

Home Assignment

① Write the importance of tissues in living organisms.

- Ans) ① It provides support and protection
② It provides nutrition
③ It fights against many infectious pathogens

② Explain the cellular organization in a multicellular organism. How is it helpful to the organism

Ans) ~~Organisms~~ Their single celled bodies are able to carry out all the processes of life such as metabolism and respiration without help from the other cells. Some single celled organisms such as ~~some~~ bacteria can group together and form a biofilm. Multicellular organisms carry out their life processes through division of labour.

Multicellular can grow larger.
It has many different cells.
The different cells can do
many functions

3. How do you rank the following
with respect to cell, tissue,
organ or organ system.

a) Amoeba b) Euglena c) Skin
d) Lungs e) neuron f) cardiac muscles

Ans) a) cell b) cell c) tissue
d) organ e) ~~cell~~ f) tissue

Why their maximum xylem tissues are dead and maximum living tissue in phloem?

Xylem is called dead tissues and none living tissues ~~are~~

because all the components in this tissue are dead except xylem ~~parenchyma~~ parenchyma.

~~As~~ these tissues lack organ cells which helps in storing and transporting more capacity bore water with plant cells

Phloem actively transports sugar into a part of the phloem called sieve tubes. This active transport requires the cells to do work and energy and can only be done while alive. That's why their maximum xylem tissues are dead and maximum living tissues in a phloem.

Home Assignment

10 Match

C-1

C-2

A	Parerenchyma	Thin walled, packing
B	photosynthesis	carbon fixation
C	Aerenchyma	localised thickenings
D	collenchyma tissues	buoyancy
E	Permanent tissues	sclerenchyma

Q2) ~~differentiate~~ Differentiate between Sclerenchyma and parenchyma tissues with a labeled diagram.

Parenchyma

1. Cells are thin walled and unspecialized

2. These are living cells

3. Loosely packed cells with large intercellular space

4. Water in stem and roots, some cells contain chlorophyll called chlorenchyma and perform photosynthesis

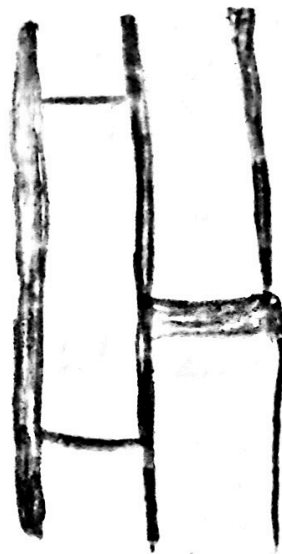
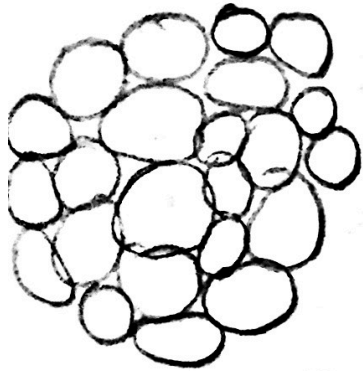
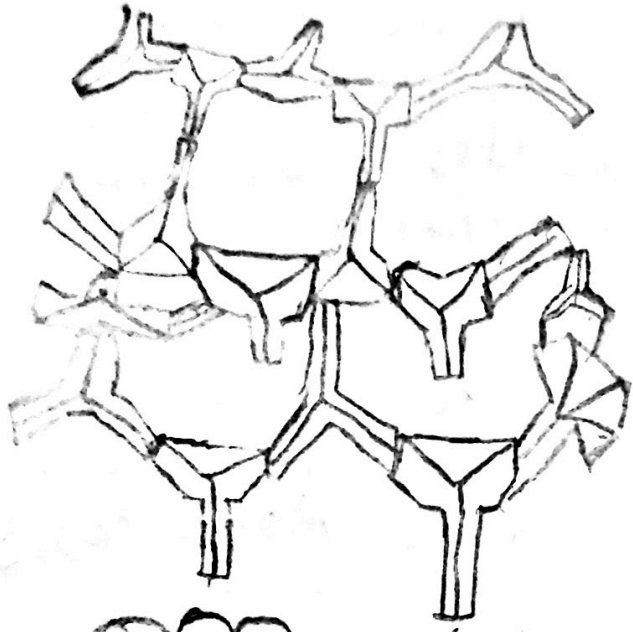
Sclerenchyma

Cells are thick walled and are lignified

Tissues are made up of dead cells

No intercellular spaces between the cells which are bound

Provides strength to the parts of the plants



3a) Meristematic cells have a prominent ~~cell~~^{nucleus} and dense ~~cell~~ cytoplasm but they lack vacuole.

Ans) Meristematic cells are continuously dividing cells so they have a prominent nucleus and dense cytoplasm. But ~~as~~ since these cells do not store food material or waste material they lack vacuole.

b) Intercellular spaces are absent in Sclerenchyma tissues.

Ans) Intercellular spaces are absent in Sclerenchymatous tissues because they have a cementing substance around their cell membrane ~~and~~ which makes them stiff and hard.

c) ~~When~~ we get a crunchy and granular feeling when we chew a pear fruit.

Ans) In pear-fruit sclerenchyma cells are called stone cells. They are small, thick and hard.

d) Branches of a tree move and bend freely in high wind velocity.

Ans) Junction of the tree branches are composed of ~~the~~ collenchyma cells which provide rigidity and flexibility to the ~~the~~ branches.

e) It is difficult to pull out the husk of a coconut tree.

Ans) Husk of the ~~tree~~ coconut tree is sclerenchyma which is hard.

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

A) Xylem and phloem are called complex tissues because they are made up of more than one type of cells. These cells work in a coordinated manner as a unit to perform the various functions of the xylem and ~~phloem~~ phloem.

Xylem is different from the phloem ~~phloem~~ as ~~phloem~~ xylem ~~phloem~~ conducts water from roots to leaves and ~~phloem~~ phloem conducts food from leaves to different parts of plants.

Q) Define the process of differentiation.

A) The loss of ability to divide they taking up a permanent shape, size and function is called differentiation. cells develop into tissues and organs with the help of differentiation.

Q) Name any two simple and two complex permanent tissues in plants.

A) The two simple and two complex permanent tissues in plants are as follows

Simple tissues - parenchyma, collenchyma
complex tissues - xylem, phloem.

Q. which is not a function of Epidermis?

Ans) conduction of water

Q2. why is epidermis important for the plants

Ans) Epidermis is important for the plants because:-

1. It gives protection
2. It helps in gaseous exchange
3. It checks water loss

Q3. How epidermis is described in aquatic plants are helpful? Explain with suitable examples

Ans) The desert plants epidermis has a thick waxy coating of cutin to check water loss. Ex - Cactus

The aquatic epidermis is usually a single layer of thin walled cells not protective in function.
Ex - Hydrilla

1. Intestine absorb the digested food
orally. What type of Epithel

Ans) Columnar Epithelium

2. What are the functions
of ~~ep~~ Squamous Epithelial
tissues

Ans) The functions of
Squamous Epithelial
tissues are

* The outline of the cell
is slightly irregular
where in the cell
fit in bounding lining
or covering.

* The simple epithelia
promote the diffusion
in tissues namely the
reunion of gas exchange
in the lungs and the
exchange of waste
and nutrients in the
at the blood capillaries.



Q. What are the functions of cuboidal Epithelial tissues

Ans) Single cuboidal epithelium consist of a single layer cells that are as tall as they are wide. The important functions of the single cuboidal epithelium are secretion and absorption. This epithelial type is found in the small collecting ducts of the kidney, pancreas and salivary gland.

Q. What are the functions of Columnar Epithelial tissues

Ans) The main functions of Columnar Epithelial tissues are -
Protection.
It also secretes.