

# Homework

1. 1. Robert Hooke
2. Esophagus
- ~~3. leaves~~
3. All of these
4. Looking at the Sun directly
5. Alveoli
6. Duodenum
7. Tonoplast
8. Sepals
9. Carbohydrates
10. Petiole
11. Cone
12. Swimming
13. Petals
14. ~~the~~ cytoplasm
15. Oxygen

2. A. 1. Lysosomes

2. Plaque

3. renation

4. Enamel

5. Stomata

B. 1. Maltase

2. Webbed

3. fruit

4. centrioles

5. respiration

3. A. Chloroplast - Manufacture of food in plants

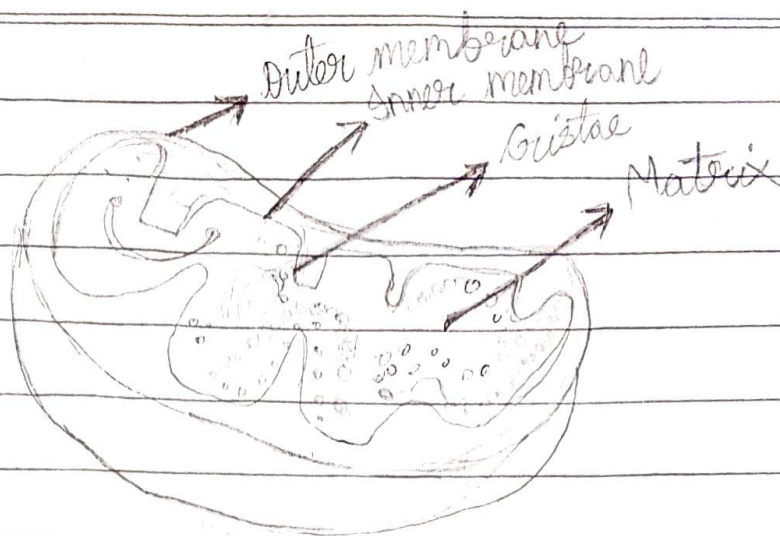
Cell membrane - Entry and exit of materials

Ribosome - Synthesis of proteins

Amylase - Converts starch into maltose

Trypsin - Converts peptones into amino acids

B. Mitochondria: ~~With~~ Mitochondria is a rod-shaped organelle which are considered as the power generators of the cell. Mitochondria performs cellular respiration, which converts glucose and oxygen into Adenosine Triphosphate (ATP). Adenosine Triphosphate is the ~~the~~ biochemical energy 'currency' of the cell for all activities.



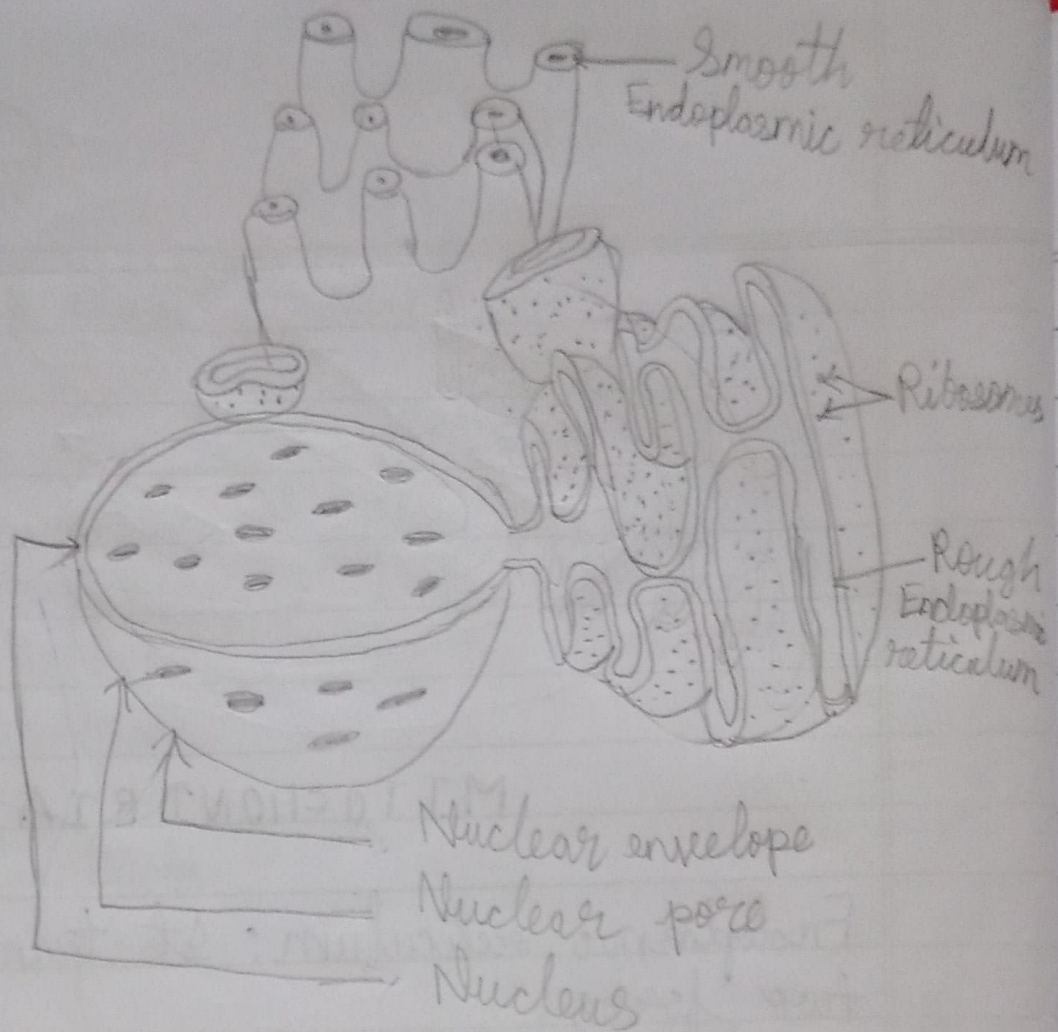
## MITOCHONDRIA

Endoplasmic reticulum: It transpires in two forms:

1. Rough endoplasmic reticulum: The endoplasmic ~~reticulum~~ ~~is~~ which is studded with ~~no~~ ribosomes because of which it has a rough surface is called rough endoplasmic reticulum. It is responsible for <sup>synthesis</sup> protein.

2. Smooth endoplasmic reticulum: The endoplasmic reticulum which does not have ribosomes because of which it has a smooth surface is ~~is~~ called smooth endoplasmic reticulum. It is responsible for lipids synthesis.

All eukaryotic cells contain endoplasmic reticulum except sperm cells and red blood cells.



## ENDOPLASMIC RETICULUM

4. A. Seed dispersal is the process by which seeds are dispersed from the parent plant to other places for suitable conditions for germination.

Methods of seed dispersal:

- Wind - Cotton seeds are dispersed by wind.
- Water - Coconut seeds are dispersed by water.
- Animals - Mango seeds are thrown away by animals and hence, get dispersed.
- Insects - Hibiscus is pollinated through insects.

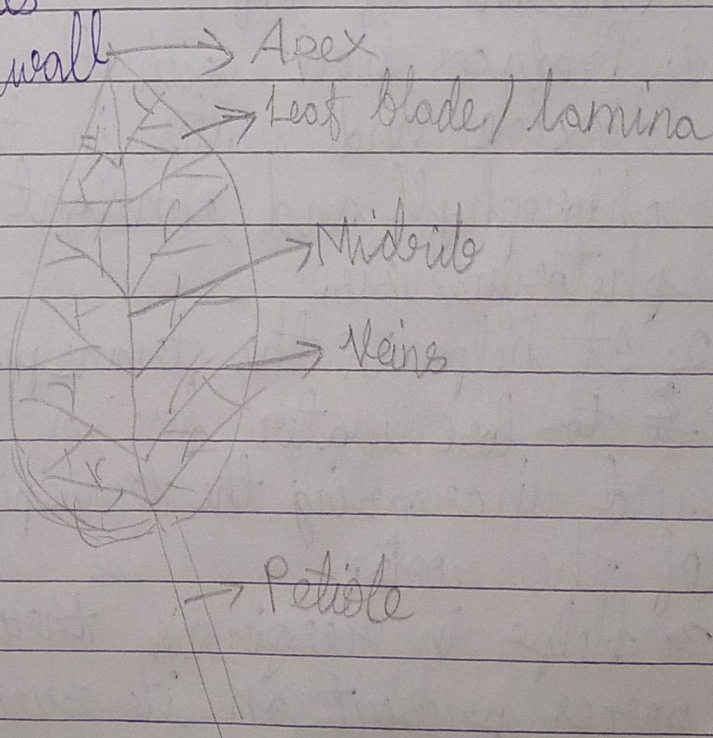
- B.
1. Oesophagus
  2. Gall bladder
  3. Stomach
  4. Pancreas
  5. ~~4~~ Small intestine

5. A. 1. ~~4~~ The leaves of cactus have been modified into spines to reduce the loss of water as cactus lives in desert areas and in deserts, there is lack of water.

~~4~~

- B.
1. Tetanus
  2. Conjunctivitis
  3. Rose
  4. Diabetes
  5. Cell wall

6. A.



1. Leaf blade/lamina: The flat, green, broad part of the leaf is known as the leaf blade/lamina. The tip of the leaf is called apex.

2. Petiole: The leaf is connected to the stem through a stalk called petiole.

3. Midrib: The petiole continues into the ~~base~~ lamina as the midrib. It gives out many side branches called veins. The ~~3~~ petiole, midrib, and veins help in the transportation of food and water in the leaf.

Functions of leaf:

1. Produces food with the help of carbon dioxide and water in the presence of chlorophyll and sunlight through photosynthesis.

2. It helps in the transpiration of leaves ~~to~~ to lose water for a cooling effect and increasing the transpirational pull of the roots.

3. Helps in respiration through small pores present on its surface called

stomata.

- B.
1. Egestion: The process of eliminating the waste products of food after digestion and absorption through the anus is called egestion.
  2. Breathing: Breathing is a physical process which includes inhalation of air through the ~~no~~ nostrils and into the nasal cavity and finally into the lungs and exhalation, the forcing out of air ~~from~~ from the lungs.
  3. Internode: The part of stem between two ~~consecutive~~ consecutive nodes is called ~~into~~ internode.
  4. Plaque: Sometimes, the ~~starchy~~ starchy or ~~sugary~~ sugary foods that we eat get stuck to our ~~teeth~~ teeth. This along with bacteria on the teeth surface forms a yellow coloured film called plaque.
  5. Bisexual flower: The flowers with both ~~male~~ male reproductive part (androecium) and female reproductive part (gynoecium) are called bisexual flowers.

Ex - hibiscus.

7. ~~B~~ A. Sometimes, the complete leaf or a part of the leaf are modified to perform specific function. The main modifications of leaves are scale leaves, spines and leaf ~~B~~ tendril.

Leaf tendril: In case of some weak stemmed plants, the leaves are modified into a coiled, wiry structure. This is called leaf tendril. It is sensitive to touch. If it touches any object, it coils around it and supports the plant to climb up.  
Ex - Sweet pea'

Spines: In case of some plants, the leaves are reduced to spines to reduce the loss of water. Ex - cactus and prickly poppy.

Scale leaves: In case of plants like onion and ginger, the leaves are modified into thin, and dry or

thick  
main  
buds

~~B~~ B. 2.

a) Coiled  
on  
surface  
coiled

b) Tendrils  
keep  
swelling  
up  
loss  
also  
whi  
grow  
the  
root



thick and fleshy scale leaves. Their main function is to  $\neq$  protect the buds.

### ~~B~~ B. 2: Importance of transpiration:

a) Cooling effect: As the water keeps on ~~evap~~ evaporating from the surface of the leaf, it gives a cooling effect to the plant.

b) Transpirational pull: As the water keeps on evaporating from the surface of the leaf, the roots pull up more water to make up this loss. Along with water, the roots also pull up minerals and salts which are important ~~to~~ for the growth of the plant. This increases the transpirational pull of the roots.