Q5. Make a comparison and write down ways in which plant cells are different from animal cells.

Ans:-

Plant cells	Animal cells
1. Plant cells have cell wall around cell membrane.	1. Animal cells do not have cell wall, they only have cell membrane.
2. In plant cells plastids are present.	2. Animal cells do not contain plastids.

3. They have a large central vacuole.	3. In animal cells, vacuoles are either absent or very small.
4. Plant cells are rigid and have a fixed shape.	4. Animal cells are flexible and have irregular shape.
5. Centriole is either absent or present in lower plant forms.	5. Centrioles are present in animal cells.
6. Nucleus is present in the periphery of the cell.	6. Nucleus is present in the center of the cell.

Prokaryotic	Eukaryotic
1. Prokaryotes do not have a well defined nucleus.	1. Eukaryotes have a well defined nucleus.
2. It is simple in structure.	2. It is complex in structure.
3. It contains single chromosome.	3. It contains more than one chromosomes.
4. The size of the cell is generally small (1–10 μm).	4. The size of the cell is generally large (5–100 μm).
5. Nuclear membrane is absent or nucleoli.	5. Nuclear membrane is present.

6. It does not contain membrane bound organelles.	6. It contains membrane bound organelles.

Q6. What would happen if the plasma membrane ruptures or breaks down?

Ans :- If the plasma membrane ruptures or breaks down then there will be spilling of cytoplasm and all the cell organelles. The cell will not be able to exchange material from its

surrounding by diffusion or osmosis. The lysosomes will burst and will digest the cellular contents. This will result in the death of cell.

Q7. What would happen to the life of a cell if there was no Golgi apparatus?

Ans- 1. If there was no Golgi apparatus, the cells will be disabled from packaging and dispatching materials which were produced by the cells.

2. There wouldn't be any lysosome for intracellular digestion and cleansing.

3. There would be no formation of new plasma membrane.

Q8. Which organelle is known as the powerhouse of the cell? Why?

Ans:- Mitochondria is known as the powerhouse of the cell because they use oxygen and nutrients to create adenosine triphosphate (ATP). ATP is required for providing energy for synthesis of new chemicals, as well as mechanical and other cellular functions. Hence, ATP is also called 'energy currency of the cell'.

Q9. Where do the lipids and proteins constituting the cell membrane get synthesised?

Ans:- Lipids are synthesised over Smooth Endoplasmic Reticulum. Proteins are synthesised over Rough Endoplasmic Reticulum due to the presence of ribosomes.

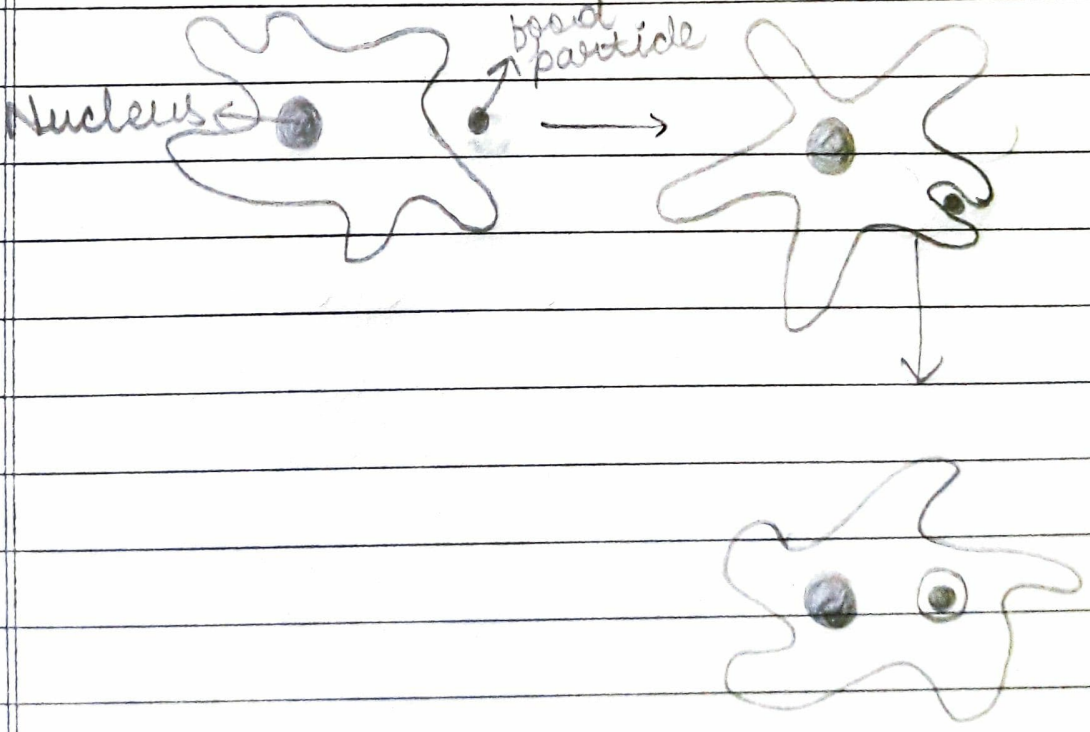
Q10. How does Amoeba obtain food?

Ans:- 1. Amoeba obtains its food through the process of endocytosis.

2. The flexibility of the cell membrane enables the cell to engulf the

solid particles of food and other materials from its external environment.

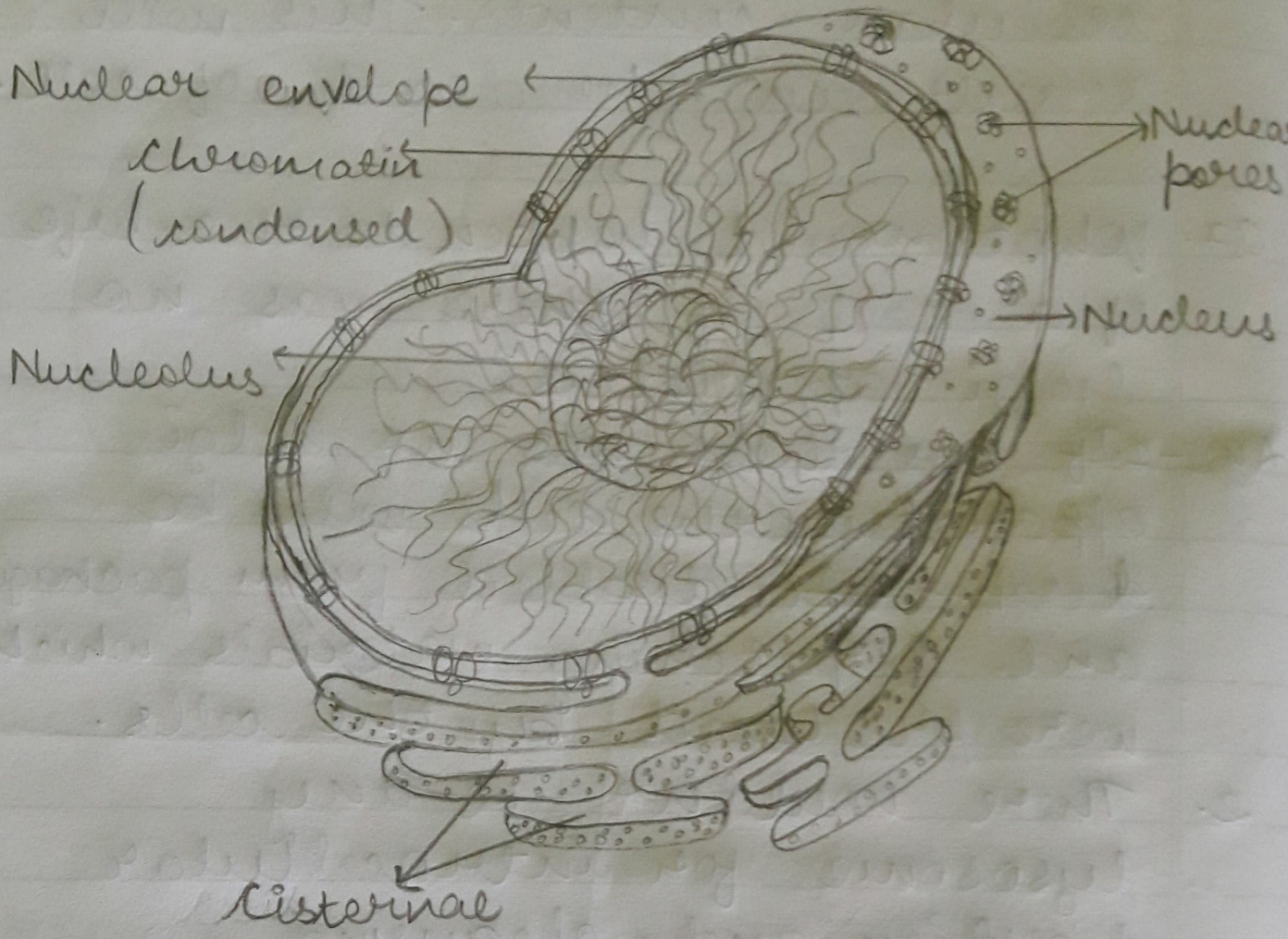
3. The engulfed food patiele passes into the body of Amoeba as a food vacuole.
4. The food vacuole (or phagosome) combines with lysosome to produce digestive vacuole.
5. Digestion occurs in food vacuole.
6. The digested food passes into surrounding cytoplasm and the undigested matter is thrown out of the cell.



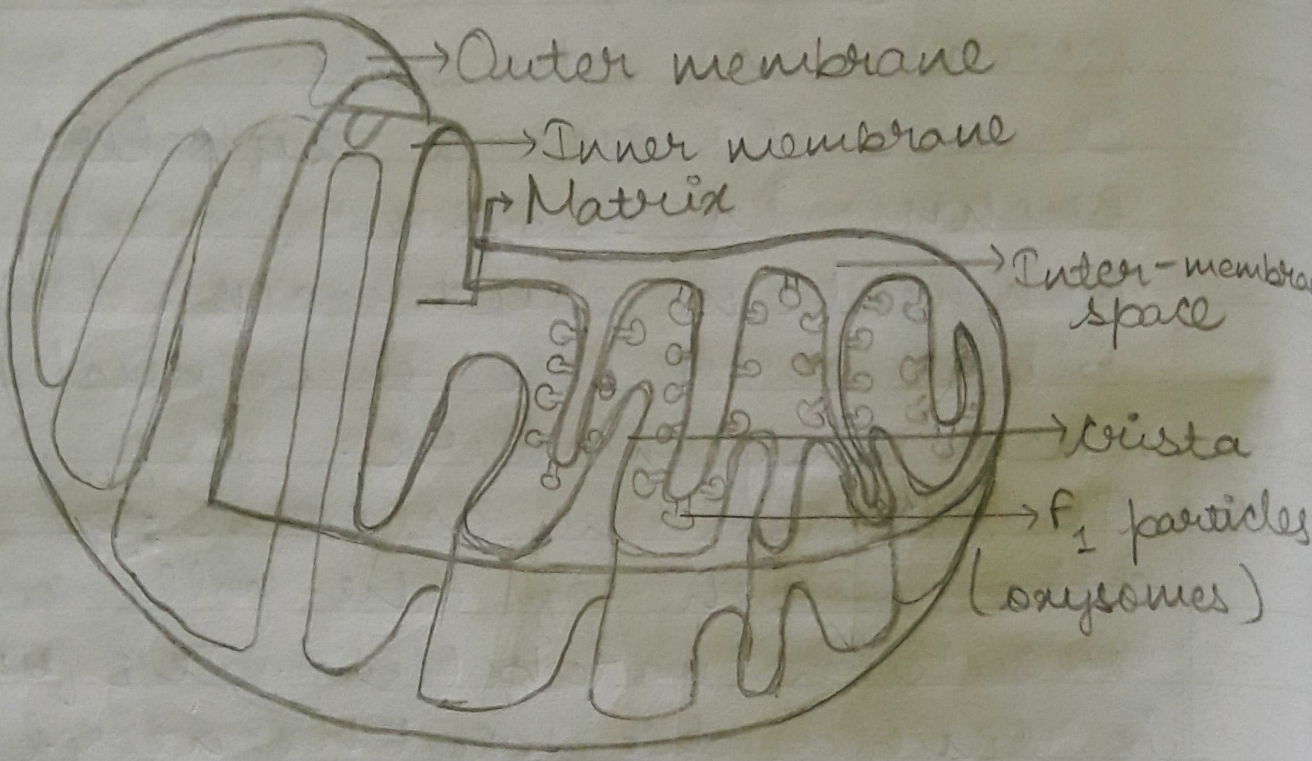
Q11. What is osmosis?

Ans:- The movement of water from the region of its higher concentration to a region of its ~~low~~ lower concentration through a semi-permeable membrane is called osmosis.

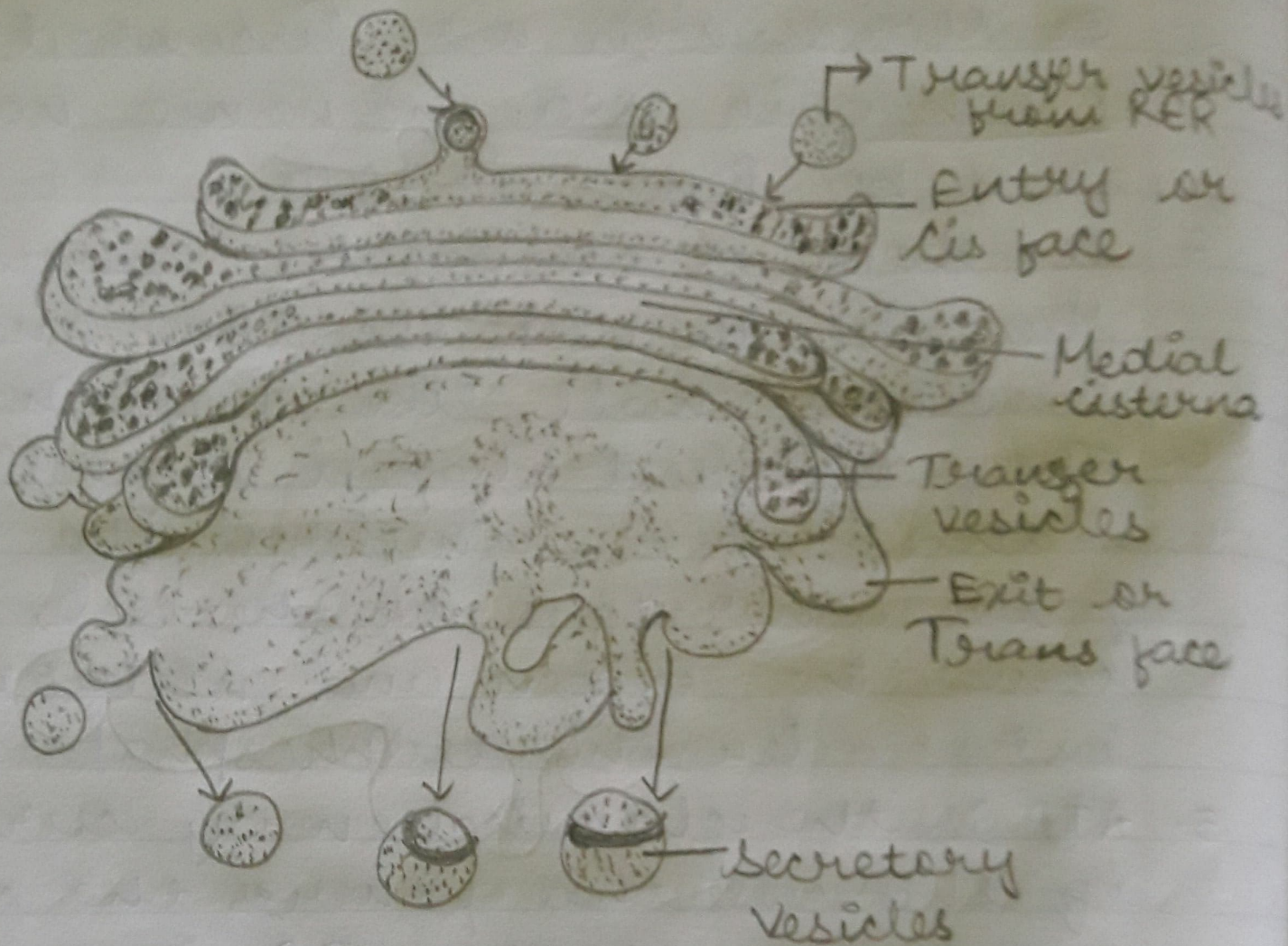
NUCLEUS : (Information Center For The cell)



MITOCHONDRIA : (Power House Of The Cell)



GOLGI BODY


Transfer vesicles from RER
Entry or cis face
Medial cisterna
Transfer vesicles
Exit or Trans face
Secretory Vesicles

PLASTIDS - CHLOROPLAST