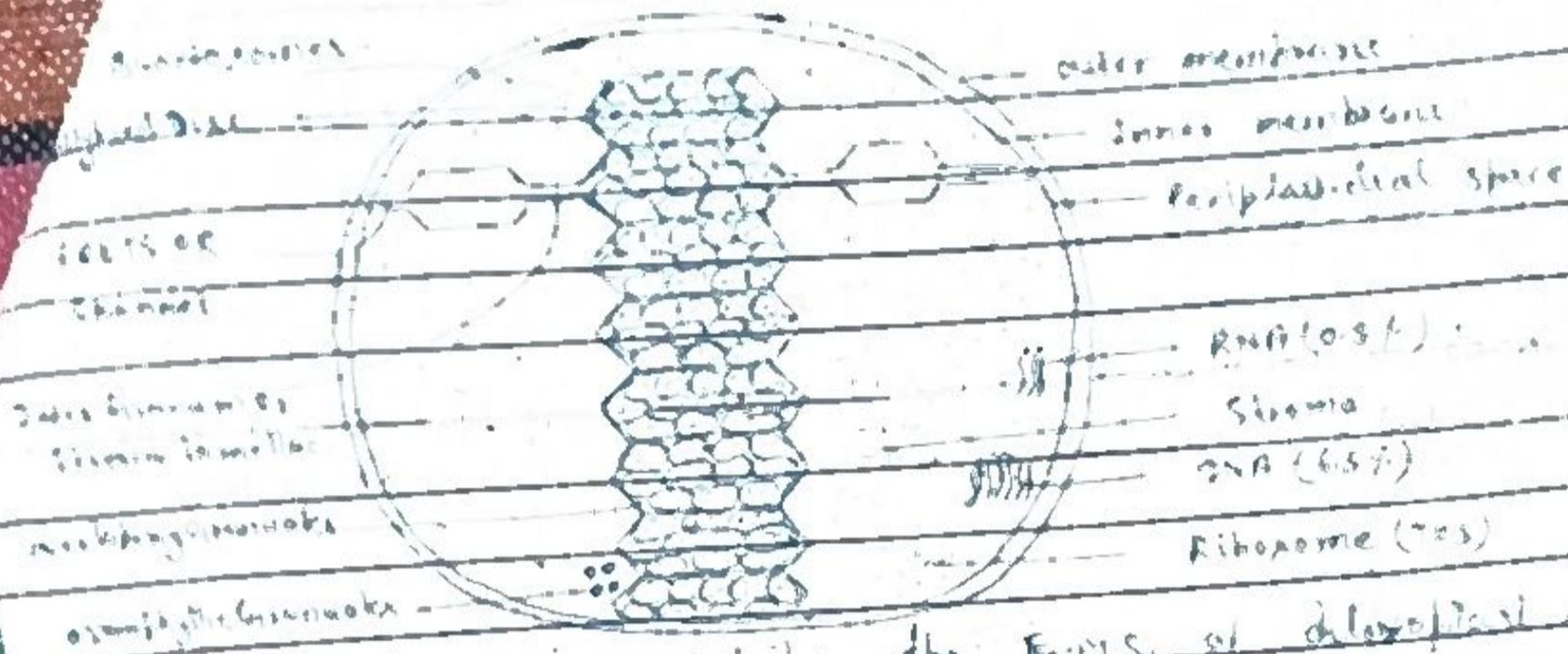


EMS. OF CHLOROPLAST



- ⇒ This diagram exhibits the EMS. of chloroplast.
- ⇒ We see chloroplast is the largest cytoplasmic organelle of plant cell.
- ⇒ It is bicovered in shape & double membrane structure. The outer most layer is outer membrane whereas the inner most layer is inner membrane.
- ⇒ In between two membranes there is a space is called Periplastidial space which thickness is 200\AA .
- ⇒ The thickness of outer & inner membrane is 50\AA and they made up of lipoprotein.
- ⇒ Plasmic genes are that forms of DNA & RNA are present in the chloroplast.
- ⇒ It is also plastogenic due to confined in chloroplast which is responsible for bearing to character from one generation to another so, such inheritance is called cytoplasmic inheritance.
- ⇒ In plastogenic the amount of DNA is 6.5% of the total chloroplast & 0.5% RNA of the total chloroplast.
- ⇒ Prokaryotic type is found & they are 70S type.
- ⇒ The inner chloroplast is filled with liquid substance is called STROMA.

- ⇒ It is site for the dark rxn of photosynthesis.
- ⇒ It contains all enzymes in Calvin cycle.
- ⇒ Carnophyllis Granules are also found in it. They are association of carotenoids, where is coming from primary association of carotene & Xanthophyll.
- ⇒ Chloroplast contains bottle shaped structure called Granum.
- ⇒ The two types of Granum is present in the chloroplast. The 1st is overlapping and 2nd is Inter granum.
- ⇒ Several granum are arranged one after another in serial way so called overlapping Granum.
- ⇒ When connected the two granum each other in lateral side is called Inter Granum. Due to found in stroma we known as stroma lamellae.
- ⇒ Granum is responsible site for the light rxn of photosynthesis.
- ⇒ Within the granum several thylakoid disc are present they contain photosynthetic units & is known as quantasomes. which contains 200 to 250 molecules of chlorophyll & than photosynthesis is start in the chloroplast.

FUNCTION OF CHLOROPLAST

There are two functions of chloroplast →

- 1) Primary function.
- 2) Secondary function.

Primary function of chloroplast →

- ⇒ This largest cytoplasmic organelle of plant cell is related with the process of photosynthesis which is an anabolic phenomenon of metabolism.
- ⇒ This is a continuous phenomenon which leads to perform function of carbohydrates which lastly convert into starch.
- ⇒ Light reaction is controlled by grana and the product will discharge in stroma.
- ⇒ Stroma contains all the enzymes for dark reaction to prepared food in form of carbohydrates by the enzymatic activity in a cycle manner called calvin cycle.

2) Secondary function →

- ⇒ With the help of prokaryotic ribosome (70S) they are also involved in process of protein synthesis like bacterial cell.
- ⇒ Due to presence of 70S rRNA in form of plastogen they are related with the process of cytoplasmic inheritance actually. the maternal cytoplasmic inheritance

