

# Exercises

① Make a comparison and write down ways in which plant cells are different from animal cells.

Ans) <u>Plant cell</u>	<u>Animal cell</u>
* Cell wall is present.	* Cell wall is absent.
* Plastids are present.	* Plastids are absent.
* Large vacuole is present.	* Small vacuole is present.
* Centrioles are absent.	* Centrioles are present.

② (Already written in notes part in cw copy)

## Prokaryotic cell

- well defined nucleus are not present.
- simple in structure
- It contains single chromosomes.
- Nucleus is absent.
- small in size (1-10 micrometer).

## Eukaryotic cell

- well defined nucleus are present
- Complex in structure
- It contains more than one chromosome.
- Nucleus is present
- Large in size (5-100  $\mu$ )

③ What would happen if the plasma membrane ruptures or breaks down?

Ans) If the plasma membrane suddenly ruptures or breaks down then the exchange of substances in and out of the cell will not be proper and the cell organelles will combine with external function of cell and indeed the cell will die.

④ What would happen to the life of a cell if there was no Golgi apparatus?

Ans) \* If there were no Golgi apparatus in the cell, then the packaged material would not be dispatched to various targets inside and outside the cell.

\* without it, there will be no such place inside the cell for the storage, modification and packaging of products.

in vesicles.

\* If there will be no Golgi apparatus there will be no synthesis of cell wall, plasma membrane and lysosomes.

⑤ Which organelle is known as the powerhouse of the cell? why?

Ans) Mitochondria is known as the powerhouse of the cell as it generates the energy in the form of ATP (Adenosine Triphosphate). The energy required for various chemical activities needed for life is released by mitochondria in the form of ATP molecules. ATP is known as the energy currency of the cell. The body uses energy stored in ATP for making new chemical compounds and for mechanical work.

⑥ Where do the lipids and proteins constituting the cell membrane get synthesised?

Ans) Lipids are synthesised in the Smooth Endoplasmic Reticulum (SER), important for cell function. Proteins are synthesised in the Rough Endoplasmic Reticulum (RER). The manufactured proteins are then sent to various places in the cell depending on need, using the ER.

⑦ How does an Amoeba obtain its food?

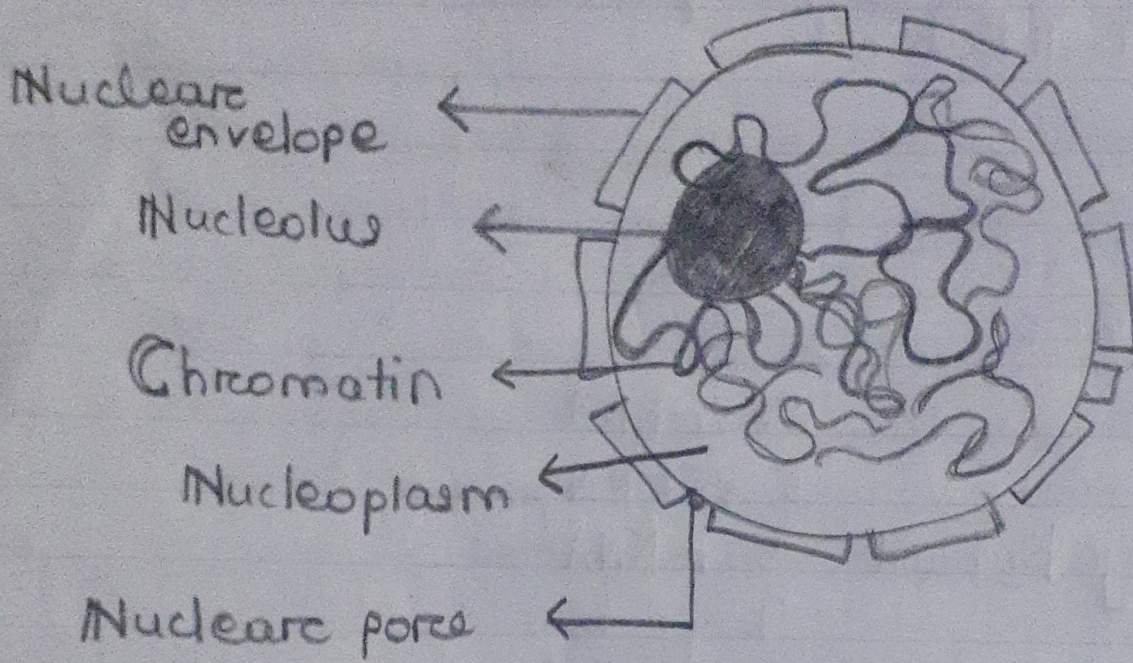
Ans) Amoeba obtains its food by the process of endocytosis.

It engulfs the food particle with the help of pseudopodia and then forms a vacuole around it. When the particle is completely trapped the amoeba secretes digestive enzymes that digest the food, then the amoeba obtain it's food.

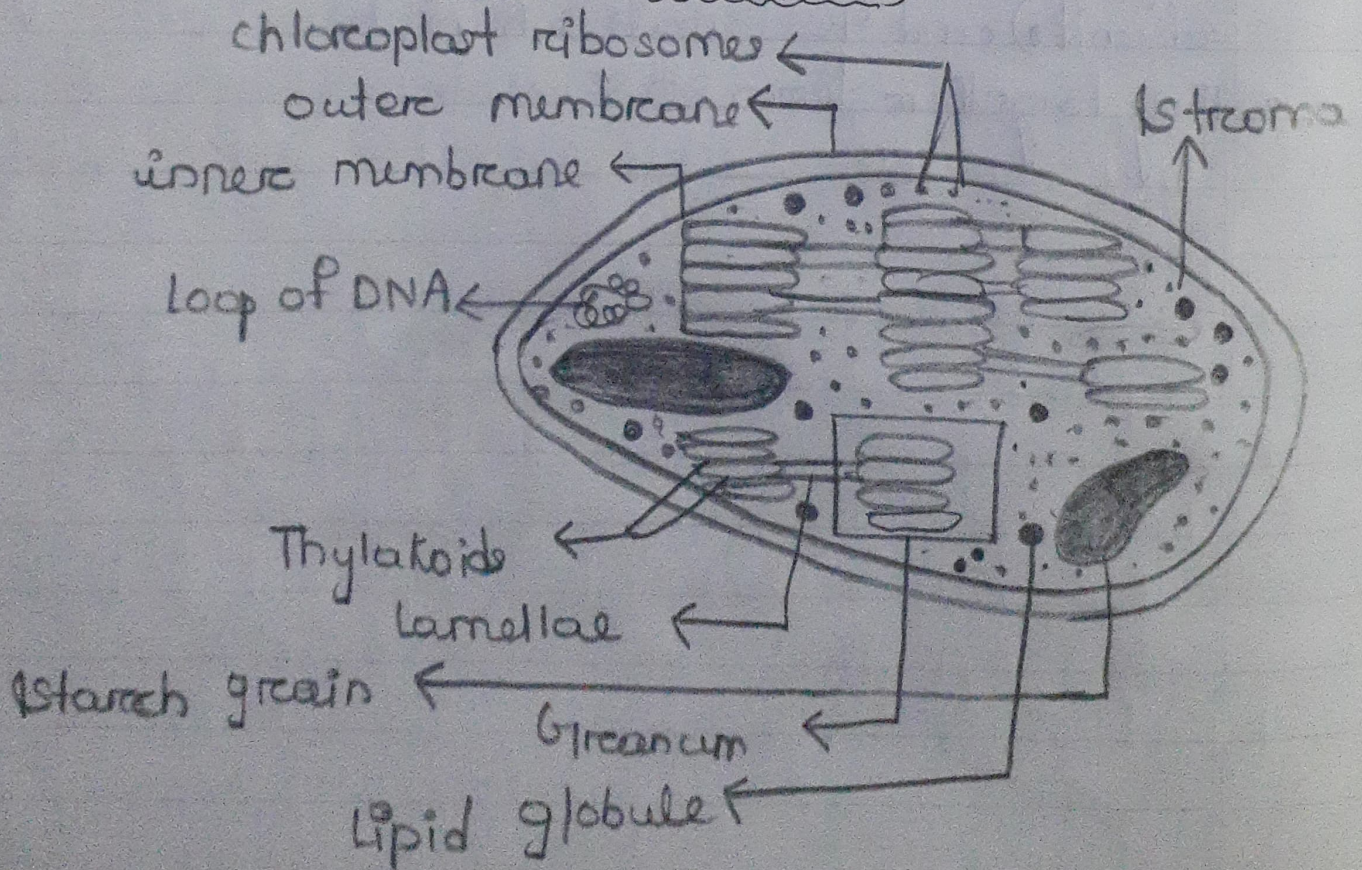
Q) What is osmosis?

Ans) The movement of water molecules through a selectively permeable membrane from a region of higher water concentration to a region of lower water concentration is known as osmosis.

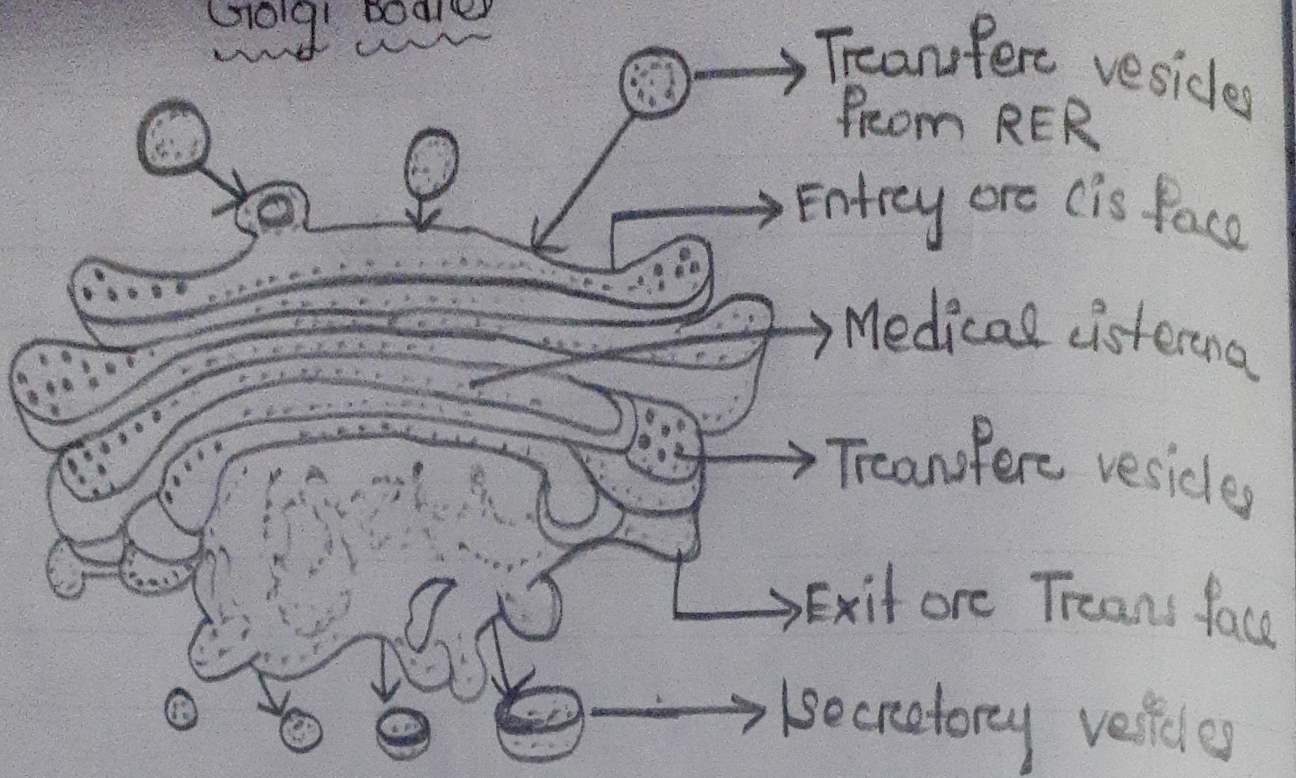
Nucleus



Plastids (chloroplast)



Golgi Bodies



Mitochondria

