

Questions and Answers

H.W

Characteristic	Plant cell	Animal cell
Cell wall	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 vacuole that is centrally located.	Presence of numerous and small vacuoles

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

Prokaryotic cell	Eukaryotic cell.
* Size :- Generally small (1-10 μm)	* Size :- Generally large (5-100 μm)
* There is a single chromosome.	* There are more than one chromosomes.
* The nuclear region is not well defined as the nuclear membrane is absent and is referred to as nucleoid.	* Nuclear region :- well defined and delimited 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 barrier, exchange of material from its surroundings - as 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 ~~two~~ stacks of membrane-bound vesicles whose functions are as follows.

- * Storage of substance
- * Packaging of substance
- * Manufacture of substance

Without the golgi apparatus, the cells will be disabled from packing and dispatching materials that were produced by the cells.

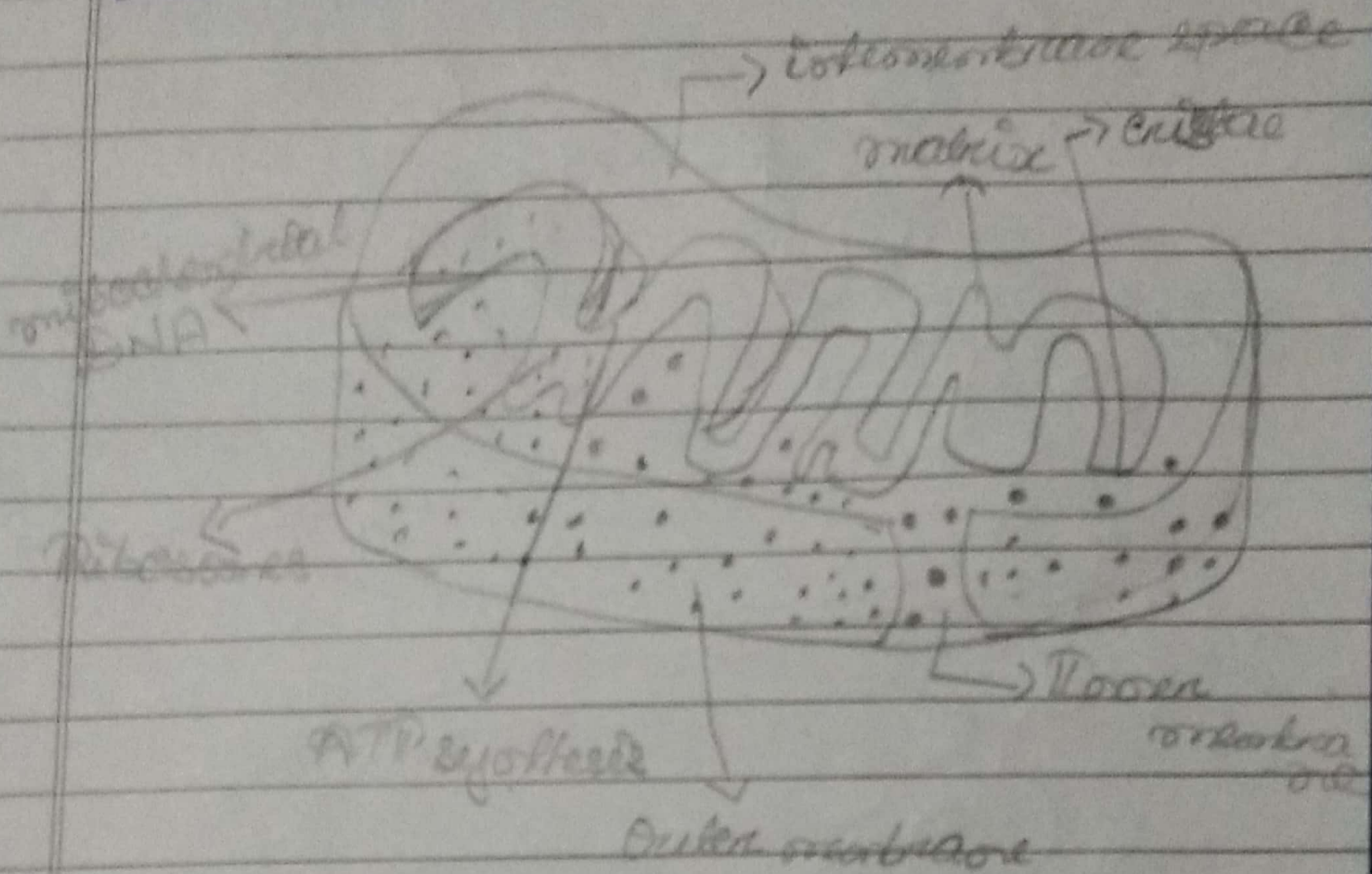
The golgi apparatus is also involved in the formation of cells. Hence in the absence of golgi apparatus cells will not be produced.

5) Mitochondria are known as the power house of the cell. It is because it releases the energy required for different activities of life. Mitochondria release energy in form of ATP (Adenosine triphosphate) molecules, essential for numerous

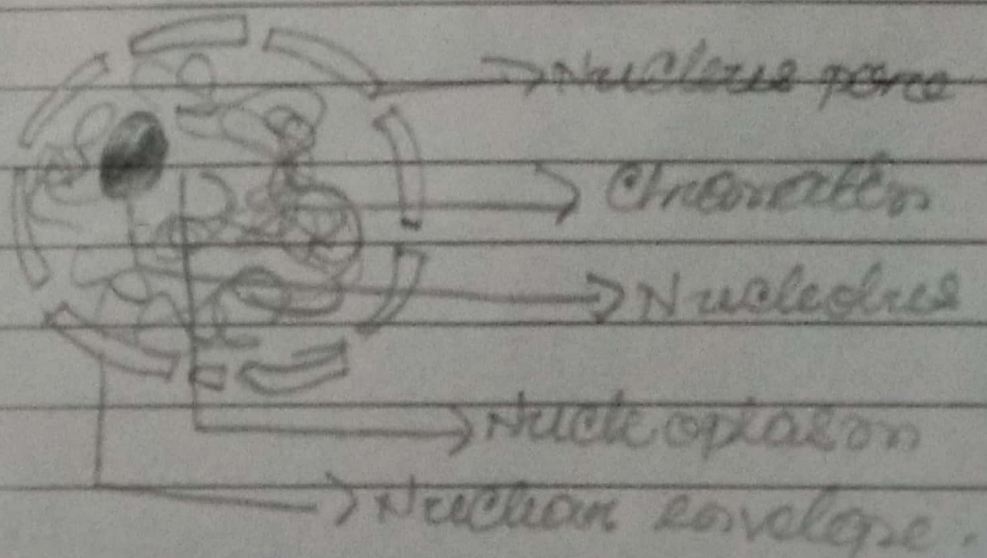
Chemical activities of life. Hence ATP is often referred to as "energy currency of the cell."

- 6) Lipids and proteins are synthesised in the ER (Endoplasmic Reticulum)
- 7) Through the process of endocytosis an amoeba obtains its food. As its cell membrane is flexible ~~enough~~ enough, food particles are engulfed forming a food vacuole. Grinding it which is assisted by the pseudopodia. ~~And~~ Amoeba secretes digestive enzymes to bring about digestion of the engulfed particle once food is trapped.
- 8) The process of movement of a water molecule from a region of higher concentration to a region of lower concentration through a semipermeable membrane is known as osmosis.

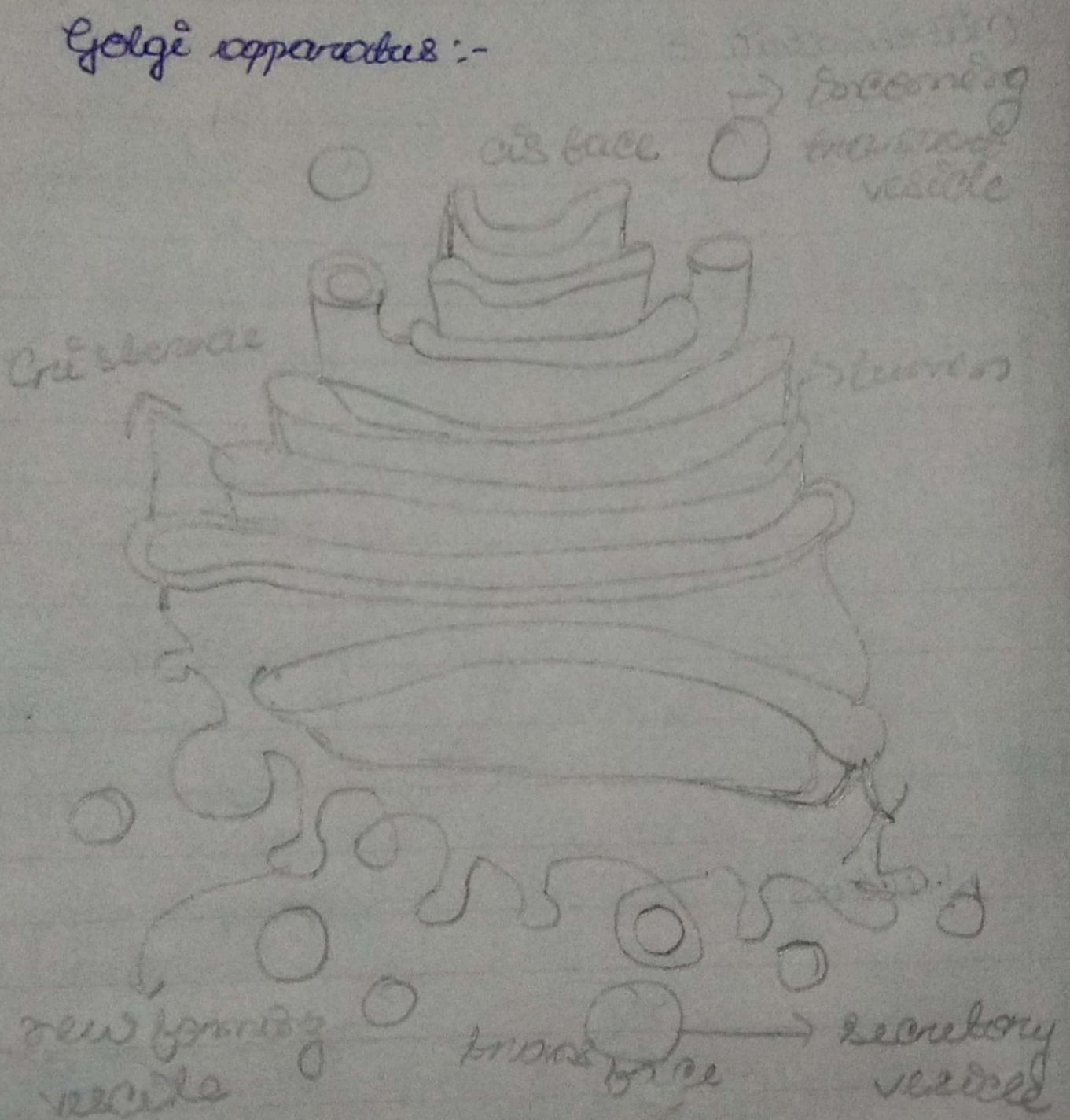
Mitochondria :-



Nucleus :-



Golgi apparatus :-



Plastid :-

