Review Questions

1.

i) A group of similar cells to perform a specific function forms a

a) organ b) species c) organ system
d) tissues

ii) The small fine branches given out from the cell body of a nerve cell are

a) dendrites b) cyton c) axon d) neurons

iii) Fluid connective tissue of humans is

a) blood and cartilage
b) ~~fat~~ lymph and plasma
c) blood and lymph
d) stroma and matrix

SHORT ANSWER QUESTION

1. Define the following terms:

i) Tissues: A group of similar cells to perform a specific function is called tissue.

ii) Organ: A group of different tissues working together to perform a function is called an organ.

2. Answer the following:

1) What is a meristematic tissue? How is it different from permanent tissues?

Ans- Meristematic tissues are made up of actively dividing cells. Their only function is to produce more cells leading to growth of the plant body.

Meristematic tissues are found at all growing points in a plant, like the tip of roots, stems and branches, where growth in length occurs. The growth in the thickness of stem is also due to meristematic tissues.

ii) Which living material could you take to demonstrate meristematic tissue?

Ans Green gram seeds can be used to demonstrate meristematic tissue.

iii) What is the function of meristematic tissue?

Ans Meristemic tissues are responsible for Plant growth. They are present at the tip of roots, stem and branches. The cells present in these tissues constantly divide to produce new cells. This leads to an increase in the hight and girth of Plants.

3. State whether the following statements are True or false:

i) A tissue is formed of only one type of ~~tissues~~ cells. True

ii) only one type of tissue forms an organ. False

iii) Permanent tissue is made up of ~~undif~~ undifferentiated and dividing cells. False

iv) Meristematic tissue is found at the growing tips of a Plant. True

v) Phloem is formed of dead tubular cells. False

4. 1

i) A group of different tissues working together to perform a function is called an organ.

ii) xylem and phloem form the conducting tissue

iii) conducting ~~tis~~ tissue is also called vascular tissue.

iv) cells are elongated and thick at the corners in collenchyma tissue.

v) Parenchyma is composed of large thin-walled cells.

5.

i) Fibrous connective tissue — a) blood (ii)

ii) Fluid connective tissue — b) cartilage (iii)

iii) Supportive connective tissue — c) connects a bone to another bone (v)

iv) Ligament — d) areolar tissue (i)

v) Tendon — e) connects a muscle with a bone (iv)

6. How do you rank the following with respect to a cell, tissue, organ or organism?

i) Amoeba : organism

ii) Euglena : organism

iii) Skin - organ

iv) Lungs : organ

v) Neuron - tissue

vi) Cardiac muscle tissue

7. ~~Each of the tissues listed in~~

Column A	Column B
i) Epithelial tissue	a) movement (iv)
ii) connective tissue	b) Protection (i)
iii) Vascular tissue	c) Messages (iv)
iv) Nervous tissue	d) support (ii)
v) Muscular tissue	e) transport (iii)

8. Name the kind of tissue that:

i) carries oxygen around your body - Blood tissue

ii) Brings about movement in animals - Muscular tissue

iii) Transports food to different parts of a plant - Phloem

iv) Transports water in plants - xylem

v) Supports an animal's body - connective tissue

vi) Binds different tissues together - Fibrous connective tissue

vii) Conducts messages from one part of the body to another - Nervous tissue.

9. 1. cuboidal epithelium

2. columnar epithelium

3. ciliated epithelium

10. Write three differences between the two principal vascular tissues found in plants

Ans Xylem is to take the water from the root system to the leaves, the phloem is to take the food from the source.

Xylem:

1. Xylem cells transport water and mineral absorbed by the roots from the soil, upwards to the leaves.

2. These cells are placed end to end

3. The partitions between the cells dissolve to form long channels for the transport of water and minerals.

Phloem:

1. Phloem provides bidirectional conduction i.e. both downward and upward movement from the leaves.

2. Provides food manufactured in the leaves to various parts of the plant.

3. Phloem consists mainly of living cells.

(11.) Mention the main characteristic features of meristematic tissues, and state where we find such tissues in plants? Give the function of meristematic tissue.

Ans. Meristematic tissue has a number of defining features, including small cells, thin cell walls, large cell nuclei, absent or small vacuoles, and no intercellular spaces.

we can find meristematic tissue on root and shoot apex. So also known as root apical meristem and shoot apical meristem.
We can also find them on nodes. They are found at all growth sites.

Function of meristematic tissues are:

Vertical growth
lateral growth of plant

12. Name the plant tissue which helps in the movement of water and minerals in the body. what are the various types of cells present in this tissue.

Ans. Vascular tissues helps in the movement of water and minerals. they contain xylem for water transport and Phloem for food transport. more than one type of specialist cells are found in these tissues. some of them are.

Sieve cells
Epidermal cells
Parenchymatous cells
Sclerenchymatous cell

13. Which plant tissue is responsible for the distribution of food prepared in the leaves? Name the four component parts of this tissue.

Ans. Phloem is composed of various specialized cells called sieve tubes, companion cells, Phloem fibres and phloem parenchyma cells.

14. Name the various types of animal tissues and state their functions

Ans. The various types of animal tissue are:-

i) Epithelial tissue
ii) connective tissue
iii) Muscular tissue
iv) Nerve tissue

1. Epithelial Tissue :- Epithelial tissue forms a thin protective layer of cells. It covers the surface of the body and forms the lining of various body cavities and internal organs. Epithelial cells may be flat, cuboidal or columnar in shape.

2. Connective Tissue :- Connective tissue connects various other tissues and orga as well as the provides support to different organs to keep them in proper position.

3. ~~Muscular~~ Muscular Tissue :- Muscular tissue forms the ~~the~~ muscles of the body. The muscles can contract and relax. Thus, they help the body in all its movements and locomotion.

4. ~~Nervous~~ Tissue :- Nervous tissue constitutes the nervous system. This tissue is made up of elongated

Nervous tissue is responsible for the carrying of electric and chemical signals and impulses from the brain and central nervous system to peripheral and vice versa

15. Give the structure and function of different types of epithelial tissue.

Ans. An example is the epidermis, the Epithelium is one of only 4 types of human body tissue. Like all types, it is formed by cells within an extracellular matrix

The Epithelial tissue is the simplest tissue - it is the protective tissue of the animal body.
The cells of this tissue are tightly packed and they form a continuous sheet

Types:

i) Squamous epithelium; They are composed of thin, flattened and polygonal cells. Example: cells of the outer layer of skin. These cells are usally Protective.

ii) cuboidal epithelium, They are composed of cube-like cells. Example. Inner wall lining of kidney tubules. These cells are usually concerned with absorption.

iii) Columnar epithelium: They are composed of vertically arranged, tall cylindrical or column-like cells. Examples Inner lining of stomach and intestine. These cells are usually secretory.

16. Draw the diagram of a neuron and label the following parts in it cyton, axon, node of Ranvier, internode

17. Name the three main kinds of muscular tissues. Give the exact location of each kind animal body.

1. ~~Stria~~ Striated muscle fibre :-

Ans. ~~Stri~~ Striated muscle fibre :-
These ~~are located~~ occur in muscles which are attached to the skeleton

2. Smooth muscle fibre :-

These are located in walls of hollow visceral organs, except the heart.

3. Cardiac muscles:- These are present in the walls of heart.