

** Diagram of plastid (chloroplast)

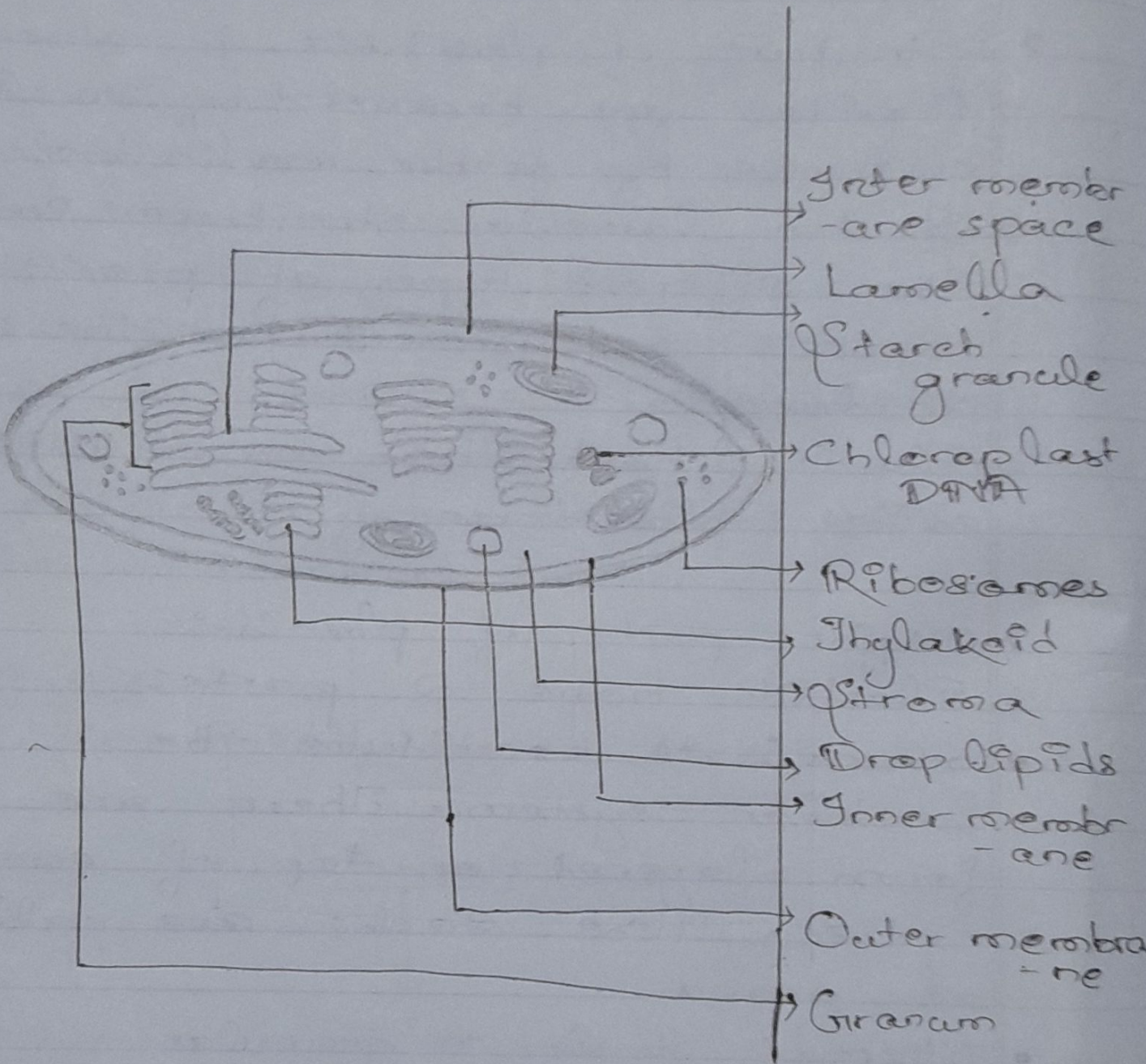


Diagram of Mitochondria

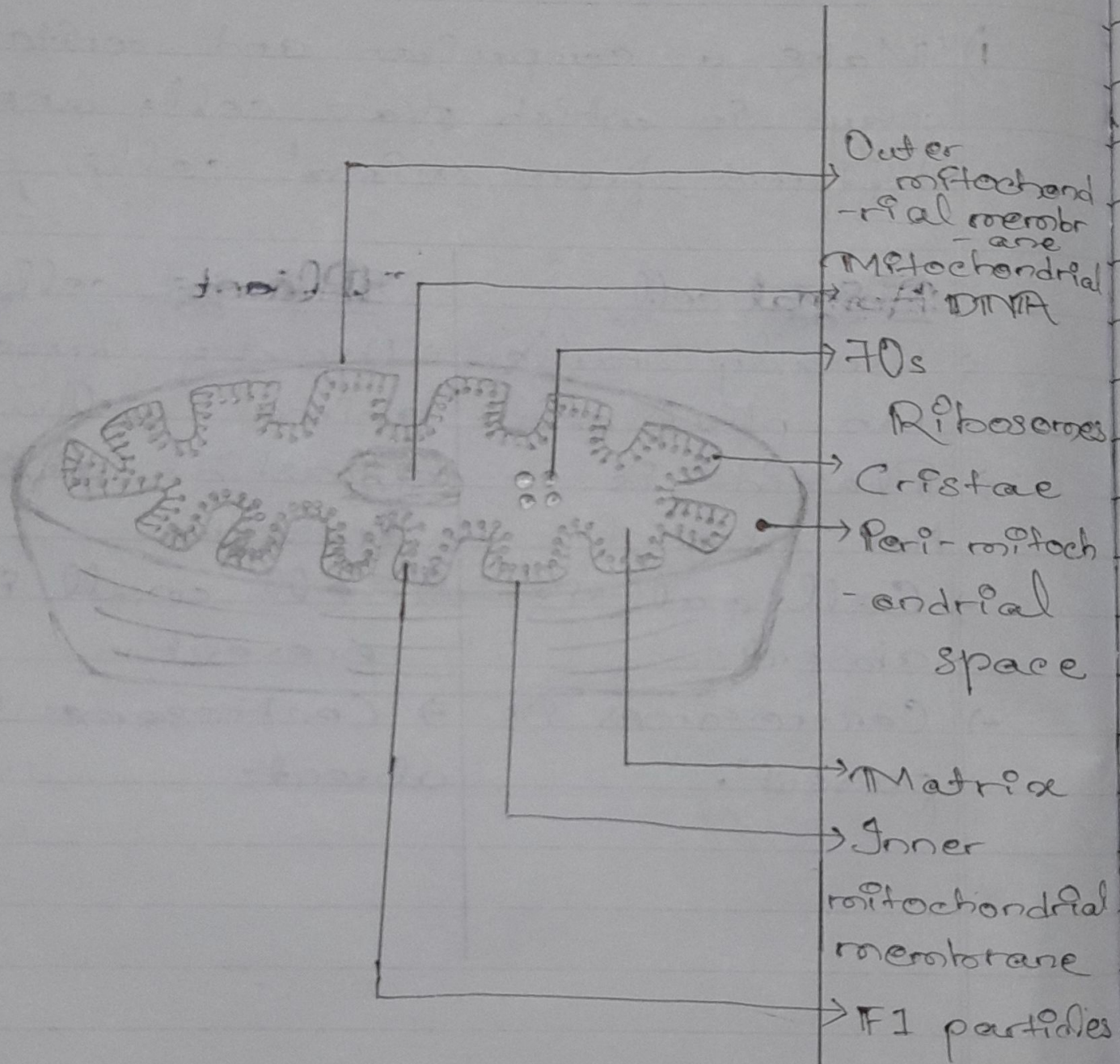


Diagram of Golgi Apparatus

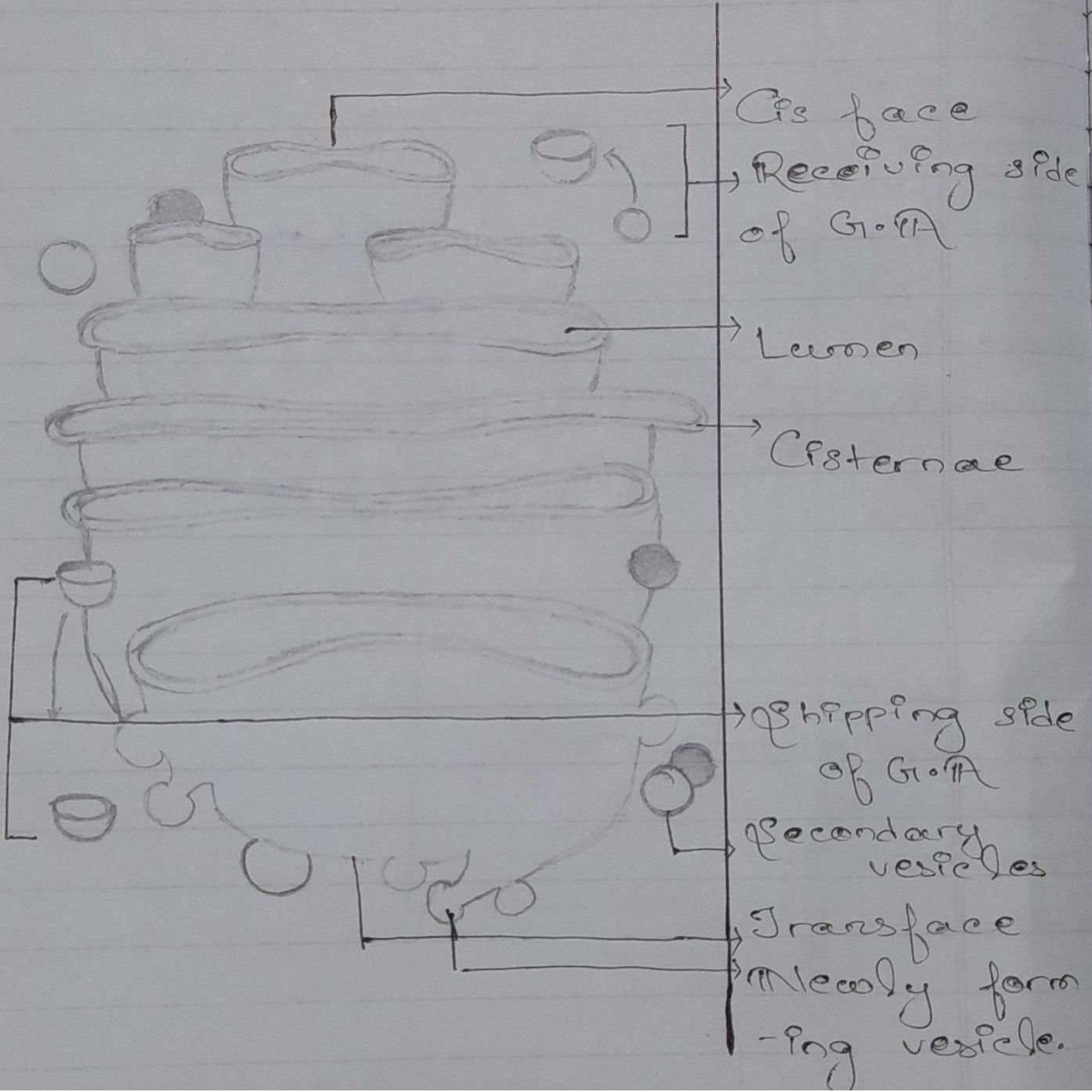
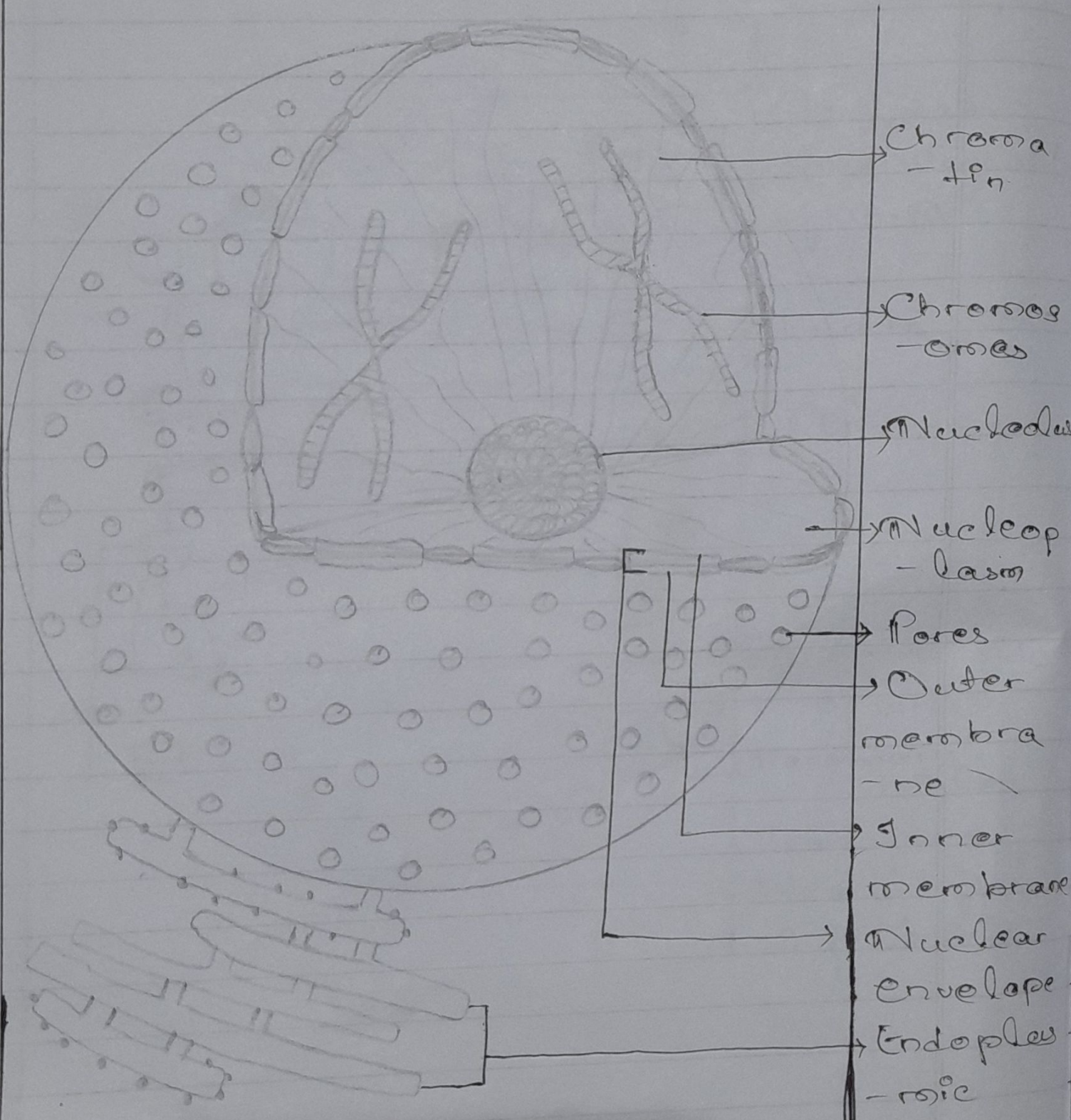
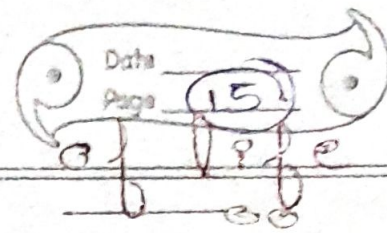


Diagram of Nucleus



The fundamental unit of life



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

<u>Plant cells</u> :-	<u>Animal cells</u> :-
→ Larger than the animal cells.	→ Smaller than plant cells.
→ Contain plastids	→ Do not contain plastid
→ Cell wall is present.	→ Cell wall is absent.
→ Do not contain centrosomes.	→ These do contain centrosomes.
→ Large vacuoles are present	→ Small/no vacuoles are present.

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

<u>Prokaryotic cell.</u>	<u>Eukaryotic cell</u>
→ Primitive and incomplete cell.	→ Advanced and complete cell.
→ Prokaryotes are always unicellular organisms.	→ Organisms are both unicellular and multicellular.
→ Nucleus is not well defined and known as nucleoid.	→ Well defined nucleus is present in eukaryotes.
→ Membrane bound organelles such as golgi complex are absent.	→ Membrane bound organelles such as golgi complex are present.
→ Ribosomes are smaller and randomly scattered.	→ Ribosomes are bigger and attached to the endoplasmic reticulum.

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

→ If the plasma membrane suddenly breaks or ruptures

then the exchange of substances in and out of cell will not be proper and the cell's organelles will combine with its external environment that will disturb the function of cell and indeed the cell will die.

1) What would happen to life if there was no Golgi apparatus?

⇒ Majorly the Golgi apparatus has the following works:-

- Manufacturing (mainly complex sugar)
- Packaging and transport of substances.
- Manufacturing of lysosomes and also involved in manufacturing / formation of new cells.

⇒ So if Golgi Apparatus is absent then the transport of substances will be blocked causing lack of various substances at various parts, the dead cells won't be absorbed as lysosomes cannot be formed, there will be low sugar level in

The cells/the person and most importantly new cells at many parts will not be formed.

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

⇒ "Mitochondria" is known as the "Powerhouse of the cell" because it produces energy in the form of ATP (Adenosine triphosphate), which is required to carry out all the different metabolic processes and life processes.

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

⇒ The lipids and proteins are synthesised in ER [Endoplasmic reticulum].

7) How does an Amoeba obtain its food?

⇒ Through the process of endocytosis, an amoeba obtains its food. As its

only cell membrane is flexible and tough, food particles are engulfed forming a food vacuole girdling it. which is assisted by the "pseudopodia" or the "false feet". Amoeba secretes digestive enzymes to bring about digestion of the engulfed particle once food is trapped.

*) What is Osmosis?

*) The process of movement of water molecule from a region of higher concentration to a region of lower concentration through a semipermeable membrane is known as "Osmosis".