

Write down on ur note book 9th class

20. Golgi apparatus: It was first described by a scientist Camillo Golgi. It is a system of membrane bound vesicles called cisterns. It functions include the storage, modification and package of cell products. The complex sugars are made from simple sugars in the Golgi apparatus. It is also involved in the formation of lysosomes.

21. Lysosomes: They contain membrane-bound sacs with powerful digestive enzymes (enzymes are made by RER) to digest the worn-out cell organelles. When the cell gets damaged, lysosomes may burst and the enzymes digest their own cell, hence called as "Suicidal bags of a cell". It is a waste disposal system of the cell.

22. Mitochondria: It is covered by a double membrane. Outer membrane is very porous and the inner membrane is deeply folded. These folds create a large surface area for ATP (Adenosine Triphosphate) molecule synthesis. ATP is the energy currency of a cell; hence the Mitochondria are called as Power House of a Cell. Mitochondria have their own DNA and Ribosomes; therefore they can make their own proteins.

23. Plastids: They are present only in plant cells. They are two types.

1. Chromoplasts (Colored Plastids: Chloroplasts – Green pigmented and useful in Photosynthesis and also contains various other pigments like yellow or orange)

2. Leucoplasts (White or colorless plastids; stores materials such as oils, proteins, fats etc.) Plastids are also covered by a double membrane. The matrix is called Stroma, seat for enzymatic actions. Plastids have their own DNA and Ribosomes; therefore they can make their own proteins.

24. Vacuoles: Storage sacs for solid or liquid contents. They are small in size in animals while plants have large, may occupy 50-90 % of the cell volume. Helps to provide turgidity and rigidity to the cell. Many substances like amino acids, sugars, organic acids and proteins are stored in vacuoles. In Amoeba food vacuole is specialized to play an important role. 25. Cell: It is the fundamental structural unit of living organisms, helps in respiration, obtaining nutrition and clearing waste material or forming a new protein. Differences between Plant cell and Animal Cell

(Please refer to Fig. 5.5 Animal cell & 5.6: Plant cell NCERT Book Page-63&64)

ANIMAL CELL PLANT CELL

Cell wall absent Cell wall present

Plasma membrane is the outer layer which provides turgidity to the cell

Cell wall is the outer layer which gives rigidity and turgidity to the cell

Vacuoles are small in size Vacuoles are big in size

Plastids are absent Plastids are present

Nucleus lies in the centre.

Nucleus lies on one side