

NCERT SOLUTIONS

CLASS IX SCIENCE

CHAPTER 6- TISSUES

Very Short Answer Questions

1. Define tissue.

Answer

The tissue is defined as a group of cells which are similar in structure and work together to perform a particular function is known as tissue.

2. In multi-cellular organisms, what is the use of tissues?

Answer

The use of tissue in multi-cellular organisms is to provide structural and mechanical strength as well as to allow division of labour.

3. Mention the types of simple tissues.

Answer

The types of simple tissues are as follows:

- Parenchyma
- Collenchyma
- Sclerenchyma
- Aerenchyma

4. Where do we find apical meristem?

Answer

The place where we can find apical meristem is the tip of shoot or root of a plant.

5. tissues make the coconut husk.

Answer

Sclerenchymatous tissue

6. What is phloem made up of?

Answer

It is made up of 4 elements

- Sieve tube
- Companion cells
- Phloem fibres
- Phloem parenchyma

7. Which tissue is responsible for the movement of our body?

Answer

A Combination of two tissues is responsible for the movement of our body.

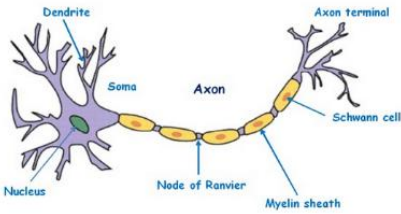
Namely,

- Muscular tissue
- Nervous tissue

8. What is the structure of a neuron?

Answer

A neuron has a cell body with a nucleus and cytoplasm. From that, long and thin hair like structure arise. Every neuron has one long part known as the axon, and many short and small branched structures known as dendrite. A single nerve cell is known as neuron and some of them may be even a metre long.



9. What is a cardiac muscle? Mention its features as well.

Answer

It is an extremely specialized tissue evolved to pump blood throughout the body.

Features:

- They are cylindrical in shape.
- They are branched and uninucleated.
- Striated muscle fibers.
- We cannot control them so they are involuntary.

10. What are areolar tissue's junctions?

Answer

Areolar tissues are found in animals. They are connective tissues. We can find them between skin and muscles. Also, we can find them around blood vessels and nerves. They are found in bone marrow. The space inside the organs is filled with these tissues. They support internal organs and help to repair tissues.

Short Answer Questions

1. Explain the term tissue.

Answer

A Tissue is defined as a group of cells which perform the same operation and are similar in size and shape (structure).

2. How many elements are needed to make up xylem tissue?

Answer

It requires 4 elements. Namely:

- Vessels
- Tracheids
- Xylem fibres
- Xylem parenchyma

3. In plants, what is the difference between simple tissues and complex tissues?

Answer

In the case of simple tissues, they are made up of a single type of cell which performs one common function. Whereas in the case of complex tissues, they are made up of more than one type of cell. They all coordinate to perform one single function.

4. How are parenchyma, collenchyma and sclerenchyma different from each other with respect to cell wall?

Answer

- Parenchyma: Thin cell walls which are made up of cellulose.
- Collenchyma: Thick cell walls at the corners because of pectin deposition.
- Sclerenchyma: Thick cell walls because of lignin deposition.

5. Mention the functions of stomata.

Answer

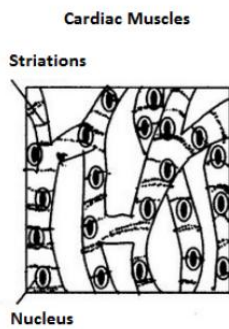
Cell's outer layer is known as epidermis and it has pores. These pores are known as stomata. It helps in exchange of gases and transpiration.

6. Give the difference between the types of muscle fibres diagrammatically.

Answer

➤ Cardiac muscles

1. They are present in the heart.
2. They are involuntary.
3. They have 1 nucleus.
4. They are branched.



➤ Smooth muscles

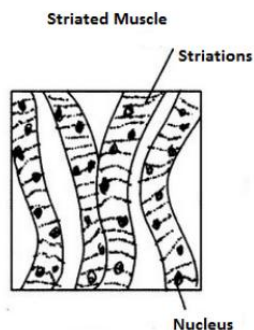
1. They are present in lungs and alimentary canal.
2. They are involuntary.
3. They have 1 nucleus.
4. They are spindle shaped.



➤ Striated muscles

1. Connected with bones
2. They are voluntary.
3. They are long and cylindrical.
4. They have many nuclei.

5. They are un-branched.



7. Mention the cardiac muscle's specific function.

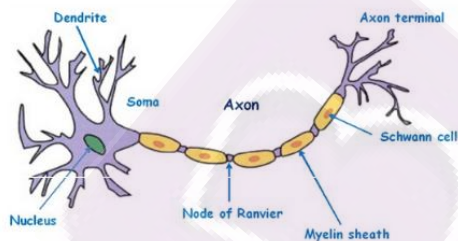
Answer

- They are cylindrical and branched.
- They are uninucleated.
- Involuntary muscles.
- They contract and relax throughout life in rhythm.

8. What is the difference between Striated, un-striated and cardiac muscles on the basis of their structure and location?

Character	Striated muscles	Un-striated muscles	Cardiac muscles
Shape	Long, cylindrical, non – tapering. They are un-branched.	Long and tapering. They are un – branched.	Cylindrical and non – tapering. They are branched.
Location in body	Hands, legs and skeletal muscles	Wall of stomach, intestine, ureter and bronchi	Heart
Dark and light bands	Present	Absent	Present but less prominent

9. Draw a diagram of neuron and also label.



10. Answer the following

- Name the tissue which forms the inner lining in our mouth.
- Name the connecting tissue between muscle and bone.
- Name the tissue in plants which transports foods.
- Name the tissue which stores fat in human body.
- Brain tissue.
- Connective tissue whose matrix is fluid Answer
- Squamous epithelium
- Tendons
- Phloem

- Areolar tissue
- Nervous tissue
- Blood

11. Name the type of tissue present in the following

- Skin
- Bark of tree
- Bone
- Lining of kidney tubule
- Vascular bundle

Answer

- Skin: Striated squamous epithelium
- Bark of tree: Protective tissue and cork
- Bone: Connective tissue
- Lining of kidney tubule: Cuboidal epithelium tissue
- Vascular bundle: Conducting tissue

12. Where is parenchyma tissue present?

Answer

It is present in the pith of stems and roots. It is called chlorenchyma when it contains chlorophyll. It is present in green leaves. In the case of aquatic plants, parenchyma is present which contains huge air cavities. That helps them in floating. Such parenchyma tissues are known as aerenchyma.

13. In plants, what is the function of epidermis?

Answer

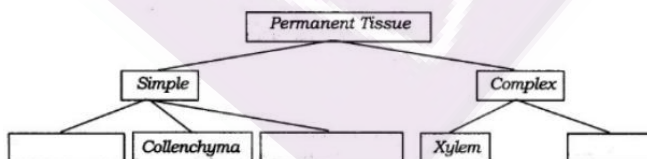
It forms a continuous layer which is without inter-cellular spaces. It provides protection.

14. How can the cork act as a protective tissue in plants?

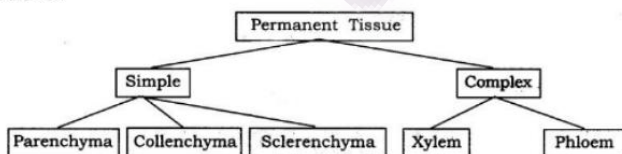
Answer

Cork cells are dead. They are arranged very closely so that there is no inter-cellular space. There is deposition of suberin on the walls which make them impervious to water and gases.

15. Complete the table.



Answer:



Multiple Choice Questions

- a) Cork cells are dead. They have a chemical in their walls which makes them impervious to water and gases. Which is that chemical?

i. Suberin

ii. Wax

iii. Cutin

iv. Lignin

b) Due to ____ tissue, there is flexibility in plants.

i. Parenchyma

ii. Chlorenchyma

iii. Collenchyma

iv. Sclerenchyma

c) Which tissue is present in ducts of salivary glands and in the lining of kidney tubules?

i. Squamous epithelium tissue

ii. Columnar epithelium tissue

iii. Glandular epithelium tissue

iv. Cuboidal epithelium tissue

d) The tissue connecting muscles to bones is ____.

i. Areolar

ii. Tendon

iii. Ligament

iv. Cartilage

e) Which tissue helps with the movement of our body?

i. Skeletal tissue

ii. Muscular tissue

iii. Nervous tissue

iv. All

f) Monocyte, neutrophil, basophil and eosinophil are types of ____.

i. White blood cells

ii. Compact bone

iii. Red blood cells

iv. Areolar tissues

g) To which of category of muscular tissues, do spindle shaped, un-branched and uni-nucleated cells belong to?

i. Smooth cells

ii. Cardiac cells

iii. Striated cells

iv. (i) and (iii) both

h) In ____, companion cells as well as sieve cells are present.

i. Cambium

ii. Xylem

iii. Cork

iv. Phloem

i) Due to ____, the size of stem increases in width.

i. Lateral meristem

ii. Intercalary meristem

iii. Apical meristem

iv. Primary meristem

j) Lymph and blood are ____ types of tissues.

i. Permanent

ii. Epithelial

iii. Muscular

iv. Connective

k) Bone and cartilage are examples of ____ type of tissue.

i. Epithelial

ii. Connective

iii. Muscular

iv. Meristematic

l) To which category of tissues do xylem and phloem belong to?

i. Complex

ii. Simple

iii. Epidermal

iv. Protective

m) Cells of ____ tissues are capable of dividing and re-dividing.

i. Meristematic

ii. Connective

iii. Complex

iv. Protective

n) ____ tissue helps in the absorption and secretion. It is present in the inner lining of the alimentary canal.

i. Columnar epithelium

ii. Cuboidal epithelium

iii. Ciliated epithelium

iv. Squamous epithelium

Answers

a) i

b) iii

c) iv

d) ii

e) iv

f) i

g) i

h) iv

i) i

j) iv

k) ii

l) i

m) i

n) i

Very Short Questions

1. Which tissue is responsible for the movement of our body?

Answer

Nervous tissue as well as muscle tissue

2. What is the structure of a neuron?

Answer

The unit cell or the building block of a nervous tissue is a neuron. It has a thread-like structure with axon and cell body.

3. Mention the types of simple and complex tissues.

Answer

Simple:

- Sclerenchyma
- Parenchyma
- Collenchyma

Complex:

- Phloem
- Xylem

4. Apical meristem is found in ____.

Answer

It is found in the growing tips of root and stem. The length of root and stem is increased due to the presence of Apical meristem.

5. Which tissue is present in the husk of a coconut?

Answer

Sclerenchyma

6. Name the elements of phloem.

Answer

- Sieve tubes
- Phloem parenchyma
- Companion cells
- Phloem fibres

7. What do you mean by aerenchyma?

Answer

Cells with large air-filled cavities of parenchyma are known as aerenchyma. It helps aquatic animals to float.

8. What are the major functions of tissues in multi-cellular organisms?

Answer

It helps organisms in growth. It also helps in performance and organization of various organs.

9. What are the two types of tissues?

9. What are the two types of tissues?

Answer

- Animal tissues
- Plant tissues

10. Mention the two types of plant tissues.

Answer

- Permanent tissue
- Meristematic tissue

11. Define differentiation.

Answer

Differentiation is defined as the process in which cells take up permanent size, shape and function.

12. Give the types of meristematic tissues.

Answer

- Intercalary tissue – nodes
- Apical tissue – tips of shoot and root
- Lateral tissue – stem sides

13. Where do you think apical tissues are found?

Answer

Tips of stems and roots

14. Apical tissues are present at the lateral surface of the stem. Is the above statement true? If not, why?

Answer

False

Lateral tissues are present at the lateral surface.

15. Name the tissues which are present in the plants at the nodes.

Answer

Intercalary tissue

16. Mention the different types of blood cells Answer

- WBCs
- RBCs
- Platelets

17. Define tracheids.

Answer

Tracheids have tapering ends and are basically elongated cells.

18. Define guard cells

Answer

Guard cells are kidney – shaped epidermal cells and a pair of these cells bound each stomata.

19. True or false The simplest tissue is epithelial tissue.

Answer

True

20. Mention the functions of Cuboidal epithelium

Answer

- Absorption
- Excretion
- Secretion
- Mechanical support

Short Answer Question

1. Differentiate between bone and cartilage Answer Bone Cartilage

Bone	Cartilage
Porous	Non – porous
Hard and non – flexible	Flexible and not very hard
Blood vessels present	Blood vessels absent
Matrix is made up of mineral and protein salts.	Matrix is made up of proteins.

2. Mention the functions of bone.

Answer

- Provides skeletal support
- Provides shape to body
- Protects the essential organs
- Anchors muscles

3. Mention the functions of cartilage.

Answer

- Support to the body
- Flexibility
- At joints, smoothen surface

4. Complete the sentences.

1. ____ conducts minerals and water.
2. ____ conducts food in higher plants.
3. Blood is a ____ type of tissue.
4. Bone has ____ cells.
5. Cartilage has ____ cells.
6. The connective tissue where fibres are not present is ____

Answers

1. Xylem
2. Phloem
3. Connective
4. Osteocyte
5. Chondrocyte
6. Blood

5. Mention the functions of the areolar tissue.

Answer

- Helps to repair tissues after any injury.
- Fixes skin of underlying muscles.
- Helps in combating outside toxins.

6. Differentiate between phloem and xylem.

Answer

Phloem	Xylem
Conducts food	Conducts minerals and water
Bidirectional movement	Unidirectional movement (upwards)
It is comprised of mostly living elements	It is comprised of mostly dead elements
Doesn't provide mechanical support	Provides mechanical support
Its elements are sieve tubes, phloem parenchyma, companion cells, and intermediary cells.	Its elements are tracheids, xylem sclerenchyma, xylem parenchyma, vessel elements.

7. Define fibres.

Answer

Fibres are those which are made up of narrow, very long and thick cells.

8. Name the following tissues.

- a) Which tissue covers the external surface in animals?
- b) Which tissue stores fat in animals?
- c) Which tissue joins bone to bone?
- d) Which tissue divides and re-divides and is responsible for growth in plants?

Answer

- a) Epithelial tissue
- b) Adipose tissue
- c) Ligament
- d) Meristematic tissue

9. Define stomata.

Answer

They are small holes or pores on the surface of leaves which help in exchange of gases and also in transpiration.

10. Epidermal tissue does not have intercellular space. Why?

Answer

This tissue forms a protective layer for plants and helps to protect the internal parts of plants. It protects the plant from loss of water, attack by parasitic fungi and mechanical injury.

11. Name and mention the function of each xylem cell

Answer

Xylem consists of the following:

- Xylem parenchyma
- Xylem fibres
- Vessels
- Tracheids Functions of xylem are as follows:
- Xylem parenchyma – It stores food. It also helps in sideways flow of water.
- Xylem fibres – They are supportive
- Tracheids and vessels – They help in transportation of minerals and water.

12. What are the functions of stratified squamous epithelium? Also, mention its location.

Answer

They are found in the skin. They are present in layers to prevent wear and tear.

13. Differentiate between tendon and ligament.

Answer

Tendon	Ligament
Strong and flexible	Elastic and flexible
Connects bone to muscles	Connects bone to bone

Tendon Ligament Strong and flexible Elastic and flexible Connects bone to muscles Connects bone to bone

14. Differentiate between striated muscles and un – striated muscles.

Answer

Striated muscles	Un – striated muscles
Voluntary muscles	Involuntary muscles
Shows alternate light and dark bands	Such bands are not present
Skeletal muscles	Smooth muscles
They are cylindrical	They are tapering
They are multinucleated	They are uninucleated

Striated muscles Un – striated muscles Voluntary muscles Involuntary muscles Shows alternate light and dark bands Such bands are not present bands Skeletal muscles Smooth muscles They are cylindrical They are tapering They are multinucleated They are uninucleated

15. Differentiate between blood and bone.

Answer

Blood	Bone
It is a liquid tissue	It is a hard tissue
Helps to transport substances	Helps in the movement and support of our body
It has RBC, WBC, plasma and blood platelets.	It has osteocytes

16. What are the different types of tissues which are present in animals?

Answer

- Nervous tissue: It consists of nerve cells and they are present in nervous system.
- Muscular tissue: It is made up of muscles and they help in movement of our body.
- Epithelial tissue: They are found in the inner and outer lining of our body.
- Connective tissue: They connect various organs of our body.

17. Blood is called the connective tissue. Give reason.

Answer

Blood is made up of cells and plasma. Plasma is a fluid. Red blood cells, white blood cells and platelets cells are also present in blood. All these cells are connected because of plasma. Blood also transports water and food to various parts of our body and connects them.

18. Name the types of muscle tissues and also mention the functions of these tissues.

Answer

There are three types of muscle tissues.

- Smooth muscle
- Striated muscle
- Cardiac muscle

Functions

- Smooth muscle Involuntary muscle, controls the flow of food in the alimentary canal, relaxation and contraction of blood vessels. They are present in the uterus, iris, etc.
- Striated muscle They have alternate dark and light bands. They are found in skeletal tissues. They are involuntary muscles. They help in the movement of bones and body.
- Cardiac muscle They are found in the heart. They help in the rhythmic contraction and relaxation of our heart throughout our life.


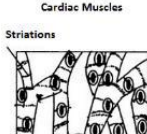
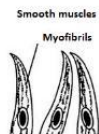
19. Differentiate between collenchyma, parenchyma and sclerenchyma.

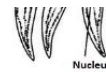
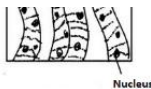
Answer

Collenchyma	Parenchyma	Sclerenchyma
Cells are living	Cells are living	Cells are dead
They are elongated.	They are spherical, oval or polygonal	They are narrow and long.
They are thick at corners.	They are thin walled.	They have a thick wall because of lignin deposition.
They have very less inter-cellular space	They have large inter – cellular space.	They do not have inter – cellular space.

20. Differentiate between striated muscle, cardiac muscle and smooth muscle.

Answer

Striated muscle	Cardiac muscle	Smooth muscle
Cells are cylindrical, long and un – branched.	Cells are cylindrical and branched.	Cells are long with pointed ends. They are un – branched.
Cell is multinucleated.	Cells are uninucleated.	Cells are uninucleated.
Cells have alternate dark and light bands.	Cells have alternate light and dark bands.	Cells do not have alternate light and dark bands.
Voluntarily controlled.	Involuntarily controlled.	Involuntarily controlled.
Attached to bones.	Present in the wall of our heart.	Found in stomach and blood vessels.
Contracts quickly. It cannot remain contracted for a longer time, so gets tired.	Contracts quickly rhythmically so do not get tired.	Contracts slowly. It can remain contracted for a longer time, so do not get tired.
<p>Striated Muscle</p> 	<p>Cardiac Muscles</p> 	<p>Smooth muscles</p> 

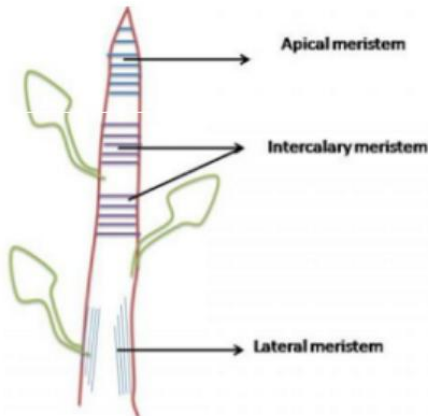


21. What are the different types of meristematic tissue? Also, mention their functions. Draw a diagram of the tissue to show its location.

Answer

There are three types of meristematic tissues namely:

- Apical meristem: Growth in length
- Lateral meristem: Growth in breadth or thickness
- Intercalary meristem: Growth in inter – nodes



22. Explain the structure of a nervous tissue with details about its location and function.

Answer

Structure:

It consists of nerve cells joined end to end. A nerve cell has a cell body with cytoplasm and nucleus. From that, long and thin hair like structure arise. Every neuron has one long part known as the axon, and many short and small branched structures known as dendrite. A single nerve cell is known as a neuron and sometimes may even be a metre long.

Location:

Nervous tissue is found in spinal cord, brain and nerves.

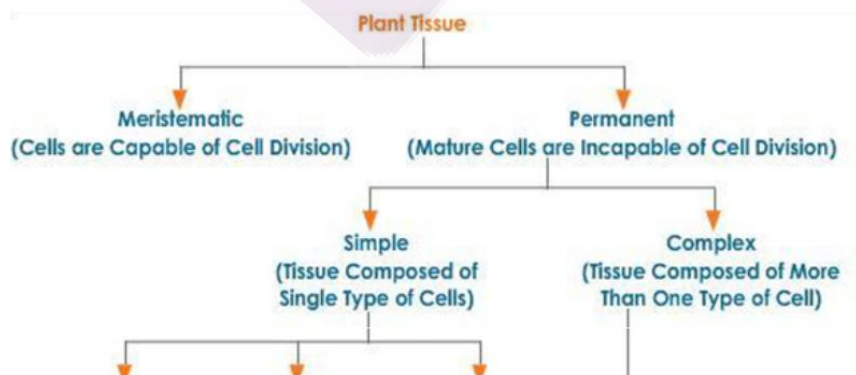
Function:

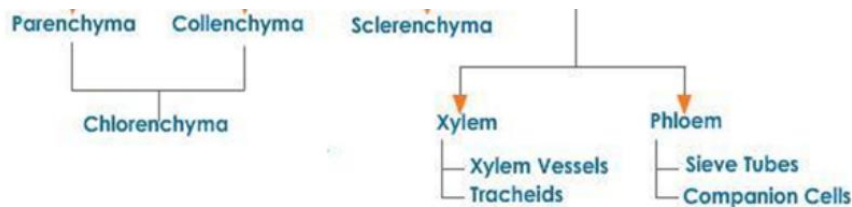
Nervous tissue is the basic element of our nervous system. These are specialized cells that does the function of exchanging information. Nervous tissue transmits and receives stimuli from one organ to another organ in the body. These cells allow moving muscles and react to stimuli.

23. Draw the flow chart of a plant tissue and an animal tissue.

Answer

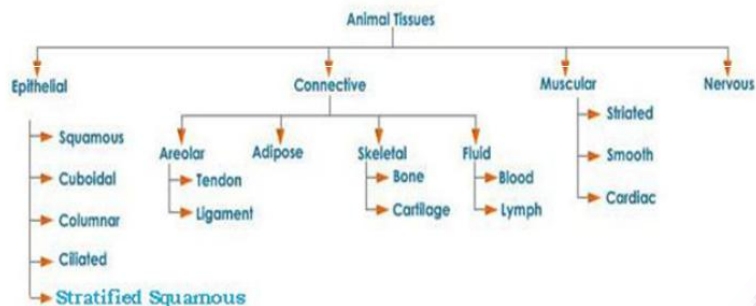
➤ Plant tissue





➤ Animal tissue

Detailed Classification of Animal Tissues



24. Differentiate between a plant cell and an animal cell.

Answer

Plant cell	Animal cell
It is larger in size.	Comparatively smaller in size.
It has a plasma membrane and a cellulose cell wall.	It has only plasma membrane.
Shape cannot be change.	Shape can be changed.
Chloroplast is present.	Chloroplast is absent.
Nucleus lies on one side.	Nucleus is in the centre.
Rarely lysosomes are present.	Lysosomes are always present.
Food is stored in the form of starch.	Food is stored in the form of glycogen.

Long Answer Questions

1. Explain plant tissue in detail.

Answer

Plant tissue is mainly divided into two categories.

- Meristematic tissue
- Permanent tissue

Meristematic tissue:

The cells divide very fast. It helps in the growth of the plants. The shape of the cell is oval, round and polygonal. There is no inter – cellular space.

There are three types of meristematic tissue:

- Apical meristem: Growth in length
- Lateral meristem: Growth in breadth or thickness
- Intercalary meristem: Growth in inter – nodes

Permanent tissue: When meristematic tissue stops dividing and gets mature, then it forms permanent tissue.

There are two types of permanent tissue:

- Simple tissue
- Complex tissue Simple Tissue They are same in structure and perform the same function.

There are three types of simple tissue:

- Parenchyma: It is present in soft parts.
- Collenchyma: It provides mechanical strength to plants and is found in stalks.
- Sclerenchyma: It provides support as well as flexibility to plants.

Complex tissue

They are different in structure but together, perform the same function.

There are two types of complex tissue:

- Xylem: It transports water from root to shoot in plants. Its elements are tracheids, xylem sclerenchyma, xylem parenchyma, vessel elements.
- Phloem: Transports food to all parts of the plant. Its elements are sieve tubes, phloem parenchyma, companion cells and intermediary cells.

2. Explain connective tissue along with its types.

Answer

Connective tissue consists of various types of cells. They all perform the same function. There are three types of connective tissue.

- Proper connective tissue
- Fluid tissue
- Skeletal tissue Proper connective tissue is comprised of four types:
 - Areolar and ligament connective tissue: It is present between muscles and skin and in the bone marrow. It is also present around nerves and blood vessels. They fill the space inside the organs. It helps to repair tissues. They also provide strength to internal organs.
 - Adipose tissue: It stores fat. It is found below the skin and also between internal organs. These tissues are packed with fat globules. Due to this fat storage, it behaves as an insulator.
 - Tendon: It is fibrous, strong and flexible. It joins muscles with bone.
 - Ligament: It is elastic and strong. It joins bone with bone.

Fluid tissue consists of:

- Blood: It is a liquid tissue called plasma. It helps to transport substances like gases, hormones, digested food and waste material. It has RBC, WBC, plasma and blood platelets.
- Lymph: It transports digested fat and white blood cells in plasma.

Skeletal tissue is made up of:

- Bone: It is a hard tissue. It helps in the movement and support of our body. It is a non – flexible tissue.
- Cartilage: It smoothens the bone surface at joints. It is found in our ear, nose, trachea and larynx.

3. Explain epidermis in plants.

Answer

It forms the outermost layer of the plant. It is comprised of a single cell layer. This tissue forms a protective layer for plants and that helps to protect the internal parts of plants. It helps in protection against loss of water, attack by parasitic fungi and mechanical injury.

Epidermis has small pores known as stomata. They are small holes or pores on the surface of leaves which help in exchange of gases and also in transpiration.

Epidermis has long parts like hair that provide greater surface area for water absorption in roots. In plants found in deserts, epidermis consists of a thick waxy coating called cutin which makes the outer layer water resistant.

4. Describe complex tissue in plants.

Answer

Generally, complex tissues consist of more than one type of cell. They are different in structure but together perform the same function.

There are two types of complex tissues:

They both are conductive tissues and form the vascular bundle.

- Xylem: It transports water from root to shoot in plants. The movement is only in one direction that is, from roots to shoot. It provides mechanical support to the plant. It has mostly dead elements. Its elements are tracheids, xylem sclerenchyma, xylem parenchyma, vessel elements.
- Phloem: Conduct food to all parts of the plant. The movement of phloem is bidirectional that is, movement in both the directions is possible. Its elements are mostly living. Its elements are sieve tubes, phloem parenchyma, companion cells and intermediary cells.

Activity

1. Take two jars of glass filled with water. Take 2 onion bulbs. Place one on each jar.

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Length	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Jar 1	2.5 cm	3 cm	3.2 cm	3.5 cm	4 cm	4.5 cm	5 cm
Jar 2	2.5cm	3 cm	3.2 cm	3.5 cm	2.5 cm	2.5 cm	2.5 cm

Observe the roots in both the bulbs for a few days.

On day 1, 2 and 3 measure the lengths of the roots.

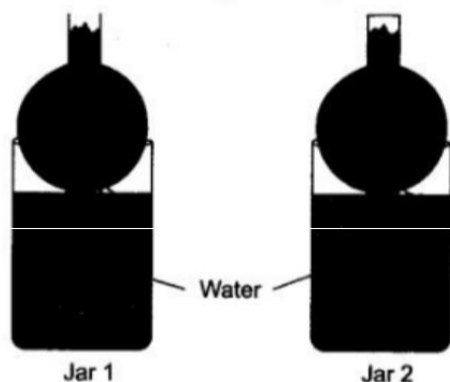
Cut root tips by approx 1 cm on day 4 in jar 2. After that, observe the growth of roots and measure their length every day in both the jars.

From the observation, answer the questions.

a) Which onion has the longest root? Give the reason?

b) The roots continue growing even after cutting the tips of plant. True or false? Explain with reason.

Answer



a) Jar 1 has the longest root because roots continue to grow as the root tips are very intact.

b) False, in jar 2 when onion tips were cut it stopped growing. The reason behind that is the root tip contains meristematic tissues which are responsible for the growth of plant but those tissues were removed with the tip so it stopped growing.

2. Take a plant. Cut the stem into very thin sections or slices. Stain slices with safranin and put one nicely cut slice on a slide and put a drop of glycerine on the slide.

Cover it with cover – slip. Observe under microscope. Observe different types of cells and also see their arrangement.

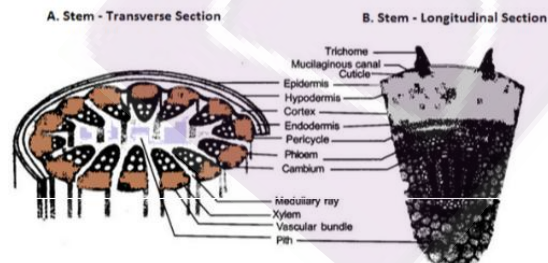
Answer the questions from your observation.

a) Are the structures of all cells similar?

b) How many types of cells can be observed?

c) Why are there so many types of cells? Give reason.

Answer



a) No, all cells are different. They have different sizes and shapes.

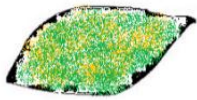
b) There are at least 10 different types of cells present in the slide.

c) There are many types of cells in plants with different size and shape. They all have specific roles to play in the overall growth of the plant.

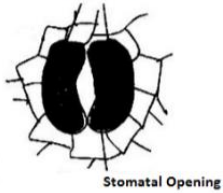
3. Pluck a leaf of Rheo. Break it with pressure after stretching. Stretch it gently while breaking so that some skin or peel comes out from the cut surface. Remove this skin. Put it in a Petri dish which is filled with water. Add safranin. Transfer it on a slide after waiting for few minutes. Place a cover – slip it on gently.

Answer

Stomata



Guard Cells



We can see epidermal cells with stomata pores under slide as shown in the figure.

When we see stomata pores under a microscope, we can see stomata pores and guard cells as shown in the figure given below.

Value based Questions

1. Students completed a project in which they had to find botanical names of the trees in the campus. They carved the name of the plants on a metal plate and fixed it on the trunk of the respective trees. Shreyash was worried that while fixing the plate, many cells are bound to get damaged. Then his teacher explained him that the outer layer of the trunk is not living, in fact nothing will happen to the trees.

- On the outer layer, which type of cells are present on the bark of a tree?
- Cork behaves as a protective tissue. How?
- What moral values are seen in the students' behavior from the incident above?

Answer

- The outer layer of the bark or trunk of the tree has dead cells which behave as a protective layer for trees.
- Cork behaves as a protective tissue because it has dead cells and they do not have any inter – cellular space. They are closely packed. Cell walls have depositions of suberin.
- The students show team effort, co – operation and care for nature.

2. There was a paralytic patient who could not walk. Family members took utmost care of the patient.

- Which tissues are responsible for the movement of the body?
- Which tissues are present in spine and brain?

Answer

- Muscular tissues and nervous tissues are responsible for the movement of the body.
- Nervous tissues are present in spine and brain.