

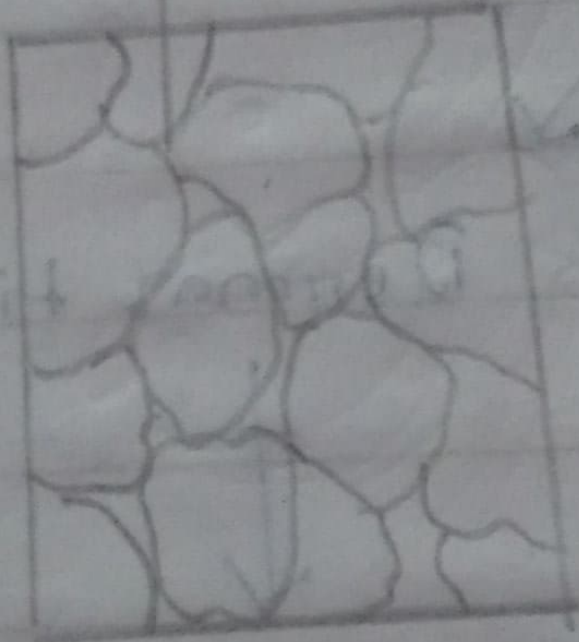
Hw

- 1) Distinguish between Sclerenchyma & parenchyma tissues. Draw well labelled diagram
- 2) Water hyacinth floats on water surface. Explain.
- 3) Why epidermis important (on plants)?
- 4) We get a crunchy & granular feeling, when we chew pear fruit. Why?
- 5) Why it is difficult to pull the husk of a coconut tree?

Answers

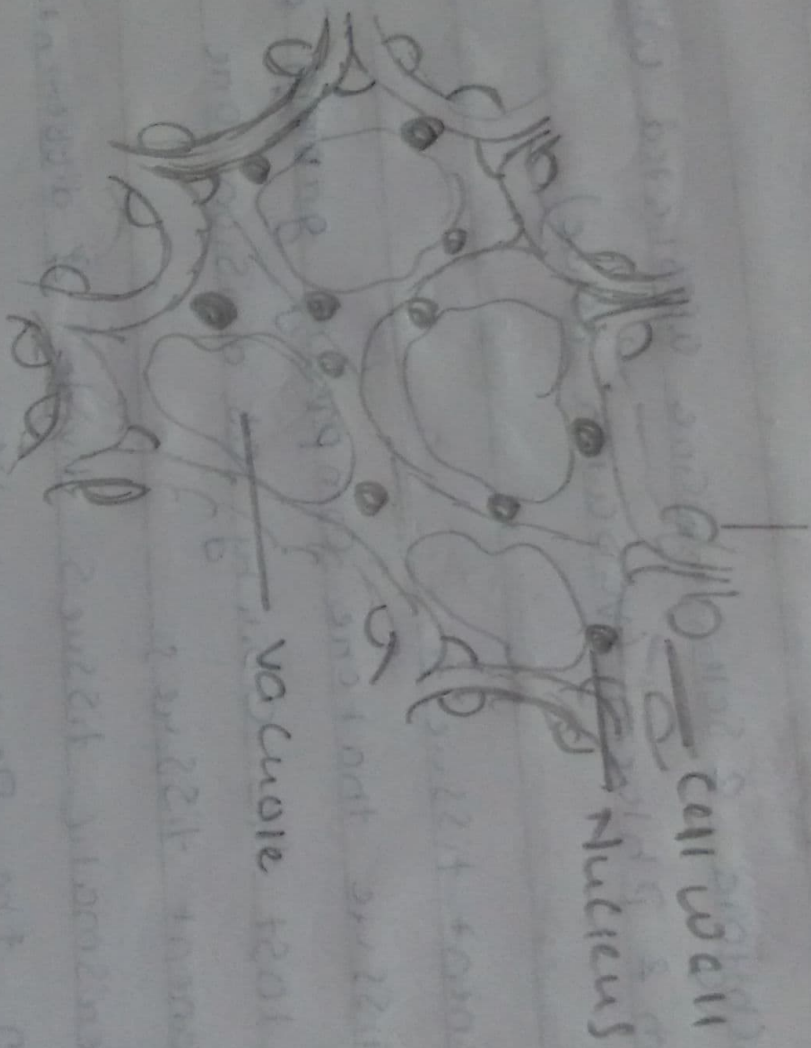
Sclerenchyma	Parenchyma
-) Long dead cells with a deposit of lignin in the cell wall	-) Plant cells with thin cell wall & living protoplasm
-) They do not have intracellular space	-) They have intracellular spaces
-) Present in stem, around vascular bundles, in veins of leaves & in hard covering of seeds & nuts	-) Found in cortex & pith of stems & roots, mesophyll of leaves & packing tissue in xylem & phloem

Intercellular
Space



Parenchyma

Cell wall thickening



Secondary wall thickening

Secondary wall thickening

2) Water hyacinth have large air cavities in the parenchyma tissue. For this reason it floats on water. These specialized parenchyma tissue present in water hyacinth are called aerenchyma. This tissue has air filled space inside & because the air gets trapped inside they are able to float.

3) Epidermis is important for plants because:-

-) It forms boundary between plant & external environment
-) It prevent water loss
-) It regulates the gaseous exchange
-) Secretes metabolic compounds
-) It absorbs water & minerals.

4) Pear contain cells of Sclerenchyma.

They are hard & with highly thickened cell wall. These cells give the crunchiness & granular feeling when we chew pear fruit.

5) Walls of Sclerenchyma are lignified, which make them thick. This tissue make the plant hard & stiff. Coconut husk is very hard & is made of such thickened, lignified cells. Such cell make it very hard to pull out the coconut husk.