H.W
16/05/21.

Exercise

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

Ans→

Plant cell	Animal cell
• Cell wall is present	• Cell wall is absent.
• Rigid in shape	• They do not have fixed shape
• Centrally located vacuole	• Either absent or present in small size
• Centrioles are absent.	• Centrioles are present
• Plastids are present	• Plastids are absent
• Less no. of mitochondria.	• More no. of mitochondria.
• Nucleus is present in periphery.	• Centrally located nucleus.

3. What would happen if the plasma membrane receptores or breakdown?

Ans→ If the plasma membrane receptores or breakdown, the cell will not be able to exchange material from its surroundings by diffusion or osmosis because it acts as a mechanical barrier. For this reason, the protoplasmic material will be disappeared, and the cell will die.

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

Ans→

Prokaryotic cell	Eukaryotic cell
• Primitive nucleus	• Advance nucleus
• Absence of nuclear membrane	• Presence of nuclear membrane
• Membrane bound organelles are absent only ribosomes which is membrane less is present like ER, mitochondria.	• All membrane bound organelles are absent.
• 0.3 mm to 5 mm	• 5m to 20 mm
• DNA is naked without histone protein.	• DNA is with histone protein.

• cell wall is made up of peptidoglycon, present in all bacteria, except mycoplasma.	• In plants, cell wall is made up of cellulose, in fungi - chitin, in animals it is absent.
• Ribosomes are 70s	• Ribosomes are 80s.

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

Ans→ If there was no Golgi apparatus, the packaging and transport of materials would not occur. Also lysosomes would not be produced, and the accumulation of dead and damaged organelles and molecules in the cell would ultimately result in cell death.

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

Ans→ Mitochondria is known as the powerhouse of the cell because the energy currency of the cell known as ATP is produced here.

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

Ans→ Lipids are synthesised in the Smooth Endoplasmic Reticulum (SER) and proteins are

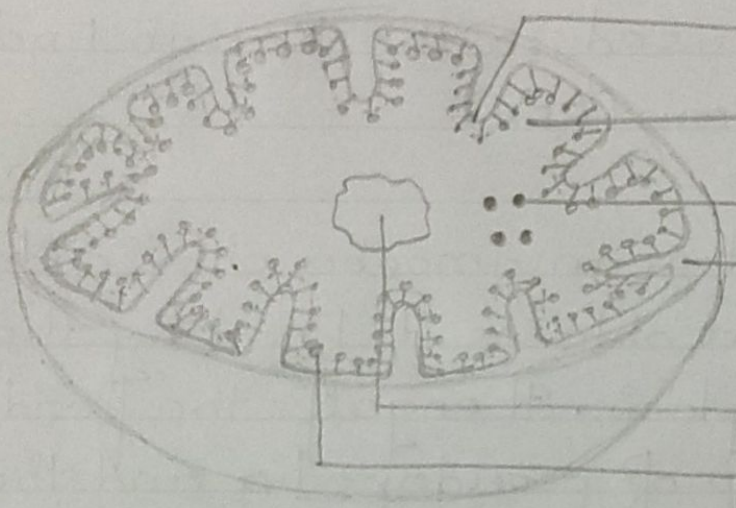
synthesised in the Rough Endoplasmic Reticulum (RER).

7. How does an Amoeba obtain its food?

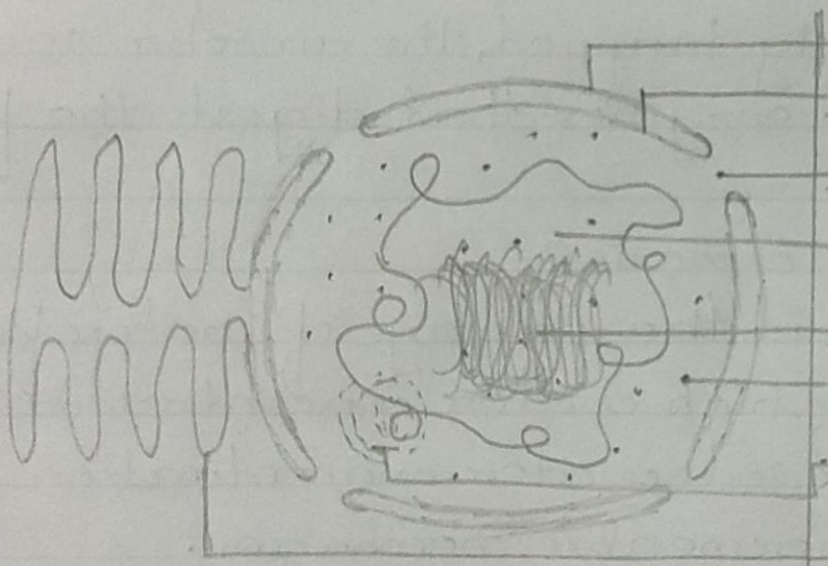
Ans→ Amoeba obtains its food by the process of endocytosis. It engulfs the food particle with the help of pseudopodia and then forms a vacuole around it. When the particle is completely trapped, the amoeba secretes digestive enzymes that digests the food.

8. What is osmosis?

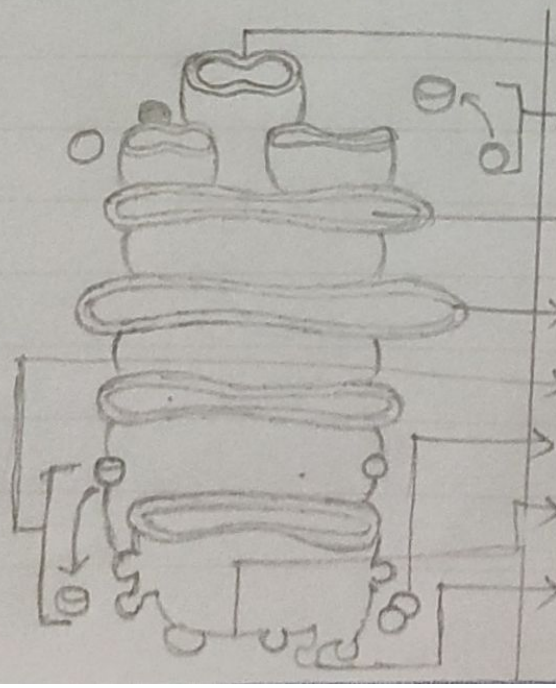
Ans→ Osmosis is the passage of water from a region of high water concentration to a region of lower water concentration through a semi-permeable membrane.



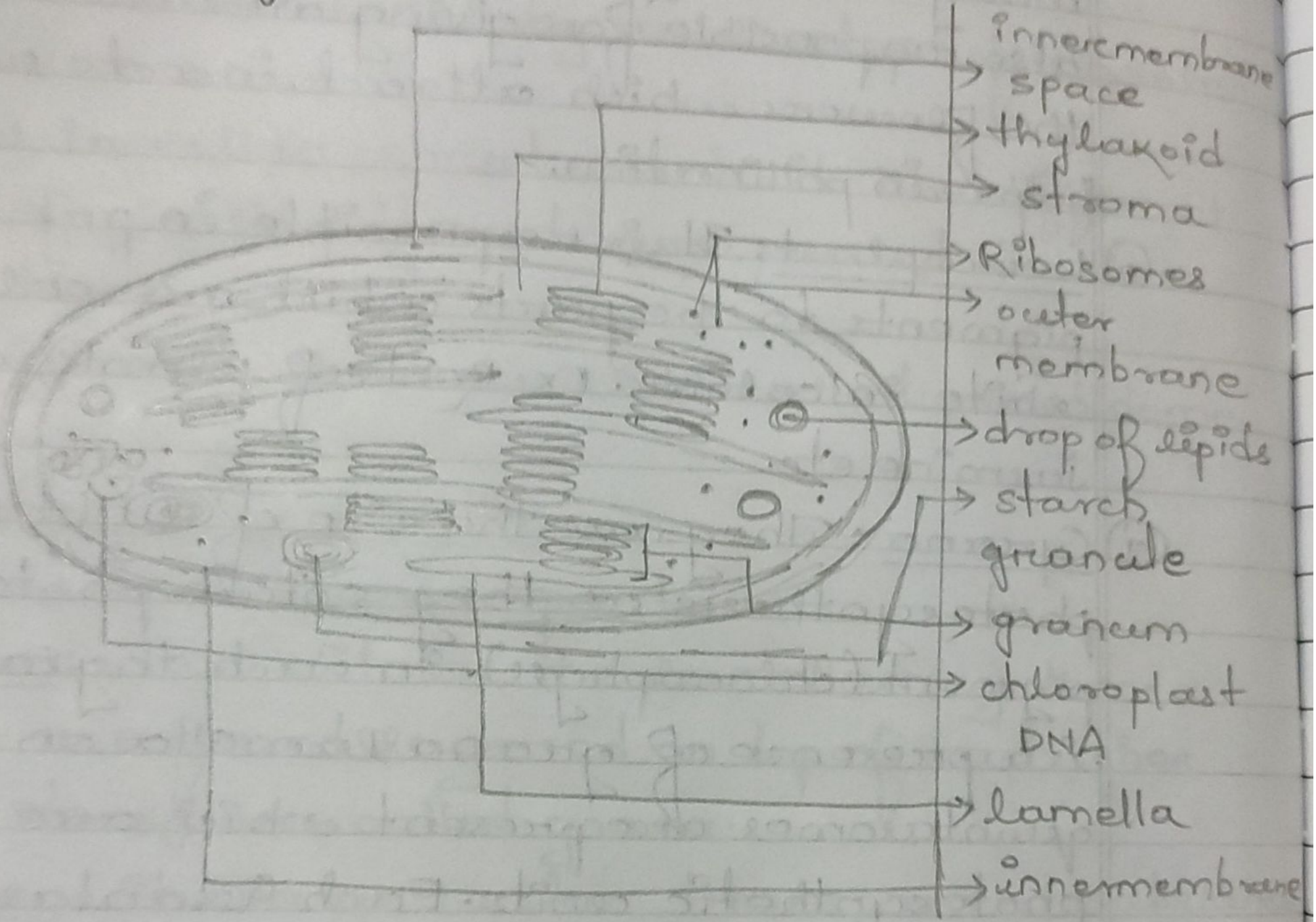
Mitochondria



Nucleus



Golgi Apparatus



Chloroplast