

by

Exercise :- (1) Make a comparison and write down ways in which plant cells are different from animal cells.

Ans:-	Plant cells	Animal cells.
*	Usually larger with distinct out lines.	* Usually small -er & with less distinct boundaries.
*	A non-living layer, the cell wall is formed found outside the cell membrane.	* plasma membrane forms the outer most envelope of the cell. There is no cell wall.
*	Plastids are present in plant cell.	* plastids are absent in it.
*	It stored food is in the form of starch.	* It stored food is in the form of glycogen.

(2) How is a prokaryotic cell different from a eukaryotic cell?



Ans 1 Prokaryotic cell

- \* Generally smaller in size (1-10  $\mu\text{m}$ )
- \* Nucleoid is not surrounded by a nuclear membrane.
- \* Contains single chromosome
- \* Nucleolus is absent

Eukaryotic cell

- \* Generally large in size (1-100  $\mu\text{m}$ )
- \* Distinct nucleus is present. Means the nucleoid is surrounded with nuclear membrane.
- \* Contains more than one chromosome.
- \* Nucleolus is present

3) What would happen to the life of a cell if the plasma membrane ruptures or breaks down?

Ans - Plasma membrane is a selectively permeable membrane of the cell. that maintains its constant internal chemical composition of the cell. If it ruptures or breaks down, the constant internal chemical composition of the cell will be lost and it will not be able to perform basic function.

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

Ans:- Effects of the absence of Golgi body on life of a cell are as follows:-

- \* The packaging and dispatching of different types of proteins to various targets inside & outside the cell will be influenced.
- \* The products of cell cannot be stored and modified later.
- \* This will affect the lysosomes formation. This will cause accumulation of worn out and dead cell organelles within the cell, which may cause cell death.

5) Which organelle is known as the powerhouse of the cell? Why?

Ans:- Mitochondria are called powerhouse of the cell. It contains oxidative enzymes, which oxidise the food and convert it into energy currency of the cell in the form of ATP. This energy is used by body for making new chemical compounds & for doing other works. Therefore, it is known as powerhouse of the cell.

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

Ans:- The synthesis of lipids occurs in



smooth Endoplasmic Reticulum [SER]. The proteins are synthesised in the ribosomes, which are attached to the Rough Endoplasmic Reticulum [RER].

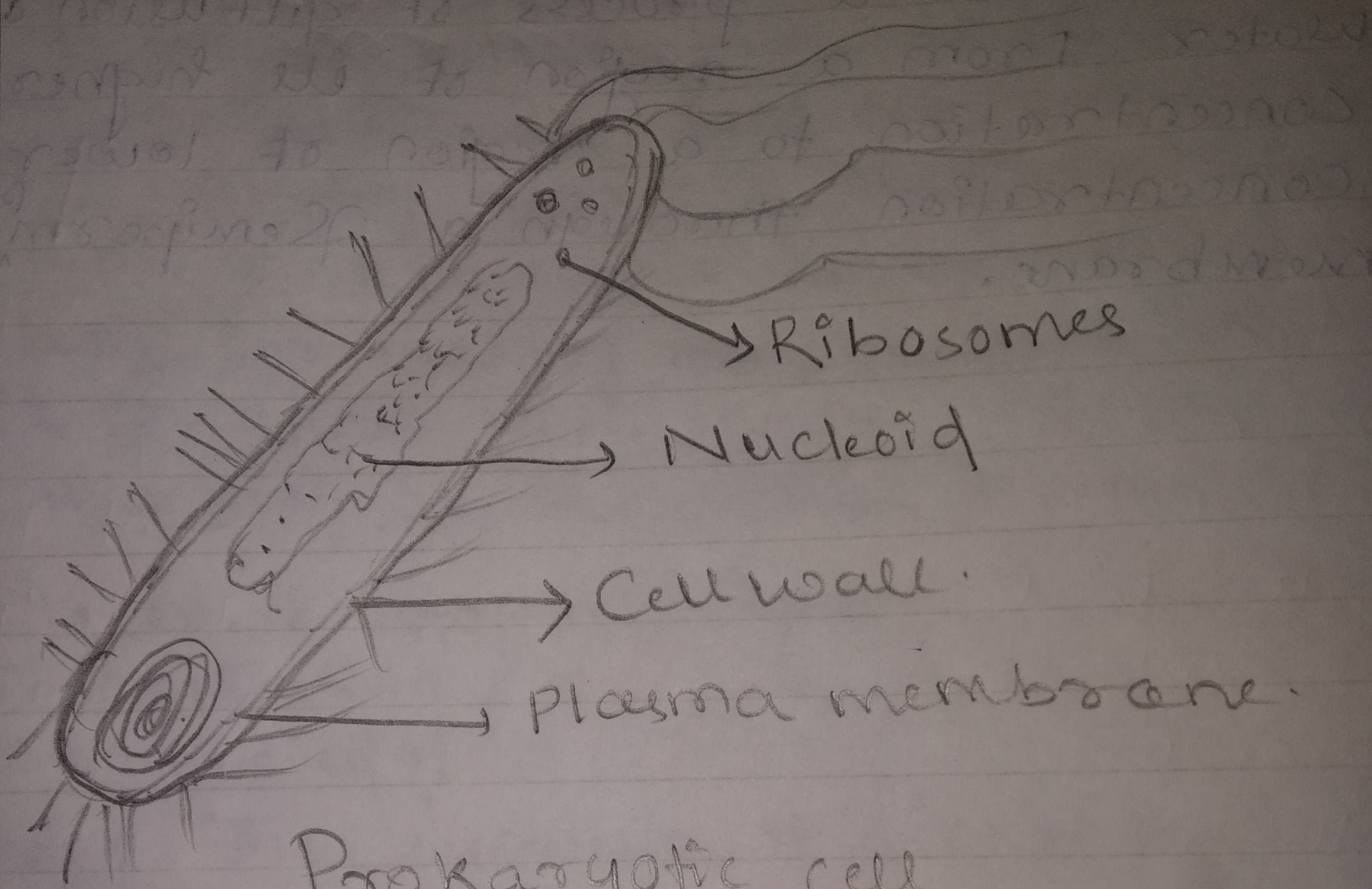
How does an Amoeba obtain its food?

Ans:- Amoeba obtains its food through endocytosis. It is the process of ingestion of food through the plasma membrane. This occurs due to flexibility of plasma membrane, which enables the Amoeba to engulf food & other materials from surrounding.

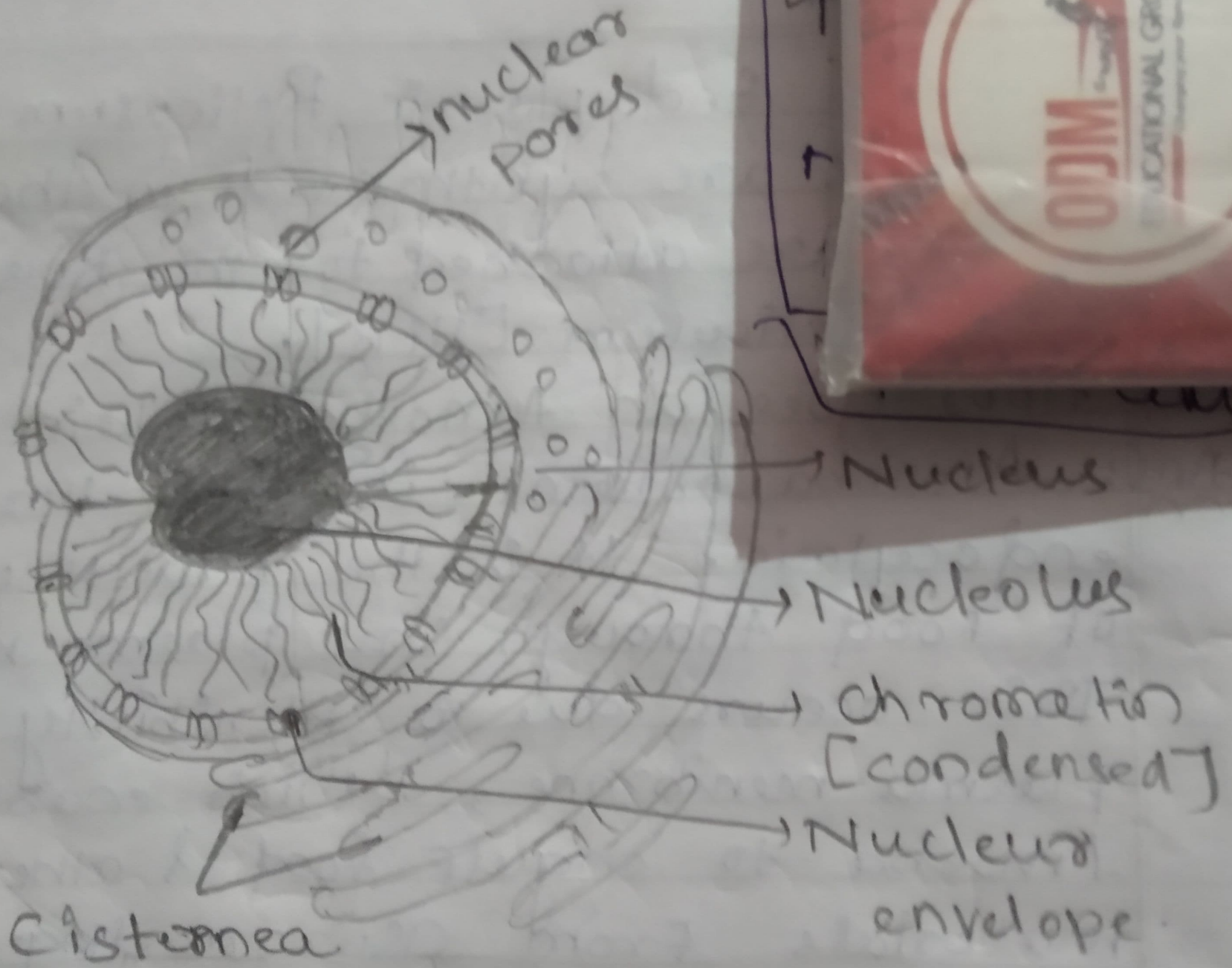
What is Osmosis?

Ans:- Osmosis is a process of diffusion of water from a region of its higher concentration to a region of lower concentration through a semipermeable membrane.



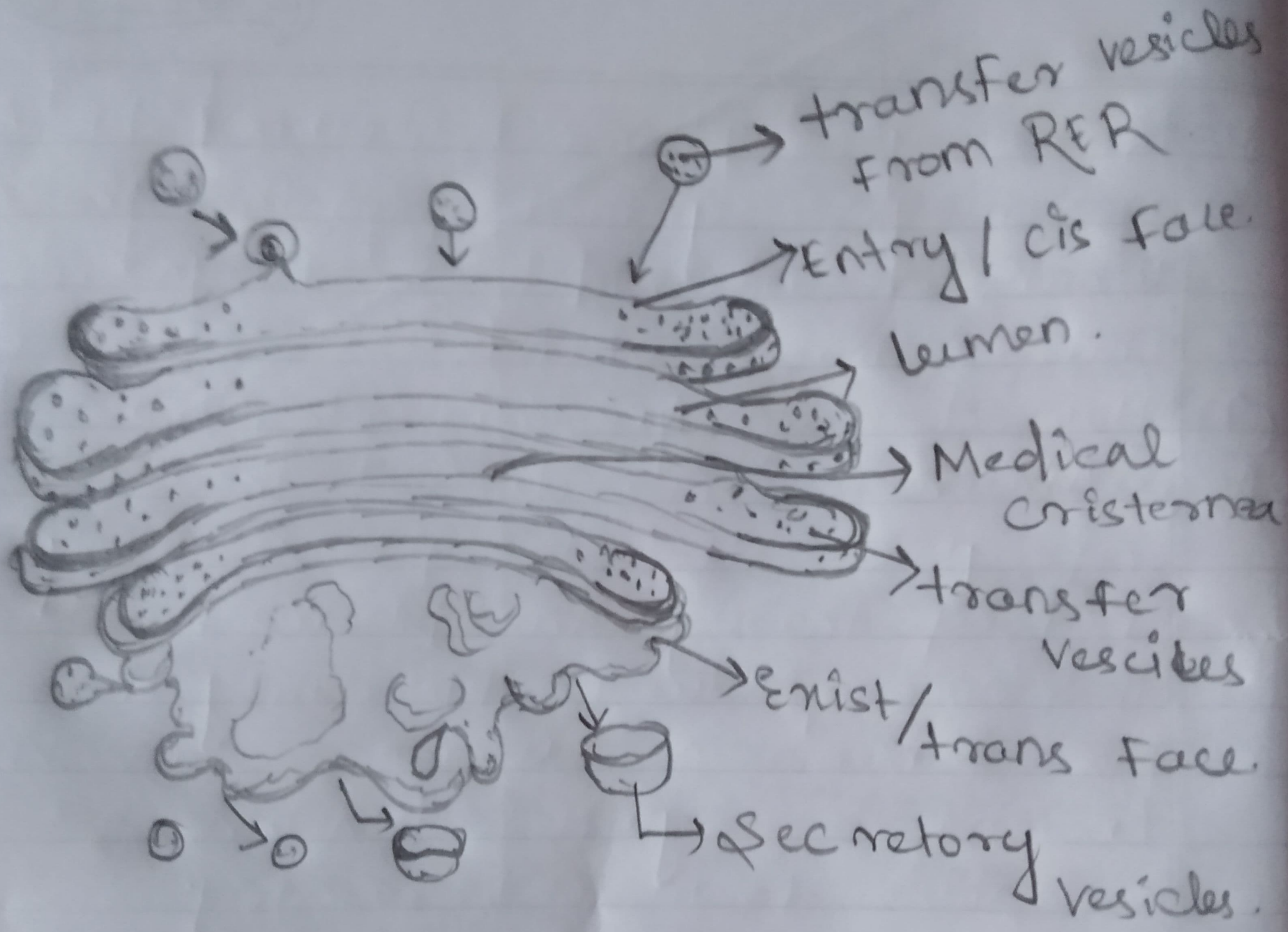


Prokaryotic cell

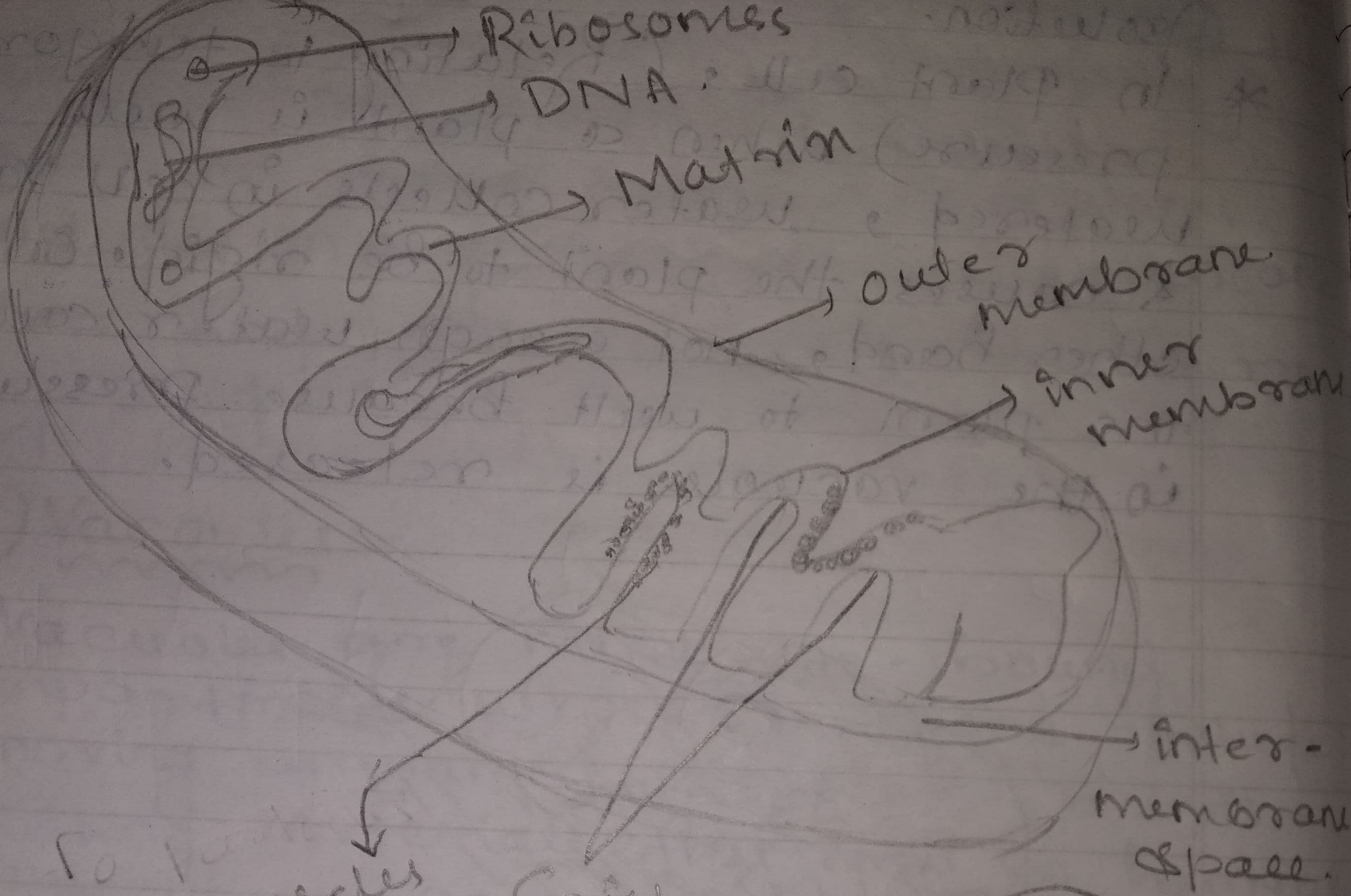


Structure of Nucleus



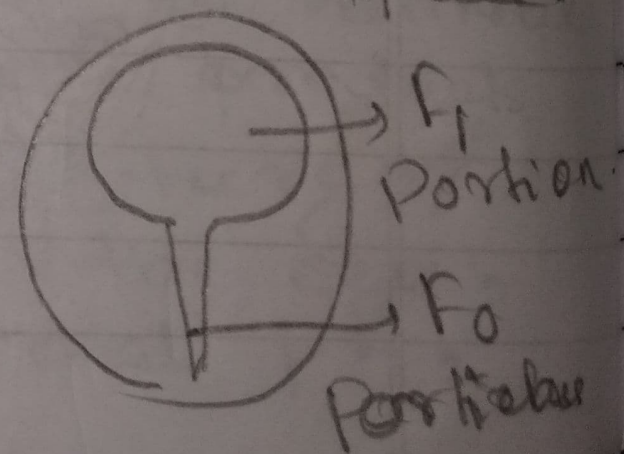


Golgi body



F<sub>1</sub> Particles  
 (Corysomes) Cristae

Mitochondria



Chlor

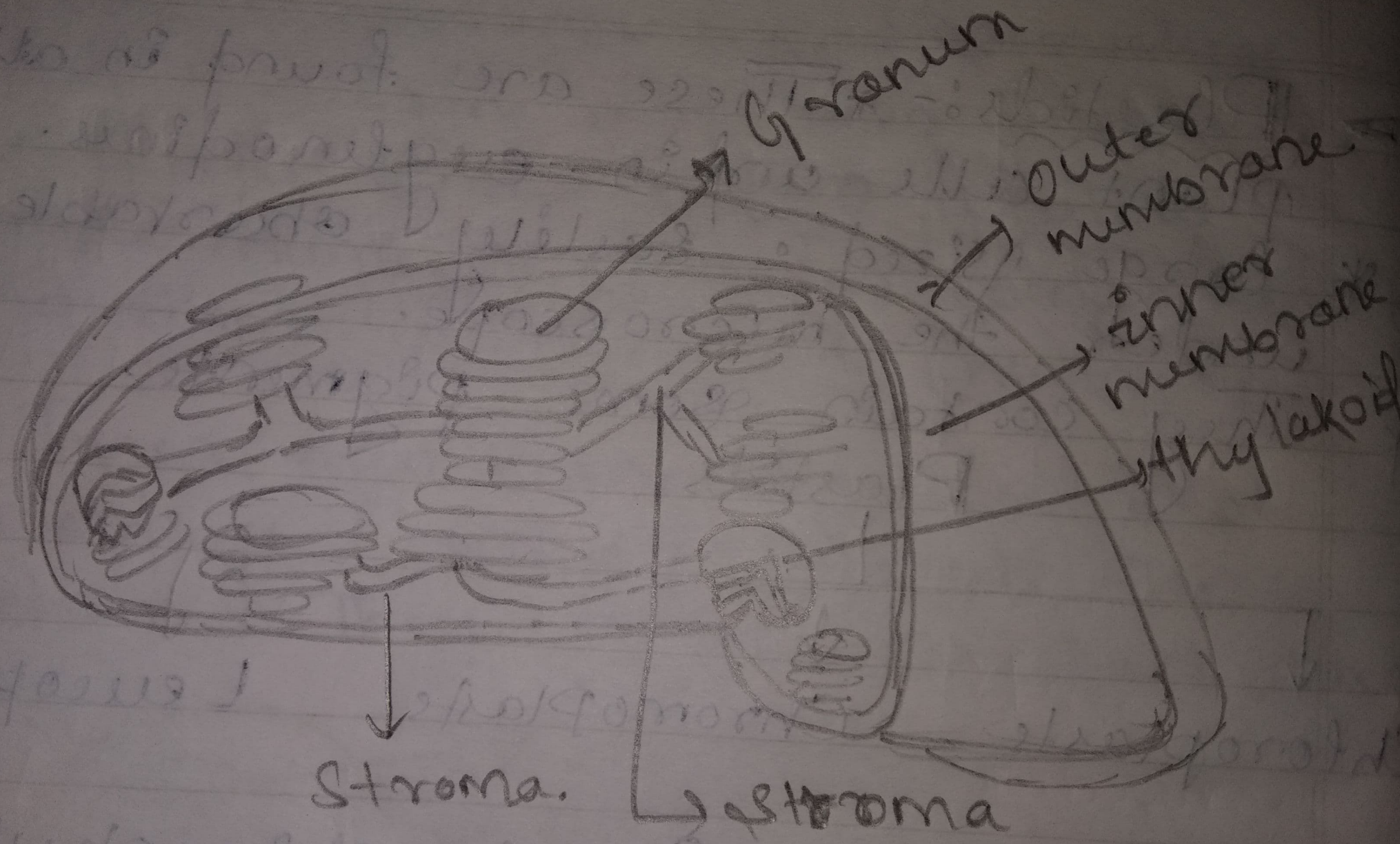
\*

\*

\*

▷





Granum

outer membrane

inner membrane

thylakoid

Stroma.

Stroma

lamella

Chloroplasts