

Cell

Date _____

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Exercises

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

→ Animal cell	Plant cell
(i) Cell wall is absent	(i) Cell wall is present
(ii) Vacuoles are absent or very small in size	(ii) Vacuoles are prominent and centrally located
(iii) Nucleus is centrally located	(iii) Nucleus is located towards the periphery
(iv) Stored food is glycogen	(iv) Stored food is starch
(v) plastids are absent	(v) plastids are present

2. How is a prokaryotic cell different from eukaryotic cells?

Prokaryotic cell	Eukaryotic cell
(i) Nucleus Nucleus is absent	(i) Nucleus is present
(ii) contains single chromosome	(ii) contains more than one chromosome.
(iii) generally small in size	(iii) generally large in size
(iv) Membrane bound organelles are absent	(iv) Membrane bound organelles are present

• What would happen if plasma membrane ruptures or breaks down?

→ If plasma membrane ruptures then the contents of the cell ~~with~~^{will} no more be separated ~~to~~ from the external environment and thus the ~~contents may~~ protoplasmic material will be disappeared and if exchange of materials will be not possible eventually the cell will die.

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

→ If there was no Golgi apparatus, then the packaging and transport of materials will stop resulting in the cell's death.

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

→ Mitochondria is known as the powerhouse of the cell because it generates energy in the form of ATP.

~~7~~ How does an Amoeba obtain its food?

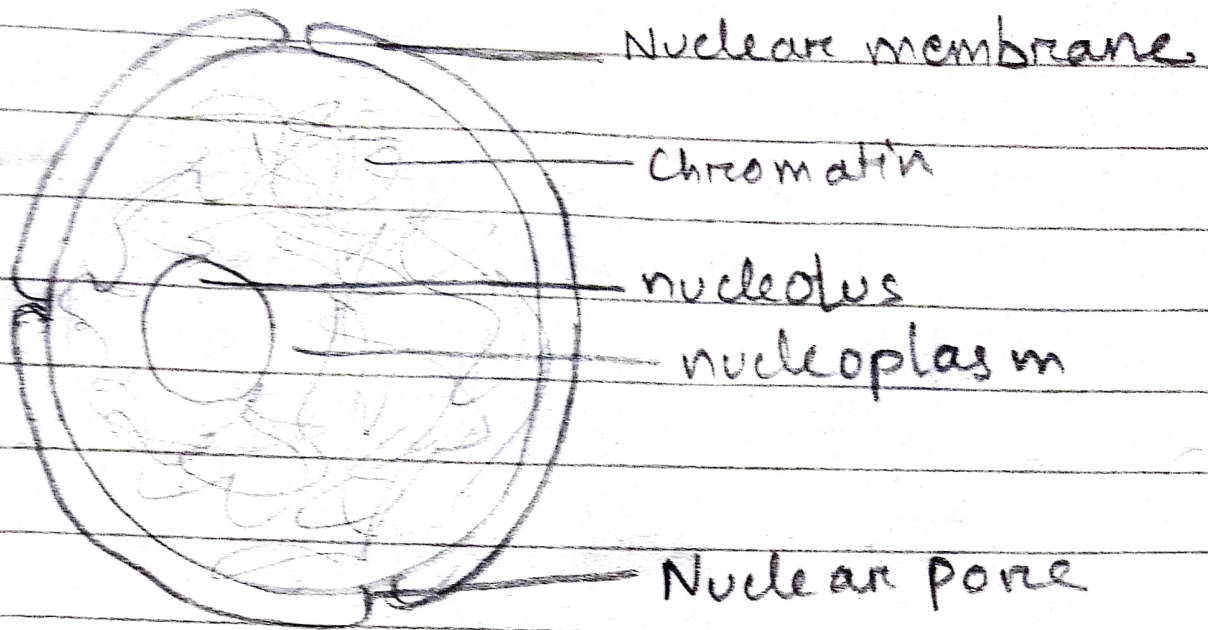
→ Amoeba obtains its food using temporary finger-like extensions of plasma membrane called Pseudopodia, which is then taken into the cell by forming a food vacuole. Then, in the food vacuole it is broken down into simple substances.

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

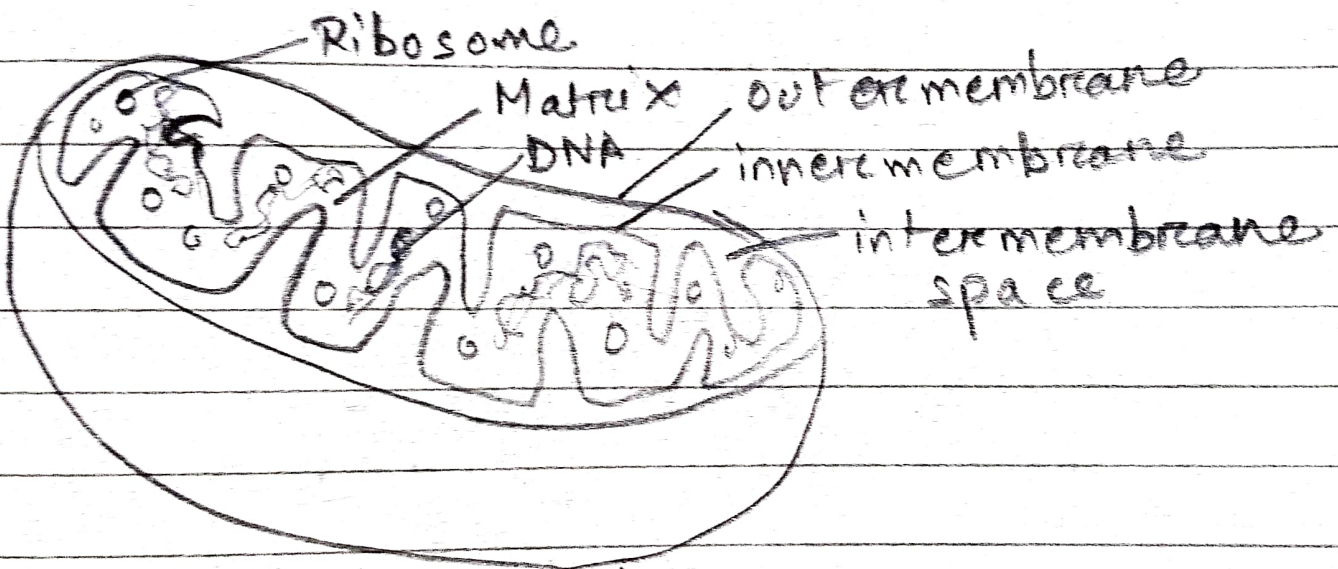
→ The lipids and proteins constituting the cell membrane get synthesized by the Endoplasmic Reticulum and Ribosomes.

8. What is osmosis?

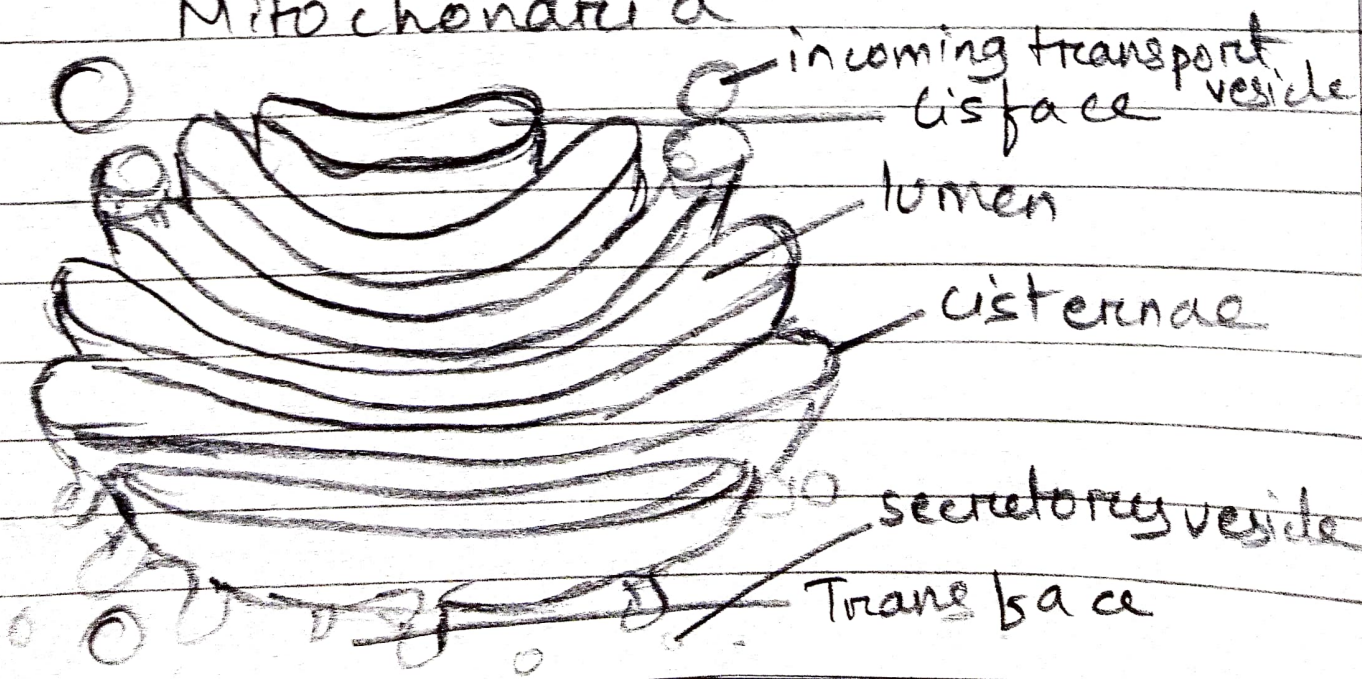
→ Osmosis is a process in which solvent molecules tend to pass through a semi-permeable membrane from a less concentrated solution into a more concentrated one.

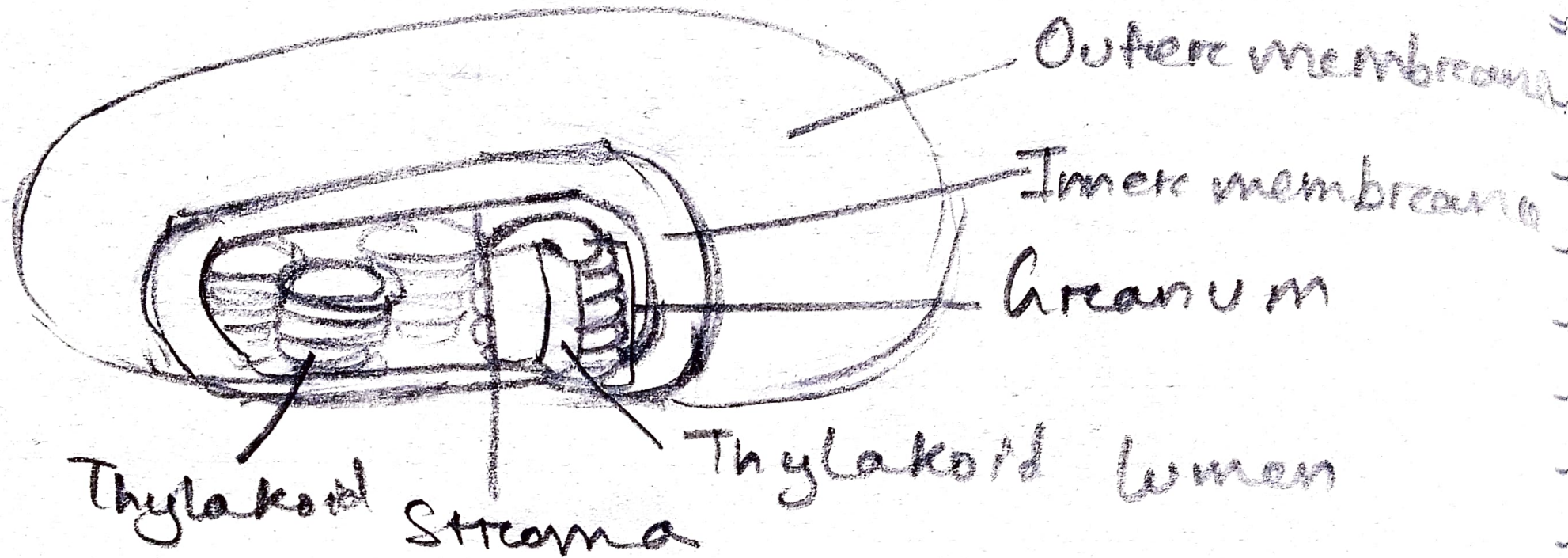


Nucleus



Mitochondria





Chloroplast .