QB365

Important Questions - Tissues

9th Standard CBSE

Science

Reg.No. : | | | | | | |

Time : 01:00:00 Hrs

Total Marks : 50

Section-A

1) A group of cells similar in form, function and origin is known as **1**

(a) parenchyma cells (b) xylem cells (c) cork cells (d) sclerenchyma cells

2) Which of the following cells are living cells? **1**

(a) Fibres (b) Vessels (c) Collenchyma (d) all of these

3) Aerenchyma is richly found in **1**

(a) xerophytes (b) mesophytes (c) halophytes (d) hydrophytes

4) How many guard cells enclose a stoma? **1**

(a) One (b) Two (c) Three (d) Four

5) A neuron consists of **1**

(a) cell body (b) dendrites (c) axon (d) all of these

6) Which is not a function of epithelial tissue? **1**

(a) It covers outer surface of organs and lines inner surface of cavities.

(b) It protects body from injury, chemicals and microbes. (c) It may be secretory in nature.

(d) It connects various body organs.

7) Which of the following is the fat-storing tissue? **1**

(a) tendon (b) adipose tissue (c) ligament (d) areolar tissue

8) Which part of the neuron contains nucleus? **1**

(a) axon (b) dendrites (c) cell body (d) all of these

9) One bone is joined with another bone by the tissue called **1**

(a) tendon (b) ligament (c) neuron (d) blood

10) What is the difference between ligament and tendon? **1**

Section-B

11) What is a tissue? **2**

12) Name two main groups of plant tissue. **2**

13) List any four salient features of meristematic tissue. **2**

14) How many types of meristems are present in plants, on the basis of position? **2**

15) Name two types of simple permanent plant tissues. **2**

16) Differentiate between collenchyma and sclerenchyma. **2**

17) What is the function of connective tissue? 2

18) What are the two main features of connective tissue? 2

19) What are fibrous connective tissue? 2

20) What are blood platelets? 2

Section-C

21) Give two differences between striated and unstriated muscles. 20

22) How is ligament different from tendons? 20

23) Define the term 'tissue'. 20

24) Differentiate between parenchyma, collenchyma and sclerenchyma on the basis of their cell wall. 20

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Section-A

1) (a) parenchyma cells 1

2) (c) Collenchyma 1

3) (d) hydrophytes 1

4) (b) Two 1

5) (d) all of these 1

6) (d) It connects various body organs. 1

7) (b) adipose tissue 1

8) (c) cell body 1

9) (b) ligament 1

10) The differences between tendon and ligament are as follows: 1

Tendon	Ligament
It is strong and non-flexible in nature.	It is elastic and flexible in nature.
It joins muscles to bones	It joins bones to bones.
It is formed of white fibrous connective tissue.	It is formed of yellow fibrous connective tissue.

Section-B

11) 2

A group of cells that are similar in structure and/or work together to achieve a particular function forms a tissue.

12) Two groups are (i) meristematic tissues and (ii) permanent tissues. 2

13) (i) This tissue consists of actively dividing cells. 2

(ii) This tissue is present in growing regions of plants.

(iii) In this tissue, cells are packed closely without intercellular spaces.

(iv) Cells of this tissue have thin cell walls, dense cytoplasm and prominent nuclei.

14) **2**

On the basis of location of meristem, it is classified into three types:

(i) Apical meristem is present at the tip of stem, root and their branches.

(ii) Intercalary meristem is found at the leaf base, above the nodes (i.e., at the base of internodes as in grasses) or below the nodes (i.e., at the upper most region of internode as in mint.)

(iii) Lateral meristem

Vascular cambium and cork cambium are the examples of lateral meristem. Vascular cambium is found in vascular bundles while cork cambium is found underneath the bark of trees. Both of these cause increase in girth of plants.

15) Simple permanent plant tissues are (i) Parenchyma (ii) Collenchyma and (iii) Sclerenchyma. **2**

16) **2**

Difference between collenchyma and sclerenchyma:

Collenchyma	**Sclerenchyma**
1. The cells of collenchyma are living and have the cytoplasm and the nucleus.	1. The cells are dead. They do not have the cytoplasm and the nucleus.
2. The collenchyma cells have thickening of cellulose at the corners.	2. The sclerenchymatous cells have thickenings of lignin.
3. They provide mechanical support and elasticity to the plant parts.	3. They mainly provide mechanical support and stiffness to plants or their parts.
4. Collenchyma cells may contain chlorophyll and can also help in the manufacture of starch and sugar.	4. They do not contain chlorophyll in any condition as they are dead cells.

17) **2**

Connective tissue connects different tissues and organs. It provides support to different parts of the body by forming packing around different organs of the body.

18) **2**

Main features. (i) Cells are loosely spaced and are embedded in matrix (ii) Matrix may be jelly-like, fluid, dense or rigid.

19) **2**

Fibrous connective tissue. It is of two types:

(i) The white fibrous connective tissue, (ii) Yellow fibrous connective tissue.

(i) **The white fibrous connective tissue** consists of white, nonelastic, unbranched fibres which unite to form bundles called tendons. Tendons are strong, tough and smooth, rope like structures which serve to attach muscles with the bones.

(ii) **The yellow fibrous connective tissue.** It also consists of fibres which are fine thread like structures. These fibres are quite elastic. Like white elastic fibres, these fibres also form cords called ligaments. These ligaments connect two bones.

20) **2**

Blood platelets are minute (about 2 to 4 μ in diameter), anucleated, disc like bodies. The main function of platelets is to help in clotting of blood.

Section-C

21) **20**

Difference between Striated and Unstriated Muscles

Striated Muscles	**Unstriated Muscles**
1. These are cylindrical, with non-tapering ends.	1. These are spindle shaped or have tapering ends.
2. Transversealternate light and dark bands or striations can be seen.	2. No light and dark bands or striations are seen.
3. Each muscle fibre has many nuclei (multinucleated), which are situated towards the periphery of the muscle fibre.	3. The muscle fibre has only one nucleus (uninucleated) which is situated in the centre.

22) **20**

Ligaments are elastic connective tissue which attach bone to bone to keep them in their place. Tendons are less elastic connective tissues which attach muscles to a bone.

23) **20**

The group of cells similar in structure that work together to achieve a particular function forms a tissue. This group of cells has a common origin.

24) **20**

Parenchyma	**Collenchyma**	**Sclerenchyma**
The cells of parenchyma have thin walls made of cellulose.	The cells of this tissue have cell walls thickened at the corners due to cellulose deposition.	The walls of sclerenchymatous cells are thickened due to lignin deposition.