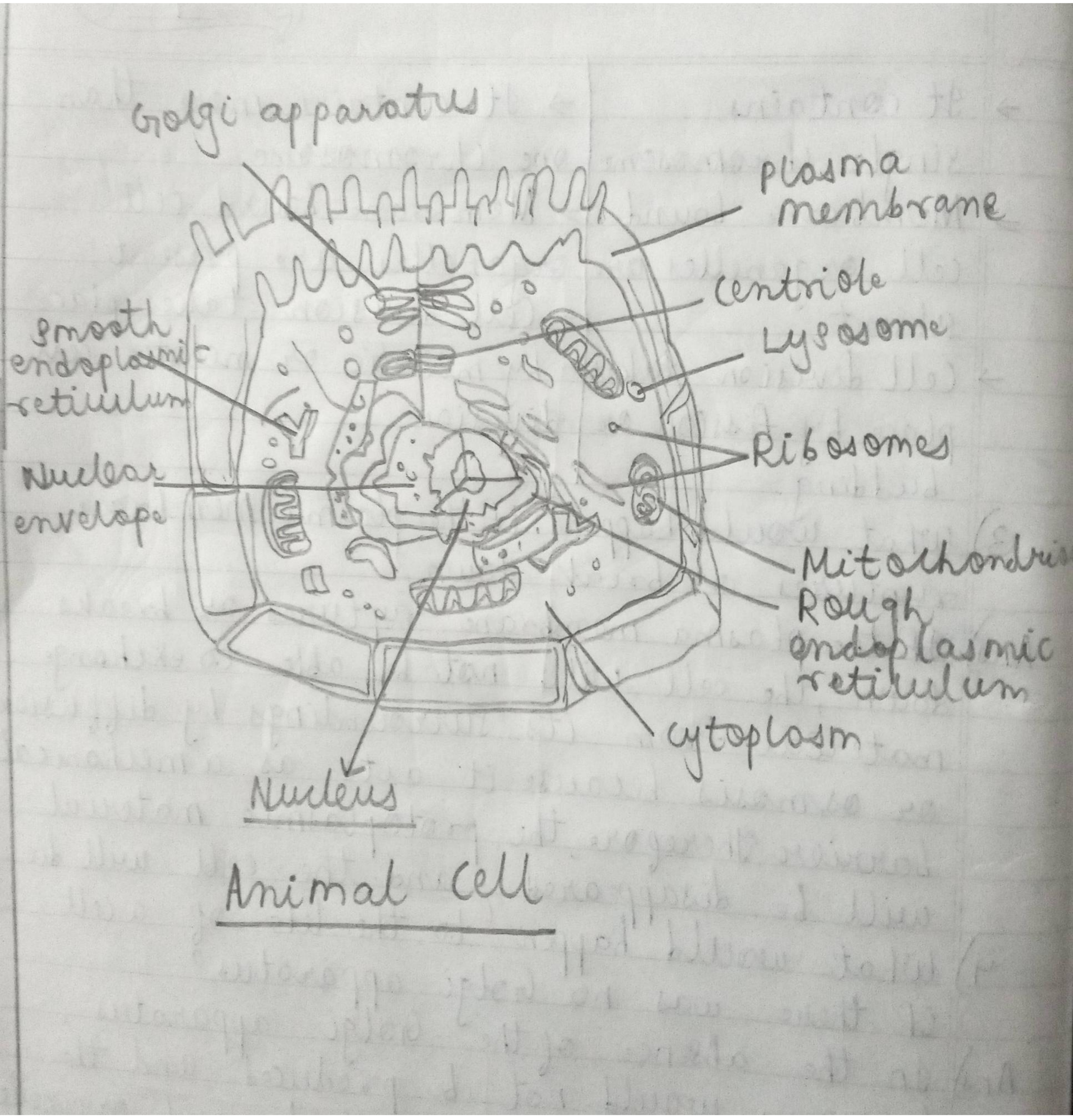

Animal cell

HW
17/5/2021

Date
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Exercises

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

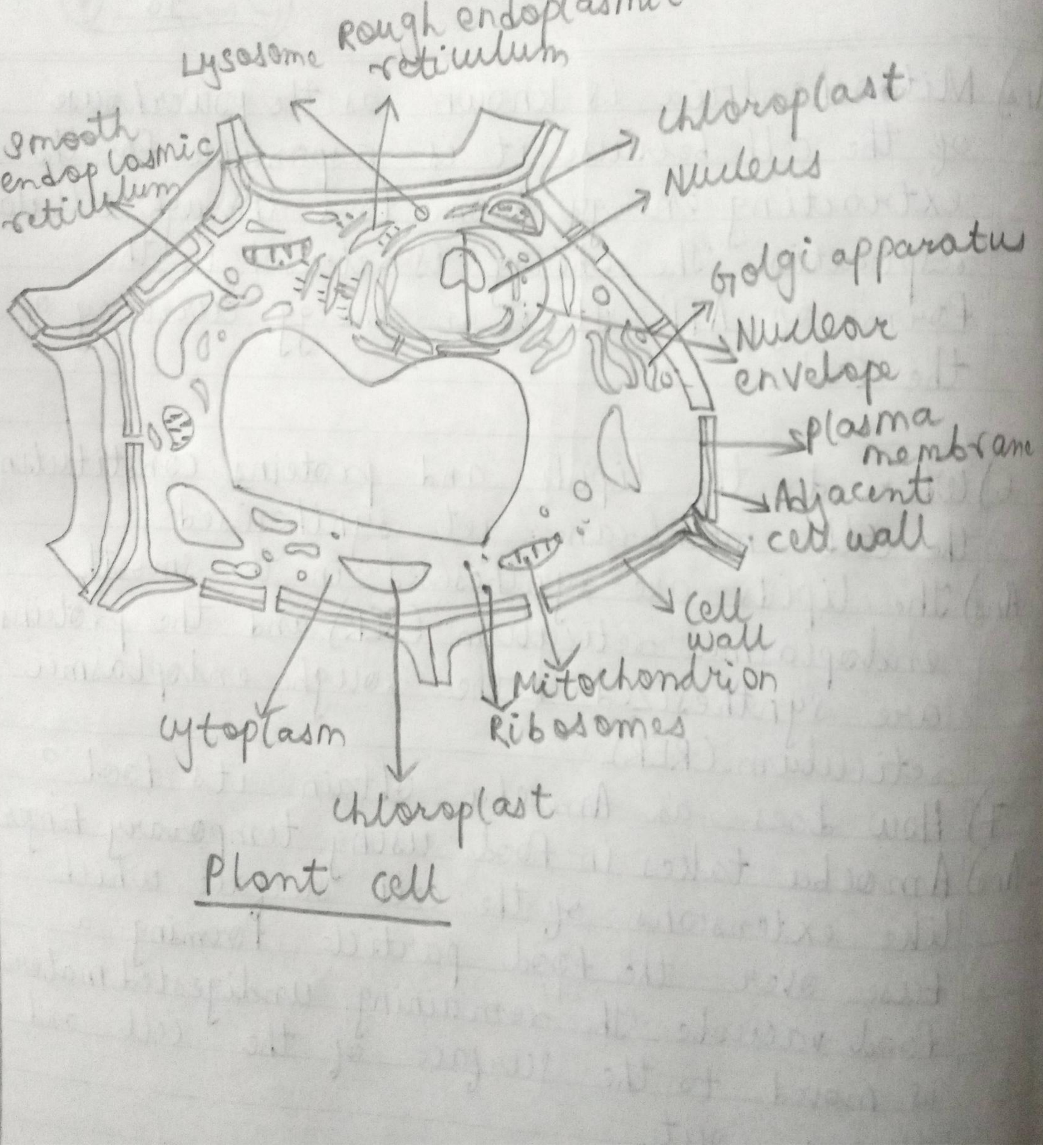
Ans)

Plant cells	Animal cells
→ Square or rectangular in Shape.	→ Irregular or round in Shape.
→ Cell wall is present.	→ Cell wall is ~~pf~~ absent.
→ ~~Plasma~~ Centrosomes are absent.	→ Centrosomes are present.
→ Plastids are present.	→ Plastids are absent.
→ Vacuoles are few large or a single, centrally positioned vacuole.	→ Vacuoles are usually small and numerous.

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

Ans)

Prokaryotic cell	Eukaryotic cell
→ Size of cell is generally small (1 - 10 mm)	→ Size of cell is generally large (5 - 100 mm)
→ Nucleus is absent.	→ Nucleus is present.
→ Nucleolus is absent.	→ Nucleolus is present.



Plant cell

→ It contains single chromosome.	→ It contains more than one chromosome.
→ Membrane bound cell organelles are absent.	→ Membrane bound cell organelles are present.
→ Cell division takes place by fission or budding.	→ Cell division takes place by mitotic or meiotic cell division.

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

Ans) If the plasma membrane ruptures or breaks down, the cell will not be able to exchange material from its surroundings by diffusion or osmosis because it acts as a mechanical barrier. Therefore, the protoplasmic material will be disappeared and the cell will die.

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

Ans) In the absence of the Golgi apparatus, 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 power house of the cell? Why?

Ans) Mitochondria is known as the powerhouse of the cell because it is responsible for the extracting energy from food through cellular respiration. The energy is released in the form of ATP. It is an energy currency of the cell.

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

Ans) The lipids are synthesised in the smooth endoplasmic reticulum (SER) and the proteins are synthesized in the rough endoplasmic reticulum. (RER).

7) How does an Amoeba obtain its food?

Ans) Amoeba takes in food using temporary finger-like extensions of the cell surface which fuse over the food particle forming a food vacuole. The remaining undigested material is moved to the surface of the cell and thrown out.

8) What is Osmosis?

Ans) Osmosis is the passage of water form a region of high water concentration to a region of low water concentration through a semi-permeable membrane.