III. Short Answer Type Questions

Question 1. Give four differences between bone and cartilage.
Answer:

Bone	Cartilage
1. Hard and non-flexible 2. Porous 3. Blood vessels present 4. Matrix made up of protein and mineral salts.	1. Flexible not very hard 2. Non-porous 3. Blood vessels absent 4. Matrix made up of proteins.

Question 2. Give the functions of bone.
Answer: The functions of bone are:
(i) It provides shape to the body.
(ii) It provides skeletal support to the body.
(iii) It anchors the muscles.
(iv) It protects the vital body organs like brain, lungs, etc.

Question 3. Give the functions of cartilage. .
Answer: (i) It provides support and flexibility to the body parts.
(ii) It smoothens surface at joints.

Question 4. Fill in the blanks:
(i) Water and minerals are conducted by .....
(ii) In higher plants food is conducted by .....
(iii) Blood is a ..... tissue.
(iv) Bone consists of.....cells.
(v) Cartilage consists of.....cells.
(vi) Fibres are absent in.....type of connective tissue.
Answer:
(i) Xylem
(ii) Phloem
(iii) Connective
(iv) Osteocyte
(v) Chondrocyte
(vi) Blood

Question 5. What are the functions of areolar tissue?
Answer: Functions are:
(i) It helps in repair of tissues after an injury.
(ii) It also helps in combating foreign toxins.
(iii) It fixes skin to underlying muscles.

Question 6. Give difference between xylem and phloem.
Answer:

Xylem	Phloem
1. It consists of mainly dead elements. 2. It conducts water and minerals. 3. It provides mechanical strength to the plant.	1. It consists of mainly living elements. 2. It conducts food. 3. It does not provide mechanical strength to the plant.

Question 7. What are fibres?
Answer: Fibres consist of very long, narrow and thick cells. Example, jute fibre.

Question 8. Name the tissues for the following:
(a) Stores fat in animal body.
(b) Divides and re-divides to grow in plants.

(c) Tissue that joins hone to hone.
(d) Covers the external surface of animal body.
Answer: (a) Adipose tissue
(b) Meristematic tissue .
(c) Ligament
(d) Epithelial tissue.

Question 9. What is stomata?
Answer: Stomata are small pores present on the surface of a leaf which helps in the exchange of gases and in transpiration.

Question 10. Why does epidermal tissue have no intercellular space?
Answer: The epidermal (layer) tissue forms a protective outer covering for the plants and it protects the internal parts of the plant. It aid in the protection against loss of water, mechanical injury and invasion by parasitic fungi. For this protective role to play the continuation of cells is necessary, hence it does not have intercellular space.

Question 11. Name and give the function of each cell of xylem:.
Answer: Xylem consists of tracheids, vessels, xylem parenchyma and xylem fibres.

1. Tracheids and vessels—Allows the transport of water and minerals.
2. Xylem parenchyma—Stores food and helps in the sideways conduction of water.
3. Xylem fibres—Are supportive in function.

Question 12. What is the function and location of stratified squamous epithelium?
Answer: Stratified squamous epithelium is present in the skin. The layers of cells are arranged to prevent wear and tear.

Question 13. Give difference between ligament and tendon.
Answer:

Ligament	Tendon
1. Ligament helps in connecting bone to bone. 2. It is elastic and flexible.	1. Tendon helps in connecting bone to muscles. 2. It is strong and non-flexible.

Question 14. Give difference between striated muscles and unstriated muscles.
Answer:

Striated Muscles	Unstriated Muscles
1. They are skeletal muscles. 2. They show alternate light and dark bands. 3. Voluntary muscles. 4. Cells are cylindrical, multinucleated	1. They are smooth muscles. 2. These muscles do not show such bands. 3. Involuntary muscle. 4. Cells are tapering, uninucleated.

Question 15. State the difference between bone and blood.
Answer:

Bone	Blood
1. It is a hard tissue. 2. It consists of osteocytes. 3. It helps in movement and support of the body.	1. It is a liquid tissue. 2. It consists of plasma, RBC, WBC and blood platelets. 3. It helps in the transport of substances.

Question 16. Name all different types of tissues present in animal.
Answer: There are four main types of tissues present in animal. '
(a) Epithelial tissue present on the outer and inner lining of the body.
(b) Muscular tissue are made up of muscles, help in movement.
(c) Connective tissue connects the different organs in the body.
(d) Nervous tissue consists of nerve cells and are present in the

nervous system.

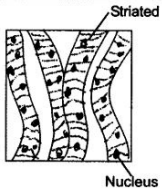
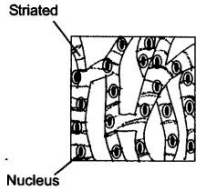
Question 17. Why is blood called connective tissue?
Answer: The blood is composed of cells and plasma. Plasma is a fluid and cells like red blood cells, white blood cells and platelets are present in it. All these cells are connected due to plasma. It also transports food, water to different parts of the body and connects them.

Question 18. Name three types of muscle tissues and give function of each.
Answer: Three types of muscle tissues are:
(a) Striated muscle (b) Smooth muscle (c) Cardiac muscle
(a) Striated muscle: These muscles show alternate light and dark bands or striations. They are involuntary and present in skeletal tissues,, help in movement of body and bones.
(b) Smooth muscle: These are involuntary muscles, control the movement of food in alimentary canal, contraction and relaxation of blood vessels. Present in iris, uterus etc.
(c) Cardiac muscle: These muscles are present in heart, help in the rhythmic contraction and relaxation throughout the life.

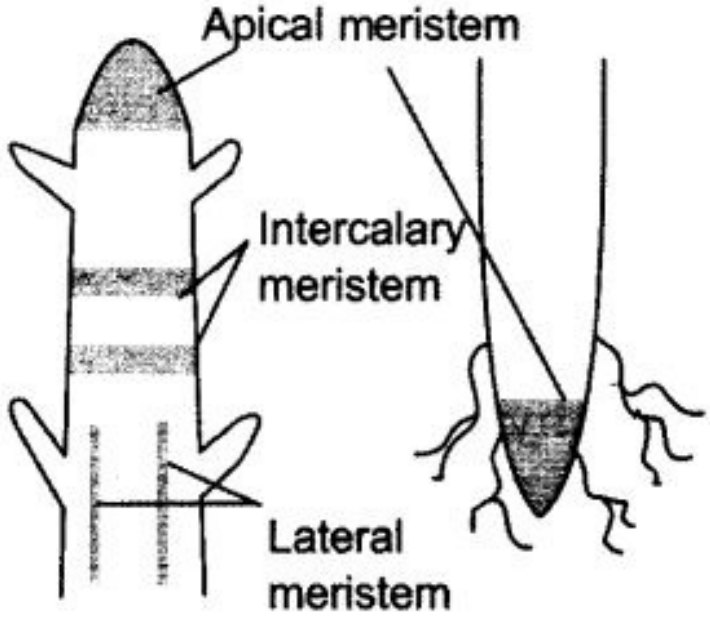
Question 19. State the difference between simple tissues of plants.
Answer: The simple tissues of plants are:
(i) Parenchyma (v) Collenchyma (iii) Sclerenchyma

Parenchyma	Collenchyma	Sclerenchyma
1. The cells are living and thin walled. 2. The cells are oval, spherical or polygonal in shape. 3. There is large, intercellular space between the cells.	The cells are living and thick at corners. The cells are elongated and thickened at corners. There is very little intercellular space.	The cells are dead and thick walled due to lignin deposition. The cells are long and narrow. There is no intercellular space.

Question 20. With the help of diagram show the difference between striated muscle fibre, smooth muscle fibre and cardiac muscle fibre.
Answer:

Striated Muscle	Smooth Muscle	Cardiac Muscle
		
1. The cells are long, cylindrical, unbranched and multinucleated. 2. The cells show alternate light and dark bands.	The cells are long with pointed ends, unbranched, and uninucleated. The cells do not have such light and dark bands.	The cells are cylindrical, branched and uninucleated. The cells show alternate dark and light bands.
3. The muscles are voluntary	The muscles are involuntary.	The muscles are involuntary.

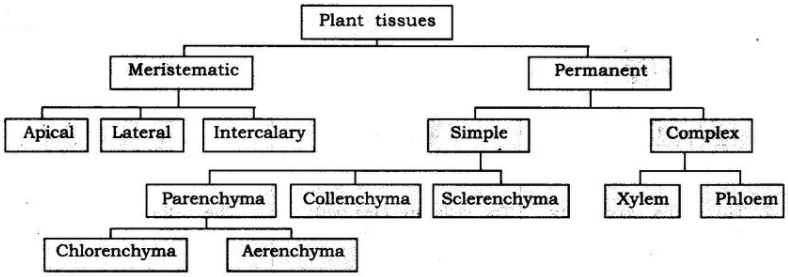
Question 21. Name different types of meristematic tissue and draw diagram to show their location.
Answer: The 3 different types of meristematic tissue are:
(a) Apical meristem—Function: growth in length.
(b) Lateral meristem—Function: growth in thickness.
(c) Intercalary meristem—Function: growth in intemodes.



Location of meristematic tissue

Question 22. Explain the structure, function and location of nervous tissue.
Answer: Structure: Nervous tissue consists of cells called nerve cells joined end to end (neurons). A neuron (nerve cell) consists of a cell body with nucleus and cytoplasm. From these cell body a long thin hair-like parts arise called axon and many short branched parts called dendrites.
Location: Nervous tissue are present in brain, spinal cord and nerves. Function: Nervous tissue receives the stimuli and transmit the stimulus rapidly from one place to another within the body. The nerve impulse allows us to move our muscles and respond to any stimuli.

Question 23. Give the flow chart of plant tissues.
Answer:



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