CBSE Test Paper 01

Chapter 06 Tissues

1. Match the following with correct response. **(1)**

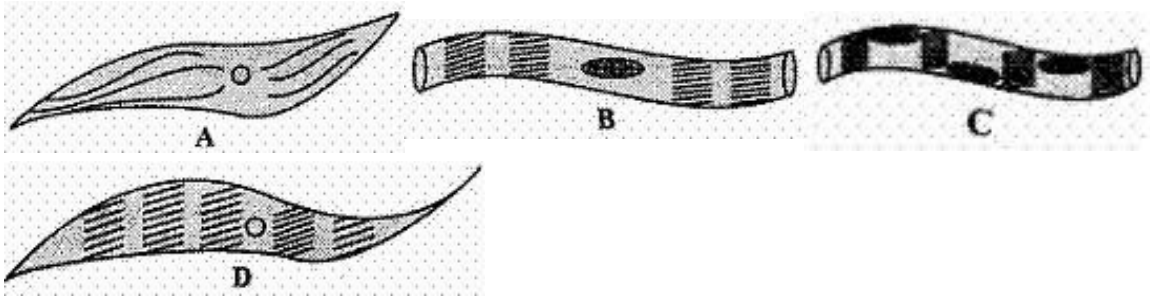
Column A	**Column B**
(1) RBC	(A) Alternate light & dark bands
(2) Striated muscles	(B) Neuron
(3) Smooth muscles	(C) Uninucleate
(4) Axon	(D) Transport oxygen

   a. 1-C, 2-B, 3-D, 4-A
   b. 1-B, 2-D, 3-A, 4-C
   c. 1-D, 2-A, 3-C, 4-B
   d. 1-A, 2-C, 3-B, 4-D

2. Which tissue has chloroplast in cells? **(1)**

   a. Sclernehyma
   b. Aerenchyma
   c. Parenchyma
   d. Chlorenchyma

3. Out of the following, the correct diagram of the stripped muscle fibre, is the diagram labelled as: **(1)**



   a. D
   b. B
   c. C

d. A

4. Which is not a function of epidermis? **(1)**

a. Protection from adverse condition
b. Transpiration
c. Conduction of water
d. Gaseous exchange

5. Which one of the following is the correct definition of the tissues? **(1)**

a. Group of dissimilar cells which perform different functions.
b. Group of similar cells which perform specific functions
c. Group of similar cells which perform similar functions.
d. Group of dissimilar cells which perform similar function

6. What are the functions of tendon and ligament? **(1)**

7. Which cells are responsible for contraction and relaxation movements? **(1)**

8. What is a tissue? **(1)**

9. Which type of tissue is most abundant in animals? **(1)**

10. Which type of WBC is most abundant in lymph? **(1)**

11. What is the utility of tissues in multi-cellular organisms? **(3)**

12. Discuss the cell arrangement which supports the fact that epidermis is a protective tissue. **(3)**

13. Differentiate between striated, unstriated and cardiac muscles on the basis of their structure and site/location in the body. **(3)**

14. Write the differences between xylem and phloem. **(3)**

15. Diagrammatically show the difference amongst three types of muscle fibres. **(5)**

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Answers

1. c. 1-D, 2-A, 3-C, 4-B

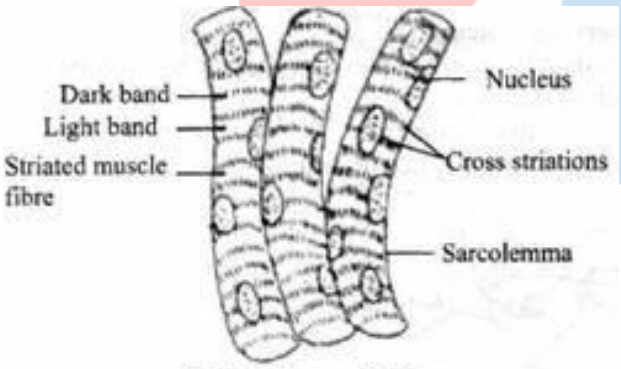
   Explanation: The primary function of red blood cells is to transport oxygen from the lungs to the cells of the body. Striated muscles contain alternate light and dark bands.Smooth muscles is composed of uninucleate cells. An axon is a long, slender projection of a nerve cell, or neuron.

2. d. Chlorenchyma

   Explanation: Chlorenchyma is a parenchyma tissue, consist of chloroplasts and perform photosynthesis found in the mesophyll of leaves

3. c. C

   Explanation: The cells of stripped muscle fibres are cylindrical, unbranched and multinucleate.



Striated muscle fibre

4. c. Conduction of water

   Explanation: Skin has three layers: The epidermis, the outermost layer of skin, provides a waterproof barrier and creates our skin tone. The dermis, beneath the epidermis, contains tough connective tissue, hair follicles, and sweat glands. The deeper subcutaneous tissue (hypodermis) is made of fat and connective tissue

5. b. Group of similar cells which perform specific functions

   Explanation: a tissue is a group of similar cells from the same origin that

together carry out a specific function.

6. Tendon - Tendon is a type of connective tissue that connects muscles to bones (another connective tissue that forms the framework to support the body of animals). It is a tough and non–elastic tissue. It provides limited flexibility.
   Ligament - Ligament is a type of connective tissue that connects two bones in animals. It is considerably strong and a very elastic tissue. It contains very little matrix.

7. Muscle cells are responsible for contraction and relaxation movements. Muscles contain special proteins called contactile proteins, which contract and relax to cause movement.

8. Tissue is a group of related cells that have a common origin and perform a common function.
9. Connective tissue is most abundant in animals.

10. Lymphocytes are most abundant in lymph.

11. In living organisms, cells are grouped together (to form tissues) to perform specific functions. There is a division of labour in multi-cellular organisms i.e. different parts of the body of a multi-cellular organism perform specific functions. All these different functions would not be possible without the formation of tissues in multi-cellular organisms.
    For example: The brain controls all other parts of the body; the heart pumps blood (specific function) to all parts of the body; the kidneys remove waste materials (specific function) from the body; the sensory organs collect information from external sources (specific function) for sensory perception; muscle cells in our body form the muscle tissues that bring about body movements (specific function).

12. Epidermis is the outermost covering of cells in plants. It is usually made up of a single layer of cells. On aerial parts of a plant epidermis cell often secrete a waxy, water-resistant layer on their outer surface to prevent loss of water from plant. The cells of epidermis are present in a continuous layer without intercellular spaces. Small pores are present on the epidermis of leaf. These pores are called as stomata, which help in gaseous exchange and transpiration. As the plant grows older, a strip of secondary meristem replaces the epidermis of stem and forms a thick cork.

13.

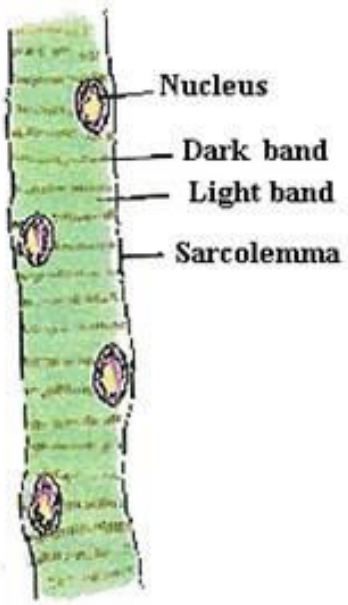
	Striated muscles	Unstriated muscles	Cardiac muscles
Internal Structure of muscles	They show alternate light and dark bands (striations) when they are stained appropriately.	They do not show any light and dark bands (striations) when they are stained.	They show striations when they are stained.
Location of muscles	They are responsible for bringing about voluntary movements (skeletal muscles of the limbs)	They are involuntary in action. E.g. Walls of tubular organs like ureters, alimentary canal, bronchi of the lungs, blood vessels, etc.	They are involuntary in their function (rhythmic contraction and relaxation of heart)
Structure of cells	Their cells are elongated, cylindrical and unbranched.	Their cells are long but spindle-shaped and unbranched.	Heart muscle cells are cylindrical and branched.
Number of nuclei	The cells are multinucleate (having many nuclei).	The cells are uninucleate.	The cells are uninucleate.

14.

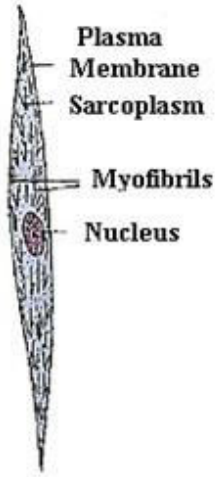
Xylem	Phloem
1. Xylem consists of tracheids, vessels, xylem parenchyma and xylem fibres.	1. Phloem is made up of sieve tubes, companion cells, phloem fibres and the phloem parenchyma.
2. Xylem mainly consists of dead cells (except the xylem parenchyma).	2. Phloem mainly consists of living cells (except phloem fibres).

3. It conducts water and minerals from roots to aerial parts of the plant.	3. It translocates food prepared by the plant from the leaves to storage organs and growing parts of the body.

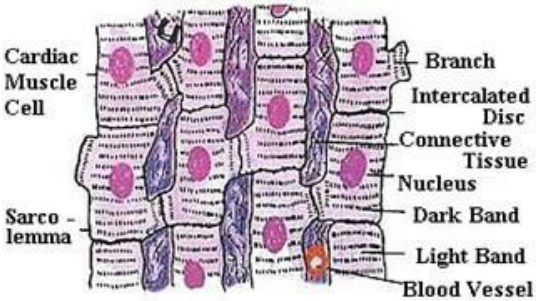
15.



Striated muscle fibre



Smooth muscle fibre



Cardiac muscle fibres