DON BOSCO SCHOOL, KOKAR, RANCHI

SESSION: 2020-2021

CLASS : 9

SUBJECT : BIOLOGY

Chap 3. Tissues : Plant and Animal Tissues

A. MULTIPLE CHOICE QUESTION

1. In potato, starch is stored in :

Ans - (c) Parenchyma

2. Tendons and Ligaments are examples of

Ans- (a) Fibrous connective tissue

3. Which one of the following pairs is correctly matched?

Ans- (a) Meristem – Actively dividing cells

4. Parenchyma containing chloroplasts is known as :

Ans- (d) Chlorenchyma

5. Annual rings are the number of :

Ans- (d) Layers of xylem in a stem

6. Which of the following cells in plants are said to be nonliving?

Ans- (d) Sclerenchyma

7. Which of the following connects a muscle to a bone?

Ans-(c) Tendon

8. Cardiac muscle is :

Ans- (d) Involuntary and Striated

B.VERY SHORT ANSWER TYPE

1. Name the kind of tissue found

(a) At the tip of plant roots. – Meristematic tissue

(b) At the lower surface of leaf. – Chlorenchyma or protective tissue

(c) In the inner lining of intestine. – Columnar epithelium

(d) At the joint between two long bones. – Ligament

(e) In the walls of the veins of leaves. – Conducting tissue

(f) As gritty masses in the skin of pears. – Sclerenchyma

2. Where is the least specialized tissue located in plants?

Ans- Sclerenchyma composed of long, narrow and thick cells, which have become dead, forms the least specialized tissue in plants.

3. Give one word for each of the following :

(a) A group of similar cells performing a specific function. – Tissue

(b) Cells least specialized in the plants. – Permanent tissue cells

(c) Cells responsible for increase in diameter of the stem and root of dicot plants. – Cambium

4. Name one place each in living organisms where the following tissues are located :

(a) Meristematic tissue- Tips of roots

(b) Cartilage – Nose

(c) Squamous epithelium – Lining of mouth

(d) Sclerenchyma – Veins of leaves

(e) Ciliated epithelium – Lining of trachea

(f) Ligament - Bones

5. Name the kinds of cells found in the following places:

(a) Surface of the human skin – Squamous epithelium

(b) Salivary gland – Cuboidal epithelium

(c) Brain - Neuron

(d) Inner lining of the windpipe- Ciliated columnar epithelium

C. SHORT ANSWER TYPE

1. Name any one body part where ciliated epithelium is found in humans ? What is its function ?

Ans- Ciliated columnar epithelium is found in the lining of trachea . This epithelium has thread-like projections called cilia at their free ends. The cilia constantly keep lashing and move the materials which enter this organ.

2. What is the difference between the nervous tissue and nervous system?

Ans- Nervous tissue or neurons are specialized group of cells. This tissue is concerned with perception and responses of animals.

The nervous tissue constitutes the nervous system, which is an organ system. It controls and coordinates all the systems of the body.

3. List the tissues found in the human heart?

Ans- (i) Muscular tissue(Cardiac muscles)

(ii) Epithelial tissue(Lining of blood vessels of the heart)

(iii) Connective tissue (fluid connective tissue in the form of red blood corpuscles)

4. Can you consider cluster of eggs as a tissue? Why?

Ans - A tissue is a group of similar cells from the same origin that together carry out a specific function. An egg is a zygote or a cell but a cluster of egg cannot be considered as a tissue as it does not form an organ like a tissue. Instead it gives rise to a new individual organism if gets fertilised.

5. Name the three kinds of muscles found in the human body. In each case, name one region in the body where they are found?

Ans- (i) Striated muscles: Provide the force for locomotion and all the voluntary movements of the body. These muscles are found in the limbs.

(ii) Unstriated muscles: Provide movements for the passage of food in the intestines. These muscles are found in the iris of the eye, lining of blood vessels, urinary bladder, etc.

(iii) Cardiac muscles: Provide rhythmic contraction and relaxation movements. These muscles are found only in the heart.

D. LONG ANSWER TYPE

1. What is the difference between

(a) Cell and Tissue?

Ans – Cell – A cell is the structural and functional unit of all living beings.

E.g. Epithelial cell

Tissue – A tissue is a group of similar cells which perform a specific function.

E.g. nervous tissue.

(b) Organ and Organism ?

Ans – Organ – Several tissues together contribute to specific functions inside the body and constitute an organ.

E.g. stomach.

Organism – Several organ systems together constitute the organism.

E.g. human being

(c) Organ and organelle

Ans – Organ- Several tissues together contribute to specific functions inside the body and constitute an organ.

E.g. stomach.

Organelle – Parts of the cell that have a definite function in the cell.

E.g. mitochondria

(d) Organ and Organ system

Ans- Organ – Several tissues together contribute to specific functions inside the body and constitute an organ.

E.g. stomach

Organ system – Many organs act together to perform a specific life process and constitute an organ system.

E.g. digestive system

2. Differentiate between cells of:

(a) Parenchyma and collenchyma

Ans -

Parenchyma	**Collenchyma**
(i) Consists of large thin-walled living cells with a single large vacuole. (ii) Intercellular spaces may or may not be present.	(i) Consists of elongated cells having thickening in their cell walls. (ii) Intercellular spaces are totally absent.

(b) Meristematic tissue and Permanent tissue

Ans-

Meristematic tissue	**Permanent tissue**
(i) Have the capacity to divide (ii) Do not have intercellular spaces	(i) Have lost the capacity to divide (ii) Have large intercellular spaces

(c) Sclerenchyma and Parenchyma

Ans-

Sclerenchyma	**Parenchyma**
(i) Consist of dead cells (ii) Have thick cell walls	(i) Consist of living cell (ii) Have tin cell walls

(d) Cells of involuntary and voluntary muscle

Ans-

Cells of involuntary muscle	**Cells of voluntary muscle**
(i) Small and spindle-shaped	(i) Long and cylindrical
(ii) Uninucleate	(ii) Multinucleate
(iii) Lack stripes or striations	(iii) Show stripes or striations
(iv) Found in the walls of the intestine and lining of blood vessels	(iv) Found in the arms, legs, face and neck

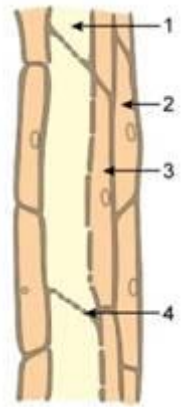
(e) Fibres of voluntary muscle and cardiac muscle

Ans-

Fibres of voluntary muscle	**Fibres of cardiac muscle**
(i) Long and cylindrical	(i) Short and branched
(ii) Multinucleate	(ii) Uninucleate
(iii) Under the control of one's own will or volition	(iii) Not under the control of one's own will or volition
(iv) Found in the arms, legs, face and neck	(iv)Found in the heart

ASSIGNMENTS

1. Study the diagram given below and then answer the questions that follow:



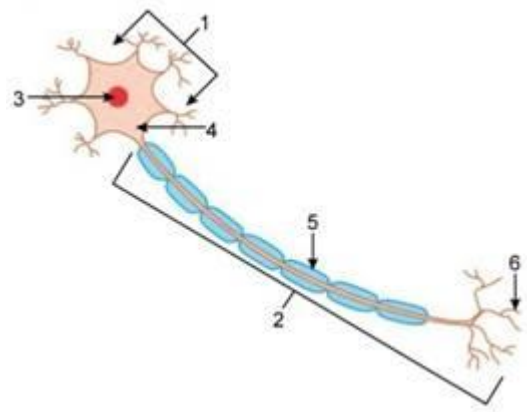
(a) Identify the tissue and give a reason to support your answer.

(b) Name the parts labelled 1, 2, 3, and 4.

(c) Where is the tissue likely to be found in the plant?

(d) State the function of the part labelled 1, 2, 3, and 4.

2. Study the diagram given below and then answer the questions that follow :



(a) Identify the cell.

(b) Name the parts labelled 1, 2, 3, 4, 5, and 6.

(c) Where is this cell likely to be found in the human body and what is its function?