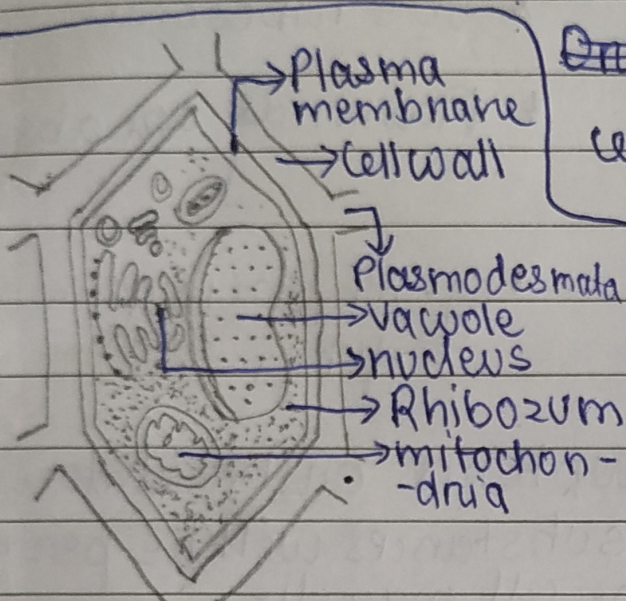
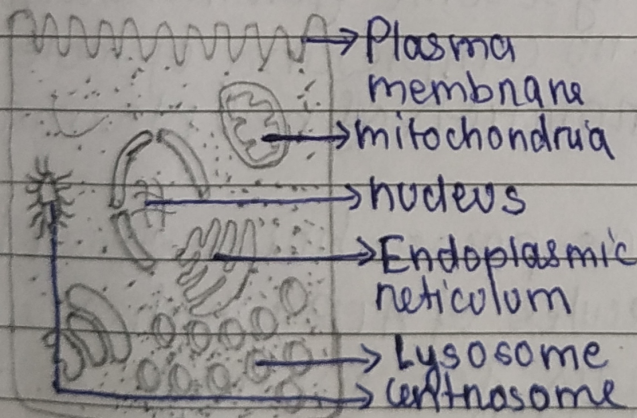


Worksheet

Q1 Difference between plant cell and animal cell.



Plant Cell



Animal Cell

Organelle	Plant cell	Animal cell
cell wall	Present	Absent
Lysosome	Absent	Present
Shape	Rectangular	Irregular
Chloroplast	Present	Absent
Vacuole	Present	Absent
Centriole	Absent	Present
Nucleus	Laterally placed	Centre

Q2

Prokaryotic Cell

Eukaryotic cell

* Smaller in size

* Larger in size

* Membrane bound nucleus

* Membrane bound

Prokaryotic cell

is absent but nucleoid is present

membrane bound organelles are absent.

* 70's ribosome

* Plasmids present give resistance for antibiotics

* Eg. Plasmid give resistance to antibiotics like Bacteria

Eukaryotic cell

organized nucleus is present

* membrane bound organelles are present

* 80's ribosome

* Plasmids are absent

* Eg. All plants, animals and fungi

③ If plasma membrane ruptures on breakdown then all the extra cellular substances will be permitted to go inside the cell and the cell may die.

④ There would not be any lysosome for intracellular digestion and cleansing, no complexing of molecules, no excretion and no formation of new plasma membrane.

⑤ Mitochondria is known as power house of cell because it produces most of molecules of ATP which are required for providing energy for synthesis of new chemicals, mechanical and other cellular functions.

⑥ Plasma membrane of Amoeba ~~obtain~~ food is flexible. with its help Amoeba engulfs food particle. The engulfed food particle passes into the body of Amoeba as a phagosome. Phagosome combines with lysosome to produce digestive on food vacuole. Digestion occurs in food vacuole. The digested food passes into surrounding cytoplasm. The undigested matter is thrown out of the cell in exocytosis.

⑥ Proteins are synthesised over ribosomes of RER when lipids are synthesised over SER.

⑧ Osmosis is the diffusion of water from higher concentration (pure water or dilute water) to lower concentration through semi permeable membrane

called cell wall.

- * The cell wall is freely permeable
- * The cell wall gives a rigid shape to the cells

Cell Organelles :-

* NUCLEUS :-

- It is a very important organelle in the cell that controls and coordinates all the activities in the cell
- The nucleus is protected by a membrane called Nucleus membrane. which contains several pores in it.
- It helps in the exchange of substances between the cytoplasm and nucleus.

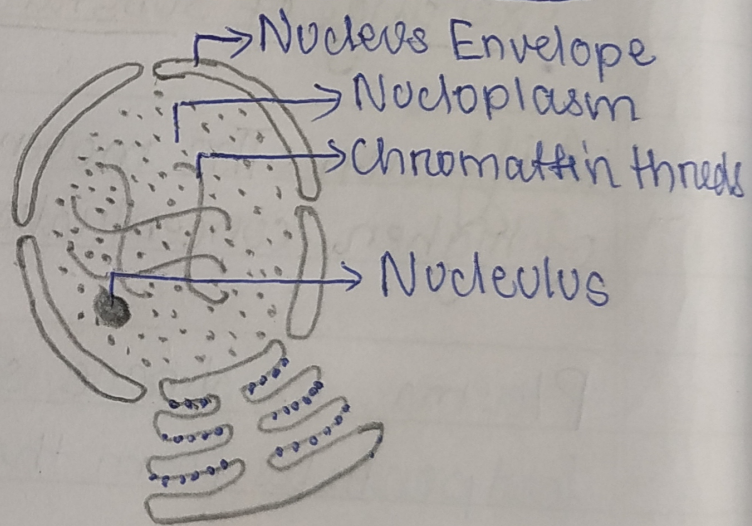
STRUCTURE OF NUCLEUS

* Nucleolus

- It is known as factory of Ribosomes
- It helps in protein synthesis in body

* Chromosomes

- It carries information of inheritance from parents to offspring
- It is made up of proteins and DNA
- Nucleus without nuclear membrane is known as Nucleoid



- * Smooth Endoplasmic Reticulum helps in synthesis of lipid
- * In animal cell, lipid-like steroidal hormones are synthesized by Smooth Endoplasmic Reticulum
- * It helps in the process of Biogenesis (making of plasma membrane).
- * Endoplasmic Reticulum helps in the Removal of toxic substances from food (Detoxification)

GIOLGI APPARTUS

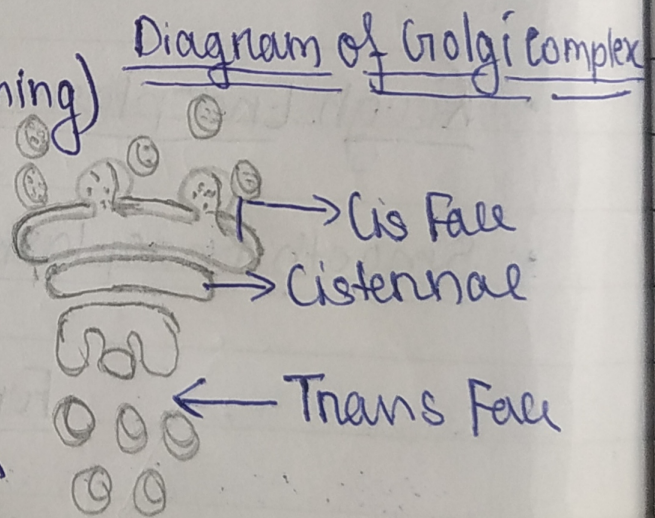
- * It was first~~ly~~ observed by Camillo-Giolgi (1898)
- * Densely stained reticular structures near nucleus
- * They consist of disc-shaped sacs (cisternae)

- * Cisternae are concentrically arranged with convex cis (forming) face and concave trans face

- * It is present in all Eukaryotic cells except RBC

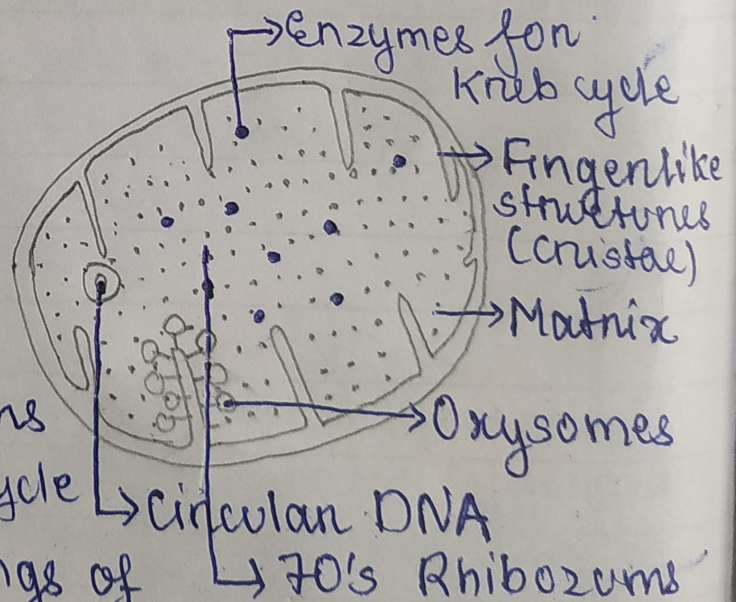
- * Cis face receives proteins/lipids from endoplasmic - Reticulum

- * Proteins synthesized by ribosomes on ER are modified in the cisternae of the Giolgi Apparat~~us~~ before they are released from its trans face
- * Formation of glycoproteins and glycolipids



Mitochondria

- * Power house of cell
- * Mitochondria is present in all Eukaryotic cell Except RBCs (mammals)
- * Matrix contains Double stranded DNA, 70's Ribozoms
- * There are enzymes for kreb cycle
- * Cristae are finger like foldings of inner membrane of mitochondria



PLASTIDS

* ~~Kitchen~~ kitchen of plant cell
(only present in plant cells)

* Double membrane bound organelle

Structure

① Stroma

② Grana

Stroma

* It is gel like fluid inside chloroplast

* In stroma 70's ribosomes, DNA and enzymes are present for photosynthesis

* Green pigment chlorophyll is present

