SHIKSHA CLASSES

Sub : Science **ANSWER PAPER** **Total Marks : 30**
Class : IX **6. Tissues**

Section A(Each 1 marks)

Q.1) The unit of nervous system is.

Ans : c) Neuron

OR

What is the function of ligament ?

Ans : It connects bone to bone.

Q.2) Which of the following is not the part of the phloem?

Ans : c) Tracheids

OR

Lysosome is a cytoplasmic organelle containing enzymes that break down bilological polymers. Lysosomes function as the digestive system of the cell. It is also called the suicide bag of the cell because

Ans : b) Its enzymes digest the cell itself.

Q.3) Assertion (A) : Skeletal muscles me also known a voluntary muscles.

Reason (R) : The activity of the skeletal muscles under the voluntary control of the nervous system.

Ans : a) Both A and R are true, and R is correct explanation of the assertion.

Q.4) Assertion (A): Parenchyma cells help in storage of food.

Reason(R) : Parenchyma cells are the main seats of photosynthesis.

Ans : b) Both A and R are true, but R is not the correct explanation of the assertion.

Q.5) Assertion(A) : Vascular or conductive tissue is a distinctive feature of complex plants.

Reason (R): Vascular tissue has made survival of complex plants possible in terrestrial environment.

Ans : b) Both A and R are true, but R is not the correct explanation of the assertion.

Q.6) Meristemetic tissues are those which help in increasing the length and growth of the plant. Which of the following statements given below is correct about the meristematic tissue?

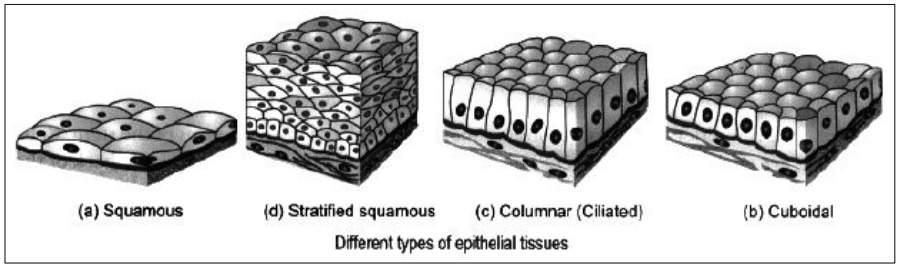
Ans : b) It is made up of cells that are capable of cell division.

OR

Epithelial tissue always has an exposed outer surface and an inner surface anchored to connective tissue by a thin, non-cellular structure called the

Ans : c) Basement membrane

Q.7) Observe the following figure and answer any two question from 5(i) to 5(iii) (2)



Different types of epithelial tissues

i) What kind of epithelium is present in squamous tissue?

Ans : a) flat

ii) Columnar epithelium is present in

Ans : b) Intenstine

iii) ------ is glandular epithelium.

Ans : a) Cuboidal

Q.8) The flexibility in plants is due to _____tissue.

Ans : b) collenchyma

Q.9) The tissue composed of the living, thin-walled, polyhedral cell

Ans : b) parenchyma

Q.10) Areolar connective tissue is found:

Ans : a) between skin and muscle

Q.11) Two slides of plant tissues, parenchyma and sclerenchyma, are shown to you. You can identify the sclerenchyma by the:

Ans : c) thickness of cell wall

Q.12) Which of the following statements is incorrect?

Ans : a) Some tissues in plants divide throughout their lifespan.

Q.13) The characteristic feature of sclerenchyma is:

Ans : a) living cells with highly thickened walls

Q.14) The shape of striated muscle cells is:

Ans : a) cylindrical

Section B (Each 2 marks)

Q.15) Answer the following questions.

a) What is the lining of blood vessels made up of?

b) What is the lining of small intestine made up of?

c) What is the lining of kidney tubules made up of?

d) Where are the epithelial cells with cilia found?

Ans : a) Squamous epithelium b) Columnar epithelium

c) Cuboidal epithelium d) Respiratory tract

Q.16) Why is the epidermis present as a thick waxy coating ofcutin in desert plants?

Ans : A thick waxy coating of cutin is present in desert plants to prevent excessive loss of water during transpiration. Due to this, plants can survive in scarcity of water in deserts.

OR

Explain the difference between voluntary and involuntary muscles

Ans :

Voluntary muscles	Involuntary muscles
Voluntary muscles work according to the desire or under conscious control.	Involuntary muscles work under the control of the autonomous nervous system of the body.
voluntary muscles are multinucleated and are located towards the periphery of the cell.	Involuntary muscles are uninucleated and located towards the centre of cells.
Theses muscles involved in locomotion and movement of body parts.	These muscles help the organs that performing automatic movements like urogenital tracts, alimentary tracts, respiratory tracts, ducts of glands, blood vessels, ciliary muscles.
They require high energy.	The requirement for energy is low

Section C(Each 3 marks)

Q.17) : What is the function of bone, cartilage and ligament ?

Ans : a) **Bone :** i) It is the hardest tissue and protects the important organs of the body like brain, heart, lungs etc.

ii) Blood cells are produced in the bone marrow. The bone marrow is a cavity present in the long bones.

b) **Cartilage :** It helps in the absorption of mechanical shocks.

c) **Ligament :** The ligaments are elastic fibres and join bone to bone.

OR

Write down differences between Plant and Animal tissues.

Ans :

	Plant tissues	Animal tissues
i.	As plants are stationary, they need less energy and so less living tissues are present.	As animals are mobile, they need more energy and so.
ii.	Growth is restricted to certain regions.	Cell growth is distributed uniformly
iii.	Structural organisation of tissues is simple.	Structural organisation of tissues is complex due to the development of organs and organ systems.
iv.	Plants grow continuously throughout their life.	Animals stop growing after attaining certain level of maturity.

Q.18) Why are xylem and phloem called complex tissues? How are they different from one other ?

Ans : Xylem and phloem are made of different cell types, who come together to perform a common function, hence they are called complex tissues.

Xylem	Phloem
1. Xylem mainly consists of dead cells (except xylem parenchyma).	1. Phloem consists of living cells (except phloem fiber).
2. It conducts water and minerals from roots to aerial parts of the plant.	2. It translocates prepared food from leaves to storage organs and growing parts of the body.

Section D(5 marks)

Q.19) What is a permanent tissue ? Classify permanent tissue and describe them.

Ans : **Permanent tissues :** Permanent tissues are derived from meriste-matic tissue but their cells have lost the power of division and have attained their definite forms.

It is classified into the following types.

i) Simple permanent tissue.

ii) Complex permanent tissue.

i) **Simple permanent tissue :** These tissues are composed of cells which are structurally and functionally similar.

There are three types of simple permanent tissues.

a) Parenchyma b) Collenchyma c) Sclerenchyma

a) Parenchyma : Parenchyma cells are alive at maturity. The function is to store food & support to plant.

b) Collenchyma : It's function is to provide additional support.

These cells serve growing parts of the plant such as shoots & leaves.

c) Sclerenchyma : It makes the plant hard & stiff. It provides strength to the plant parts.

ii) Complex permanent tissues : The complex tissues consists of more than one type of cells which work together as a unit. All having a common origin.

There are two types of complex permanent tissues :

a) Phloem b) Xylem.

a) Phloem - It transports food from leaves to other parts of the plant

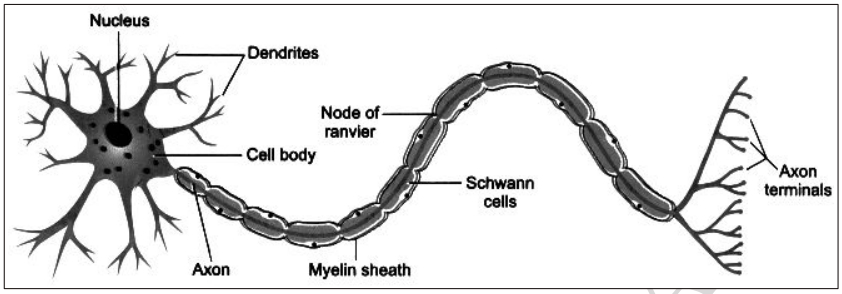
b) Xylem - It transports water and minerals from root to other parts of the plant.

OR

What is a neuron? Write the structure and functions of a neuron.

Ans : Nervous tissue contains highly specialised unit cells called nerve cells or neurons. Each neuron has the following three parts:

- The cyton or cell body: It contains a central nucleus and cytoplasm with characteristic deeply stained particles, called Nissl granules.
- The dendrites: These are short processes arising from the cyton.
- The axon: It is a single, long, cylindrical process of uniform diameter It carries impulses away from the cell body.



Functions:

Neurons have the ability to receive stimuli from within or outside the body and conduct impulses to different parts of the body. The impulses travel from one neuron to another neuron and finally to the brain or spinal cord.

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