M.NIYOGI

FOR GOD AND COUNTRY

ST. LAWRENCE HIGH SCHOOL

FIRST TERM – 2019

Sub : LIFE SCIENCE | **Class : VII** | **F.M. : 90**
Duration : 2 HR 30 MIN | **SOLUTION** | **Date : 13.04.19**

GROUP – A

1. MCQ **[1x5=5]**

1.1 The cells of meristematic tissue (b) Divide throughout a plant's life
1.2 Xylem and Phloem are responsible for (c) transporting materials
1.3 Ligaments contain (d) more elastin than tendons do
1.4 Cartilage is made up of (c) Chondrocytes
1.5 Connective tissue includes (a) Vascular tissue

2. State true or false: **[1x5=5]**

2.1 Meristematic tissue arises from permanent tissue. – False
2.2 There are no intercellular spaces between the cells of sclerenchyma. – True
2.3 Areolar tissue is a type of connective tissue. – True
2.4 Cartilage is a knd of muscular tissue. – False
2.5 Blood cells are suspended in the plasma. – True

3. Fill in the blanks: **[1x3=3]**

3.1 Adipocytes stores fats within their vacuoles.
3.2 Cells that are similar to structure and carry out same functions together form a tissue.
3.3 The bone marrow present inside bones is responsible for formation of blood cells.

4. Name the following: **[1x6=6]**

4.1 The cytoplasm of a neuron is called neuroplasm.
4.2 Connective tissue is also called supprotive tissue.
4.3 Voluntary muscles are also called skeletal muscles or straited muscles.
4.4 Lateral meristem is also known as cambium.
4.5 Heart muscles are called cardiac muscles.

5. Match the following: **[1x6=6]**

Column A	Column B
5.1 Connective tissue proper	d) Tendon
5.2 Skeletal tissue	c) Bone
5.3 Vascular tissue	a) Blood
5.4 Muscular tissue	f) Cardiac muscles
5.5 Simple permanent tissue	b) Collenchyma
5.6 Complex permanent tissue	e) Phloem

GROUP – B

6. Answer the following question (all) **[2x5=10]**

6.1 What is a tissue?

ANS: A tissue is a group of cells that are similar in structure and carry out a specific function.

6.2 What is an organ?

ANS: Different kinds of tissue make up an organ.

6.3 Give the characteristics of meristematic tissue.

ANS: Characteristics of meristematic tissue are:

a) They are made up of small thin walled cells which maybe spherical or oval or polygonal. They have large nucleus, dense cytoplasm and few small vacuoles.
b) These cells can divide.

6.4 Name the different types of meristematic tissue.

ANS: The different types of meristematic tissue are Apical and Lateral meristem.

6.5 Give the diagram of section of cartilage and label any one part.

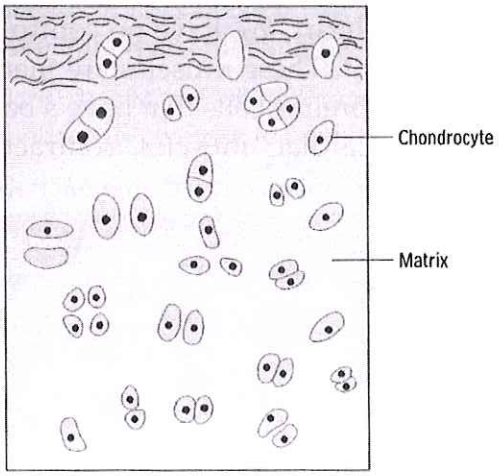


Fig. 1.7 Section of cartilage

7. Answer the following questions (any 5) **[3x5=15]**

7.1 What is an organ system? Name any two.

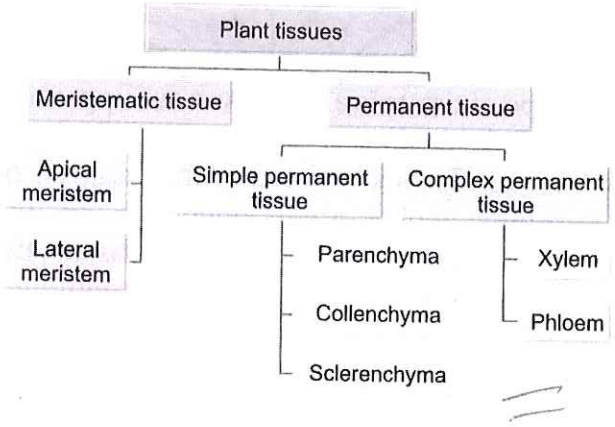
ANS: Many organs work together as a functional unit to carry out various life processes. Such a group of organs is called organ system. Examples digestive system and nervous system.

7.2 Distinguish between simple permanent tissue on the basis of functions.

ANS:

PARENCHYMA	COLLENCHYMA	SCLERENCHYMA
a) Stores food and water. b) In leaves it manufactures food via photosynthesis.	Provide support and flexibity.	Provides strength to the plant.

7.3 Draw the flowchart of different types of plant tissues.



7.4 Distinguish between complex permanent tissue on the basis of functions and location.

ANS:

Complex permanent tissue	XYLEM	PHLOEM
Functions	Conducts water and minerals from roots to the leaves.	Transport of food to different parts of plant.
Location	Runs through centre of stem	Lies closer to surface pf stem than xylem does.

7.5 What are seive cells?

ANS: Seive cells are elongated cells joined end to end, with perforated plates between them. The pores in the plates between the cells provide a continuous route for the massage of food.

7.6 What happens if no cambium is present in a plant body?

ANS: Cambium helps the stem and root to grow in thickness. No cambium means plants will elongate but will not expand laterally.

7.7 How is lymph formed?

ANS: Some blood, minues RBCs and a few other constituents, leaves the blood cappilaries and passes into spaces between tissue. This straw-coloured watery fluid is called lymph.

GROUP – C

8. Answer the following questions (any 8) **[5x8=40]**

8.1 Give the functions of
a) blood
b) ligament

ANS: (a) Functions of blood:

(i) They transport oxygen, carbon dioxide, digested food and waste from one part of the body to another.

(ii) It helps to fight infections.

(iii) It regulates body temperature.

(b) Functions of ligament:

(i) It supports and stabilises joints and prevent movement that maybe damaging.

(ii) In bones of ribs they limit the movement of ribs to a gentle motion that helps in breathing.

8.2 Give the structure of
a) adipose tissue
b) areolar tissue

ANS: (a) Structure of Adipose tissue is that they are made of fat cells called adipocytes within a matrix of collagen fibres.

(b) Structure of Areolar tissue is that they are a mesh of different types of protein fibres such as collagen and elastin and cells such as fibroblasts embedded in a jelly like matrix.

8.3 Give the differences between striated muscles and unstriated muscles. Give diagrams to support your answer. [3+2]

ANS:

STRAITED MUSCLES	UNSTRAITED MUSCLES
a) They contains series of bands along their length.	a) They do not have banded appearance.
b) We can control their movement.	b) We cannot control their movement.
c) They have long, cylindrical, fibrelike cells.	c) They are made up of tapering spindlelike cells.

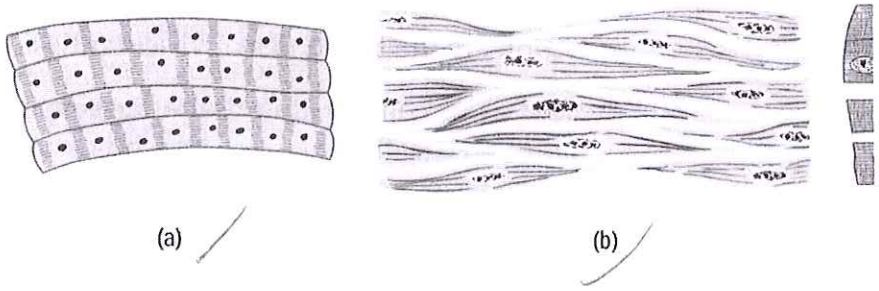


Fig. 1.10 Types of muscular tissue—(a) voluntary, (b) involuntary

8.4 Write the functions of connective tissue in general. Name the three different types of connective tissue. [3+2]

ANS: Functions of connective tissue:

(i) It connects and binds various structures of the body and fills up spaces.

(ii) It provides support and forms the framework of body.

(iii) It provides protection to various parts of body.

The names of the three different types of connective tissue are connective tissue proper, skeletal tissue amnd vascular tissue.

8.5 What is a neuron? Write in details about its structure.

ANS: Neuron is a nerve cell that composes the nervous tissue that transmits messages messages from all parts of the body to the brain and spinal cord and vice-versa.

Structure of neuron:

(i) Consists of cyton or the cell body

(ii) Consists of a taillike structure called axon

(iii) Consists of dendrites which are short fibrelike structure from cyton

(iv) The cyton contains nucleus and various organelles. The cytoplasm of a neuron is known as neuroplasm.

8.6 Write about the structure of bone in details.

ANS: The structure of bone:

(i) Its is the hardest connective tissue.

(ii) It contains three types of cells – Osteoblasts, Osteocytes and Osteoclasts.

(iii) Osteoblasts produce a protein mixture that hardens to form bone matrix. The matrix contains mminerals like calcium, phosphorus and magnesium. It also has fibres.

(iv) Osteoblasts eventually get trapped within the matrix and become osteocytes.

(v) Osteoclasts are near the outer layer of bones and help to break down damaged bone tissue which is replaced by new matrix produced by osteoblasts.

8.7 Name the two types of meristematic tissue. Give one example each. Give two differences between them. [2+1+2]

ANS: The names of the two types of meristematic tissue are Apical and Lateral meristem. The example of Apical meristem is grass or any other monocot plants. The example of Lateral meristem is mango or any other dicot plant.

APICAL MERISTEM	LATERAL MERISTEM
(a) They help grow in length.	(a) They help grow in thickness.
(b) They are located at tips of stem and root.	(b) They form a sort of ring under bark or is present in strips inside stem and root.

8.8 Give the diagram of parenchyma in section and label its 2 parts.

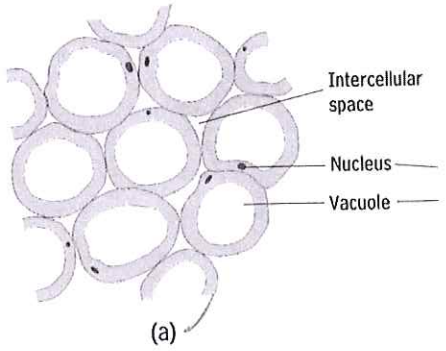


Fig. 1.2 (a) Parenchyma,

8.9 Write a short note on cardiac muscles. Give one example of involuntary and voluntary tissue. [3+2]

ANS: Cardiac muscles:

(i) Specialised involuntary muscles present in heart.

(ii) They are made up of branced, fibrelike cells that have a banded appearance.

(iii) They contract and relax continuously throughout our lifetime to help the heart pump blood day and night.

One example of involuntary tissue: Any parts of body that move voluntarily.

One example of voluntary tissue: In the walls of stomach or blood vessels.

8.10 Draw a nerve cell and label its four parts. [3+2]

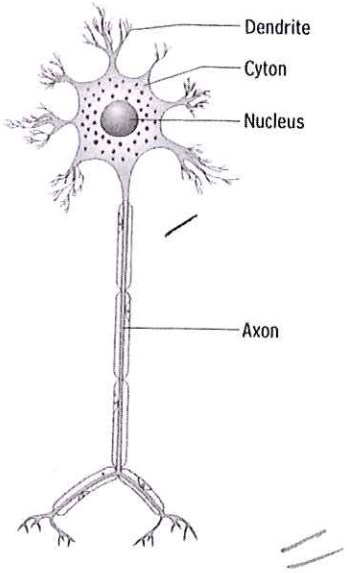


Fig. 1.11 A nerve cell