Questions and Answers

1)

Characteristics	Plant Cell	Animal Cell
Cell	Present	Absent
Shape of Cell	Distinct edges, shape is either rectangular or square shaped	Round and irregular shape.
Nucleus	Present lies on one side of the cell	Present, lies in the centre of the cell.
Lysosomes	Rarely Present	Always present
Plastids	Present	Absent
Structure of vacuoles	Single or a few large vacuoles that is centrally located.	Presence of numerous and small vacuoles

2. The following are the differences between prokaryotic and eukaryotic cells.

Prokaryotic Cells	Eukaryotic cells
* Size :- Generally small (1-10 μm)	* Size :- Generally large (5-100 μm)
* There is a single chromosome	* There are more than one chromsome
* The nuclear region is not well defined as the nuclear membrane is absent and is referred to as nucloid	* Nuclear region :- well defined and gioled by a nuclear membrane

* Membrane-bound cell organelles absent	* Membrane-bound cell organelles are present.

3. If Plasma membrane ruptures or breaks down then molecules of some substances will freely move in and out of the cells. As plasma membrane acts as a mechanical barrior, exchange of material from ~~his~~ its surroundings through osmosis or diffusion in a cell won't take place. Consequently, the cell would die due to the disappearance of the protoplasmic material.
4. The Golgi apparatus consists of stacks of membrane-bound vesicles whose functions are as follows.
* Storage of Substance
* Packaging of substance.
* Manufacture of ~~structure~~ substance.

without the golgi apparatus, the cells will be disabled from packaging and dispatching materials materials that were produced by the cells. The golgi apparatus is also involved in the formation of cells. Hence in the absence of golgi apparatus cells will not be produced.

5) Mitrochondria are known as the power house of the Cell. It is because it releases the energy

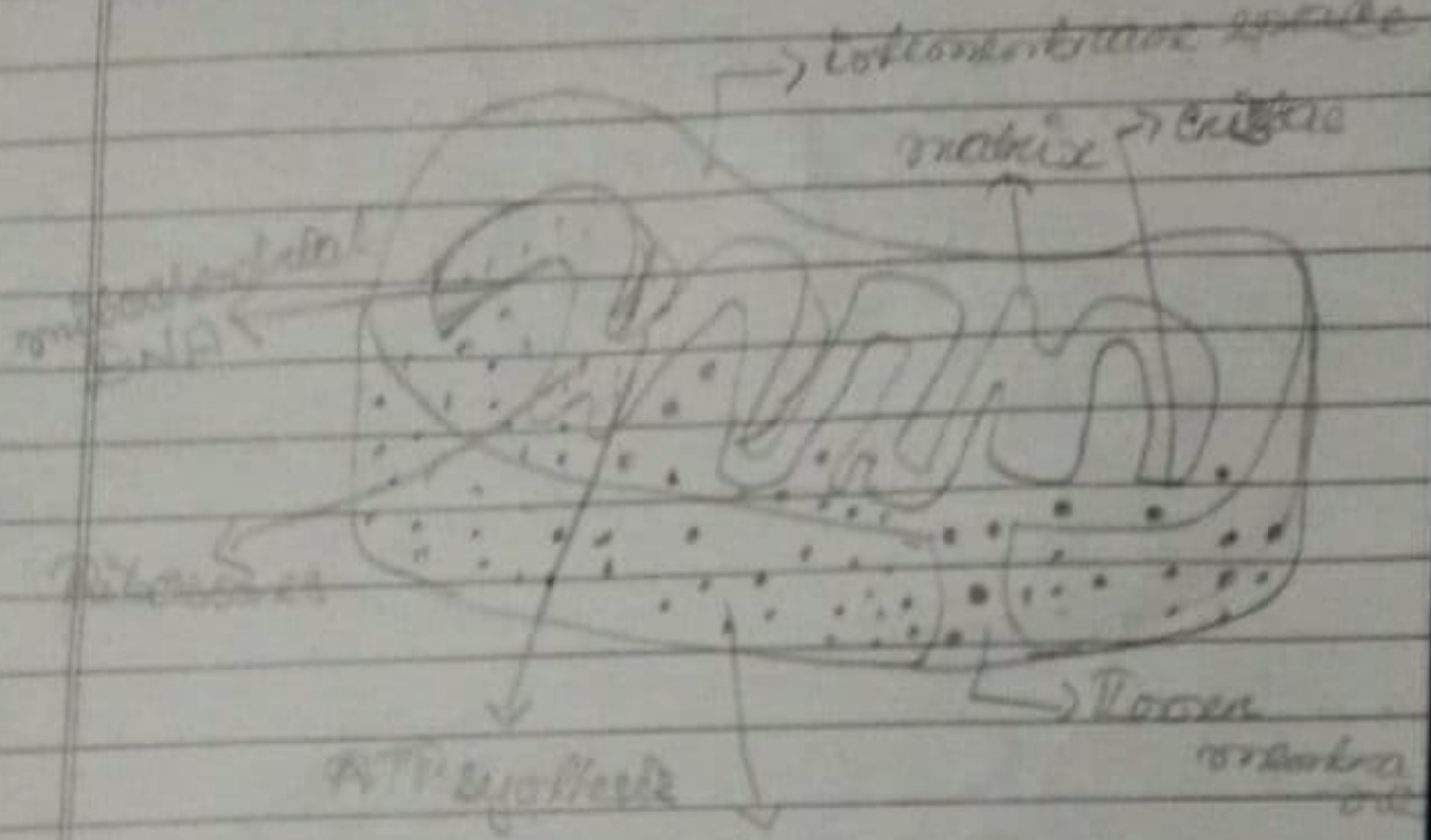
required for different activities of life mitochondria. releases energy in form of ATP (Adenosine triphosphate) molecules, essential for numerous chemical activities of life. Hence ATP is often referred to as "energy currency of the cell".

6) Lipids and proteins are synthesized in the ER (Endoplasmic reticulum).

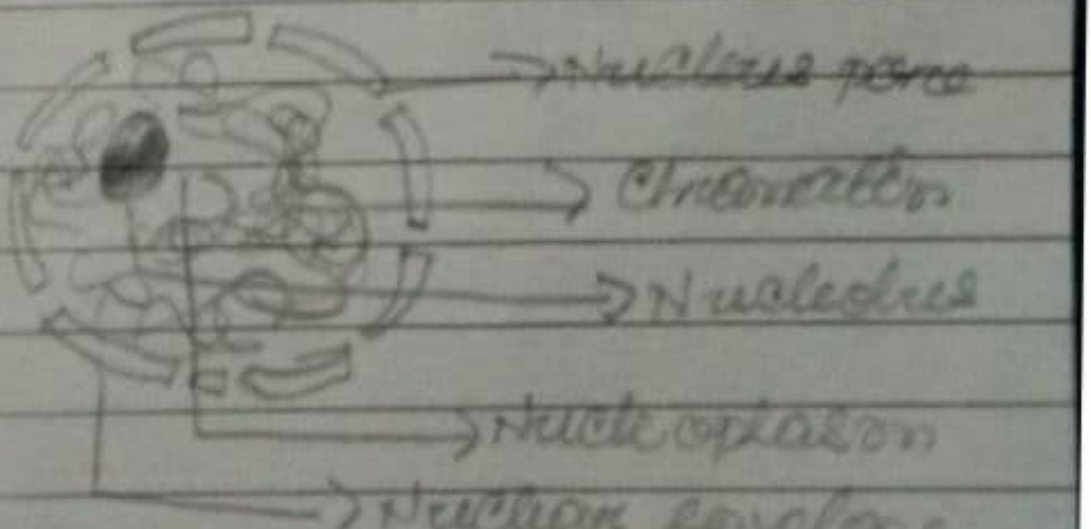
7) Through the process of endocytosis an amoeba obtains its food. As its cell membrane is flexible enough, food particles are engulfed forming a food vacuole girdling it which is assisted by the pseudopodia. Amoeba secretes digestive enzymes to bring about digestion of the engulfed particles once food is trapped.

8) The process of movement of a water molecules from a region of higher concentration to a region of lower concentration through a semipermeable membrane is known as osmosis.

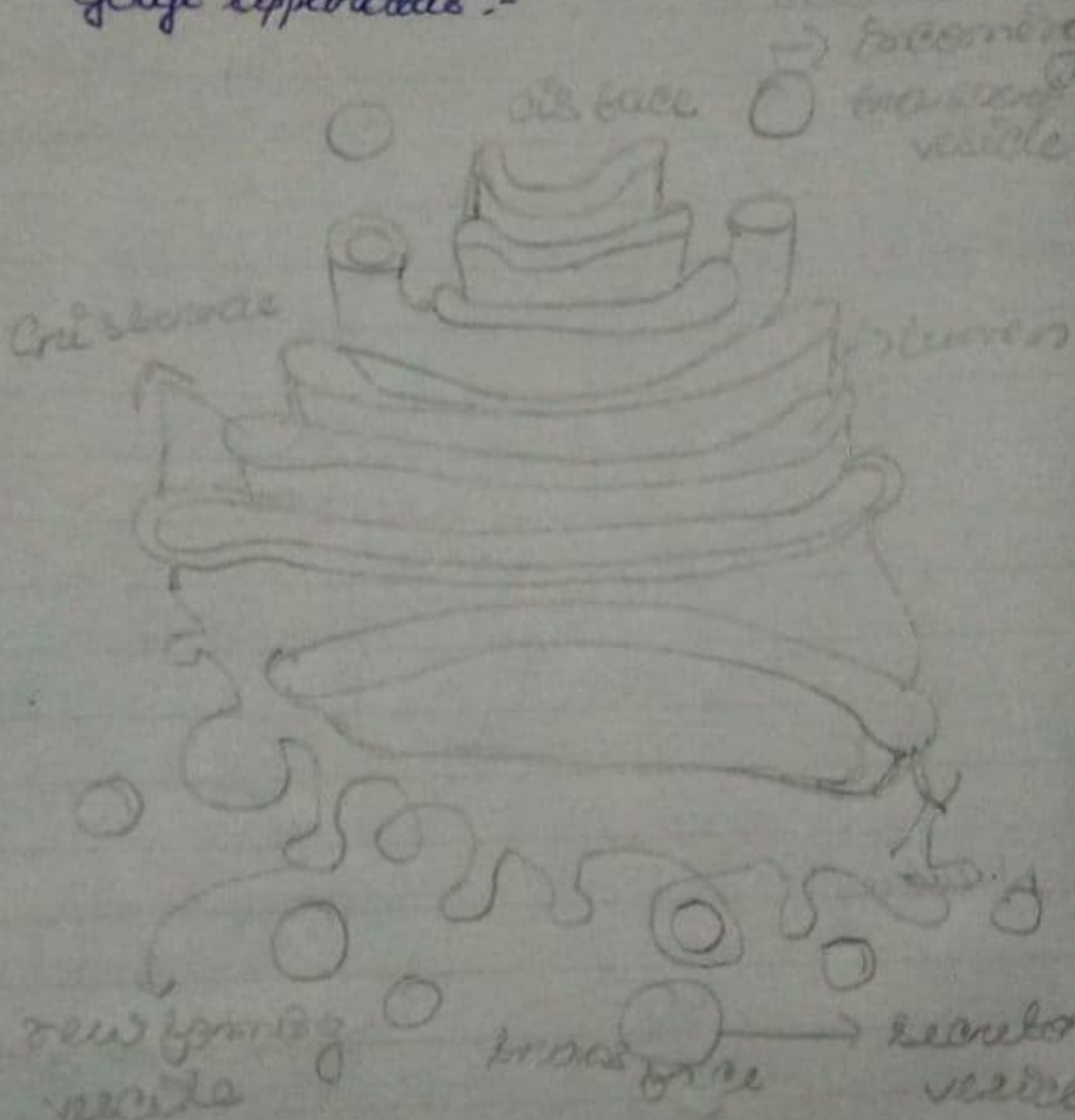
Mitochondria :-



Nucleus :-



Golgi apparatus :-



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Plastid :-