**CBSE Test Paper 04**

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

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

| **Column A** | **Column B** |
|---|---|
| (1) Root tip | (A) Fluid connective tissue |
| (2) Cell | (B) Consist of meristematic tissue |
| (3) Blood | (C) Grow & Reproduce |
| (4) Living organisms | (D) Structural & functional unit of life |

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

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

| **Column A** | **Column B** |
|---|---|
| (1) Meristematic tissue | (A) Outer surface of plants |
| (2) Epidermal tissue | (B) Conduct message |
| (3) Connective tissue | (C) Blood and bones |
| (4) Nervous tissue | (D) Divides rapidly |

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

4. Fibrinogen is absent in **(1)**
   a. Both Blood and Serum
   b. Blood
   c. Plasma
   d. Serum
5. Which of the following muscle gets fatigued very soon? **(1)**
   a. All of these
   b. Skeletal muscle
   c. Heart muscle
   d. Brain muscle
6. What is the main function of blood platelets? **(1)**
7. Name the two main types of plant tissues. **(1)**
8. What does a neuron look like? **(1)**
9. Which type of epithelium is present in the organs where exchange of substances takes place? **(1)**
10. Which structure protects the plant body against the invasion of parasites? **1**
11. Differentiate between parenchyma and collenchyma. **(3)**
12. Why does an organism-plant or animal, require different types of cells in the body? **(3)**
13. Explain why animals of colder regions and fishes of cold water have thick layer of subcutaneous fat. **(3)**
14. What are involuntary muscles? Where are they found? **(3)**
15. Describe the structure and function of different types of epithelial tissues. Draw the diagram for each type of epithelial tissue. **(5)**

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**Answers**

1. b. 1-D, 2-A, 3-C, 4-B
   **Explanation:** RBC transport oxygen in the body through blood.Striated muscles have alternate light & dark bands. Smooth muscles is composed of uninucleate cells. Axon is a long, slender projection of a neuron.
2. a. 1-B, 2-D, 3-A, 4-C
   **Explanation:** Root tip consists of meristematic tissue. Cell is a structural and functional unit of life. Blood is a fluid connective tissue. Living organisms grow and reproduce.
3. c. 1-D, 2-A, 3-C, 4-B
   **Explanation:** Meristematic tissue divides rapidly. Epidermal tissue are the outer surface of plants. Blood and bones are connective tissues. Through nervous tissues messages are conducted.
4. d. Serum
   **Explanation:** Fibrinogen is present in blood that is responsible for clotting of blood in case of injury. Serum does not contain fibrinogen.
5. b. Skeletal muscle
   **Explanation:** Skeletal muscles get fatigued very soon. Skeletal muscles are responsible for movement in different part of the body.
6. Blood platelets help in clotting of blood at the site of injury.
7. Plant tissues are mainly divided into two types. These are as follows:-
   a) Meristmatic tissue – It consists of actively dividing cells. The cells of this tissue are very active; they contain prominent nuclei and dense cytoplasm. They lack vacuoles. Cells of meristmatic tissues differentiate to form permanent tissues.
   b) Permanent tissue – It consists of differentiated cells which have lost the ability to divide. The cells of permanent tissues have little cytoplasm, nucleus on the periphery and a big central vacuole.

8. A neuron consists of a cell body with a nucleus and cytoplasm, from which thin hair-like parts arise. It has a single long part called the axon and many short, branched parts called dendrites. The nerve endings receive the impulses.

9. Squamous epithelium is present in the organs where exchange of substances takes place. Squamous epithelium is found lining surfaces such as the skin, and alveoli in the lung, enabling simple passive diffusion as also found in the alveolar epithelium in the lungs.

10. The epidermis has thick cuticles. Epidermal cells secrete waxy substances (cutin) on their outer surface. This prevents invasion by parasites.

11.

| Parenchyma | Collenchyma |
|---|---|
| 1. Parenchyma consists of relatively unspecialized cells with thin cell walls. | 1. Cells of collenchyma have irregular thickening at the corners. Their thick cell walls are composed of cellulose and pectin. |
| 2. They are usually loosely packed; intercellular spaces are present. | 2. They are compactly arranged; intercellular spaces are small. |
| 3. Parenchyma provides support to the plant and also stores food. | 3. It provides flexibility to the parts of a plant; allows easy bending of leaves and stem without breaking. It also provides mechanical support and structure to the plant. |

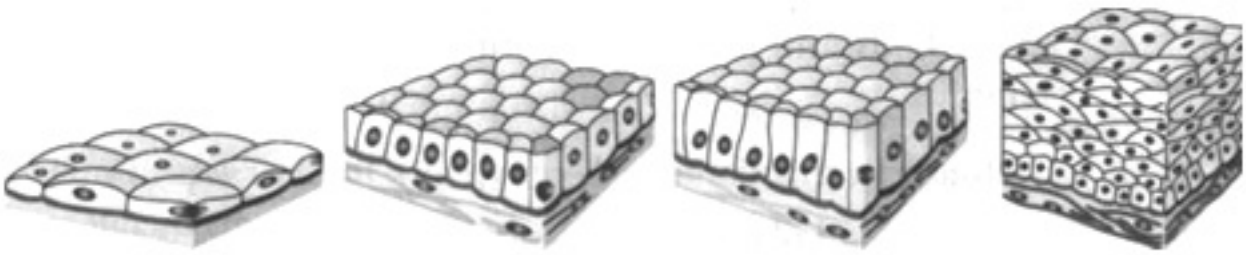
12. For the proper working of the body, an organism requires many functions like respiration, food transportation, immunity, strength, etc. to be performed properly. In plants and animals, a single cell cannot perform all the functions efficiently. Most of the cells specialise in one particular function only. Each specialised function in plants and animals is therefore taken up by a different group of cells. This division of labour in the body of an organism requires a wide range of cell types. Cells specialising in one function are grouped together at a definite place in their body. This cluster of cells or tissue is arranged and designed so as to give the highest possible efficiency of

function.
Cells →Tissues → Organs → Organ Systems

13. Thick layer of subcutaneous fat present in animals of colder regions and fishes of cold water acts as an insulator. It prevents the body heat from escaping. Hence, the fat keeps their bodies warm.

14. The muscles which do not move on our will are called involuntary muscles. These muscles are also called smooth muscles. We cannot move them or stop them when we want to. They are found in the alimentary canal, blood vessels, cilliary muscles of the eye, ureters and bronchi of the lungs. The movement of food in the alimentary canal or the contraction and relaxation of blood vessels are involuntary movements.

15. Epithelial tissues can be (A) Squamous epithelium (Either simple squamous epithelium or stratified squamous epithelium) (B) Columnar epithelium (C) Cuboidal epithelium or (D) Glandular epithelium



The structure and function of different types of epithelial tissues are as follows:-

A. Squamous epithelium can be of two types:-
    a. Simple squamous epithelium: Simple squamous epithelial cells are a simple flat kind of epithelium. They are extremely thin and flat. They form a delicate lining. They are present in the lining of the blood vessels or the alveoli (in lungs) where transportation of substances occurs through a selectively permeable membrane. They are also present in the esophagus and the lining of the mouth are also covered with this type of cells.
    b. Stratified squamous epithelium: Stratified squamous epithelial cells are arranged in a pattern of layers. E.g. Skin epithelial cells are arranged in many layers to prevent wear and tear.
B. Columnar epithelium: Columnar epithelial cells are present where absorption and secretion occur as in the inner lining of the intestine. These cells are long or

columnar (pillar-like). They facilitate movement across the epithelial barrier. In the respiratory tract, the columnar epithelial tissue has hair-like projections (cilia) on the outer surfaces of epithelial cells. The movement of the cilia pushes the mucus forward and clears it.

C. Cuboidal epithelium: Cuboidal epithelium is made up of cube-shaped cells which provide mechanical support. They form the lining of the kidney tubules and ducts of salivary glands.

D. Glandular epithelium: A multicellular gland or glandular epithelium is formed when a portion of the epithelial tissue folds inward and a multicellular gland is formed. An epithelial cell sometimes acquires additional specialisation as a gland cell. Gland cells can secrete substances at the surface of the epithelium.