Tissue: Exercise Questions

Q.1 Define the term "tissue".
Sol. A group of cells which performs a specific function is called tissue.

Q.2 How many types of elements together make up the xylem tissue? Name them.
Sol. Xylem is made up of the elements tracheids, xylem vessel, xylem parenchyma and xylem fibre.

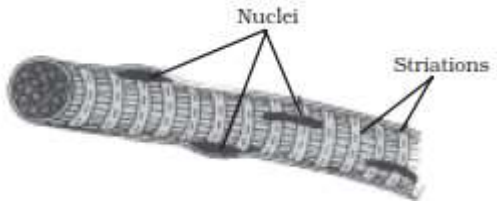
Q.3 How are simple tissues different from complex tissues in plants?
Sol. Simple tissues are composed of similar cells which coordinate to perform a common function. While complex tissues are composed of more than one types of cells. All these cell coordinate and perform common function.

Q.4 Differentiate between parenchyma, collenchyma and sclerenchyma on the basis of their cell wall.
Sol.

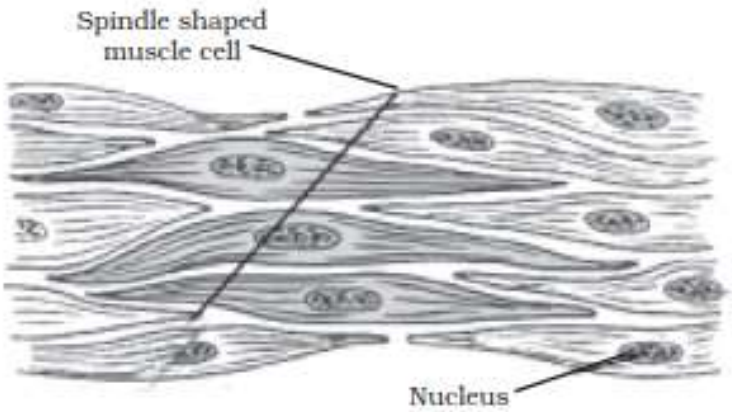
Parechyma	Collenchyma	Sclerenchyma
It has thin cell walls made up of cellulose	Its cell wall is thickened at corners due to pectin deposition	Its cell wall is thickened all around due to lignin deposition.

Q.5 What are the functions of the stomata?
Sol. The main functions of stomata are:
(a) Exchange of gases from the atmosphere
(b) Transpiration

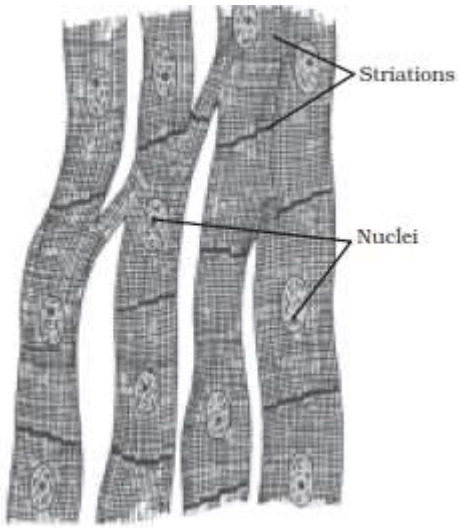
Q.6 Diagrammatically show the difference between the three types of muscle fibres.
Sol.



Striated muscle



Smooth muscle



Cardiac muscle

Q.7 What is the specific function of the cardiac muscle?

Sol. Cardiac muscles provide rhythmic contraction and relaxation of heart which helps in pumping action of the heart throughout life.

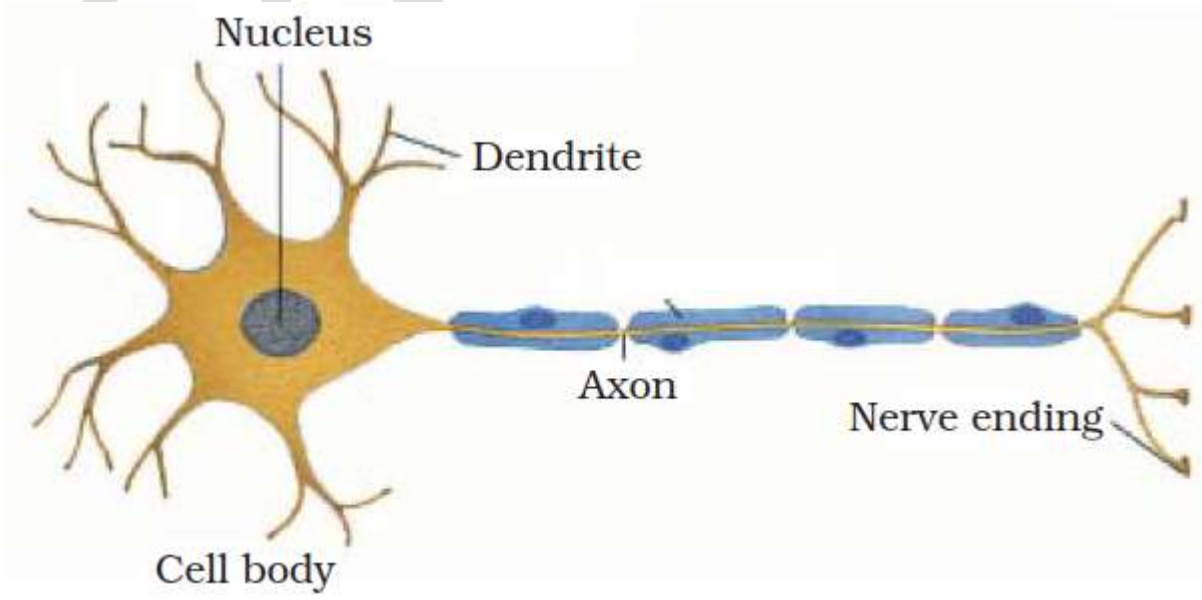
Q.8 Differentiate between striated, unstriated and cardiac muscles on the basis of their structure and site/location in the body.

Sol. Differentiate between striated, unstriated and cardiac muscles

Character muscles	***Striated muscles***	***Unstriated muscles***	***Cardiac muscles***
1. Structure	These cells are long, cylindrical, non-tapering and unbranched	These cells are long with tapering ends and unbranched	These cells are non-tapering and cylindrical in shaped and branched.
Location	These cells are present in hands, legs, and skeletal muscles	These cells are present in wall of stomach, intestine, ureter, and bronchi etc.	These cells are present in heart.

Q.9 Draw a labelled diagram of a neuron.

Sol.



Q.10 Name the following.

(a) Tissue that forms the inner lining of our mouth.

Sol. Simple epithelium

(b) Tissue that connects muscle to bone in humans.

Sol. Tendons

(c) Tissue that transports food in plants.

Sol. Phloem

(d) Tissue that stores fat in our body.

Sol. Adipose tissue

(e) Connective tissue with a fluid matrix.

Sol. Blood

(f) Tissue present in the brain.

Sol. Nervous tissue

Q.11 Identify the type of tissue in the following: skin, bark of tree, bone, lining of kidney tubule, vascular bundle.

Sol. the type of tissue in the following:

Skin: Striated squamous epithelium
Bark of tree: Cork, Protective Tissue,
Bone: Connective tissue,
Lining of kidney tubule: Cuboidal Epithelium tissue,
Vascular bundle: Complex plant tissue

Q.12 Name the regions in which parenchyma tissue is present.

Sol. Parenchyma is present in fruits, mesophyll of leaves, flowers and young stem. In aquatic plants, this tissue contains large air cavity and help them to float.

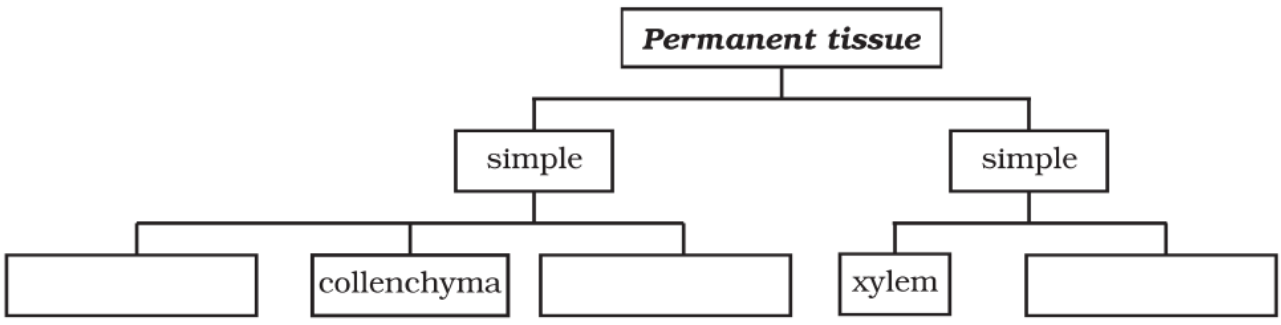
Q.13 What is the role of epidermis in plants?

Sol. Epidermis cells form a continuous layer without intercellular spaces in plants which provides protective covering to the underlying tissues.

Q.14 How does the cork act as a protective tissue?

Sol. Cork forms a protecting layer over underlying tissues. Its cells are dead and arranged without intercellular spaces. Cork prevents entry of water to the underlying tissue.

Q.15 Complete the table:



Sol.