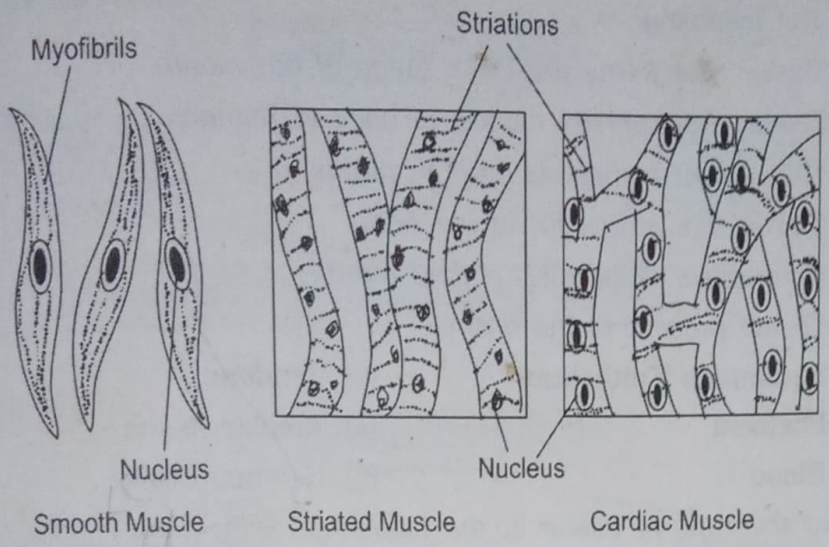
Cardiac muscles

(1) They are found in heart.

(2) They are in voluntary in action.

(3) They are branched and have one nucleus.

functions of stomata
→ Help in loss of water due to transpiration
→ Help in exchange of gases
→ Help in loss of water



Q. 7. *What is the specific function of the cardiac muscle?*

Ans. (1) Cardiac muscles cells are cylindrical, branched and uninucleated.

(2) They are involuntary muscles.

(3) They show rythamically contraction and relaxation throughout life.

(4) Their rythamic contraction and relaxation helps in pumping action of heart.

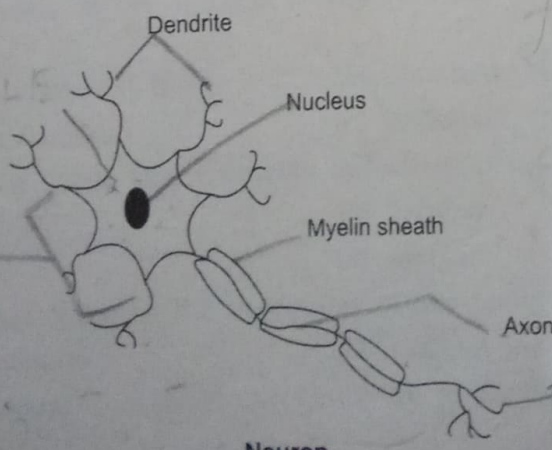
Q. 8. *Differentiate between striated, unstriated and cardiac muscles on the basis of their structure and site location in the body.*

Ans.

Character	Striated Muscles	Unstriated Muscles	Cardiac Muscles
1. Shape	Cells are long, cylinderal, nontaping and are unbranched.	Cells are long with tapering ends and are unbranched.	Cells are non-tapering and cylinderally in shape and are bra-nched.
2. Location in body	In hands, legs and skeletal muscles.	The wall of stomach, intenstine ureter and bronchi, etc.	In the heart.

Q. 9. *Draw a labelled diagram of neuron.*

Ans.



Neuron

Q. 10. *Name the following:*

(1) Tissue that forms the inner lining of our mouth.

(2) Tissue that connect muscle to bone in humans.

(3) Tissue that transports food in plants.

(4) Tissue that stores fat in our body.

(5) Connective tissue with a fluid matrix.

(6) Tissue present in the brain.

Ans. (1) Squamous Epithelium (2) Tendons

(3) Pheloem (4) Areolar tissue

(5) Blood (6) Nervous Tissue

Q. 11. *Identity the type of tissue in the following: Skin, bark of tree, bone, lining of kidney tubule, vascular bundle.*

Ans. (*a*) Skin—Striated Squamous Epithelium

(*b*) Bark of Tree—Cork protection Tissue

(*c*) Bone—Connective Tissue

(*d*) Lining of Kidney Tubule—Cubiodial Epithelium

(*e*) Vascular Bundle—Conducting Tissue

Q. 12. *Name the region in which parenchyma tissue is present?*

Ans. In the pith of the roots and stems when it contains chrogophyll, it is called chlorenchyma, found in green leaves. In aquatic plants, it contains cavities and help them to float.

Q. 13. *What is the role of epidermis in plants?*

Ans. Cells of epidermis form a continuous layer without inter-cellular spaces. It protects all the parts of plants.

Q. 14. *How does the cork act as a protective tissue?*

Ans. Cork acts as a protective tissue because its cells are dead and compactly arranged without intercellular spaces. They have deposition of suberin on the walls that make them impervious to gases and water.

(c), 11—(b), 12—(d), 13—(d), 14—(d).

II. VERY SHORT ANSWER TYPE QUESTIONS

Q. 1. *Name the tissue responsible for the movement of the body?*

Ans. Muscle Tissue and nervous tissue

Q. 2. *How does neuron look like?*

Ans. A neuron is the unit cell of nervous tissue. It looks like a thread like structure with cell body and axon.

Q. 3. *Name the types of simple tissues.*

Ans. Parenchyma Collenchyma Sclerenchyma

Q. 4. *Name the types of complex tissues.*

Ans. Xylem and phloem.

Q. 5. *Where is apical meristem found?*

Ans. It is present at the growing tips of stem and root and increase the length of the stem and roots.

Q. 6. *Which tissue make up the husk of coconut?*

Ans. Sclerenchyma.

Q. 7. *What are the constituents of phloem?*

Ans. Phloem constitutes the sieves tubes, companion cell, phloem parenchyma and phloem fibres.

Q. 8. *Define: Arenchyma.*

Ans. When the cells have airfilled in large cavities of cell, it is called arenchyma present in aquatic plants to help them in floating.

Q. 9. *What is the utility of tissues in multicellular organisms?*

Ans. It helps in growth, length, size, organisation of different organs and performs functions.

Q. 10. *Name the two types of tissues.*

Ans. Plant Tissues and Animal Tissues.

Q. 11. *Name the two types of Plant Tissue.*

Ans. Meristematic Tissue and Permanent Tissue.

Q. 12. *What is Differentiation?*

Ans. The process of taking up permanent shape, size and funtion by cells is called differentiation.

Q. 13. *Name the three types of meristamatic tissues.*

Ans. The three types are:

(1) Apical Tissue—tips of root and shoot

(2) Lateral Tissue—sides of stem.

(3) Intercalary Tissue—at nodes.

Q. 14. *Where is apical tissue found?*

Ans. Present at the tips of roots and stems.

Q. 15. *Tissues present at the lateral surface of the stem are called apical tissues. Put (T) if true and put (F) if false.*

Rewrite the answer if (F).

Ans. (F) Tissues present at the lateral surface of the stem are called lateral tissue.

Q. 16. *Which tissues are present at the nodes of the plants?*

Ans. Intercalary tissue.

Q. 17. *What the various types of blood cells?*

Ans. There are three types:

(1) RBC's.

(2) WBC's and

(3) Platelets.

Q. 18. *What are trachieds?*

Ans. They are elongated cells with tapering ends.

Q. 19. *What are guard cells?*

Ans. Each stomata is bounded by a pair of specialised epidermal cells called guard cells.

Q. 20. *Write (F) or (T)*

Ans. Epithelial tissue is the simplest tissue (T).

Q. 21. *What are the functions of Cubiodial Epithelium?*

Ans. It helps in absorption, excretion and secretion and provides mechanical support.