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Question No.1 (a)

Cell:

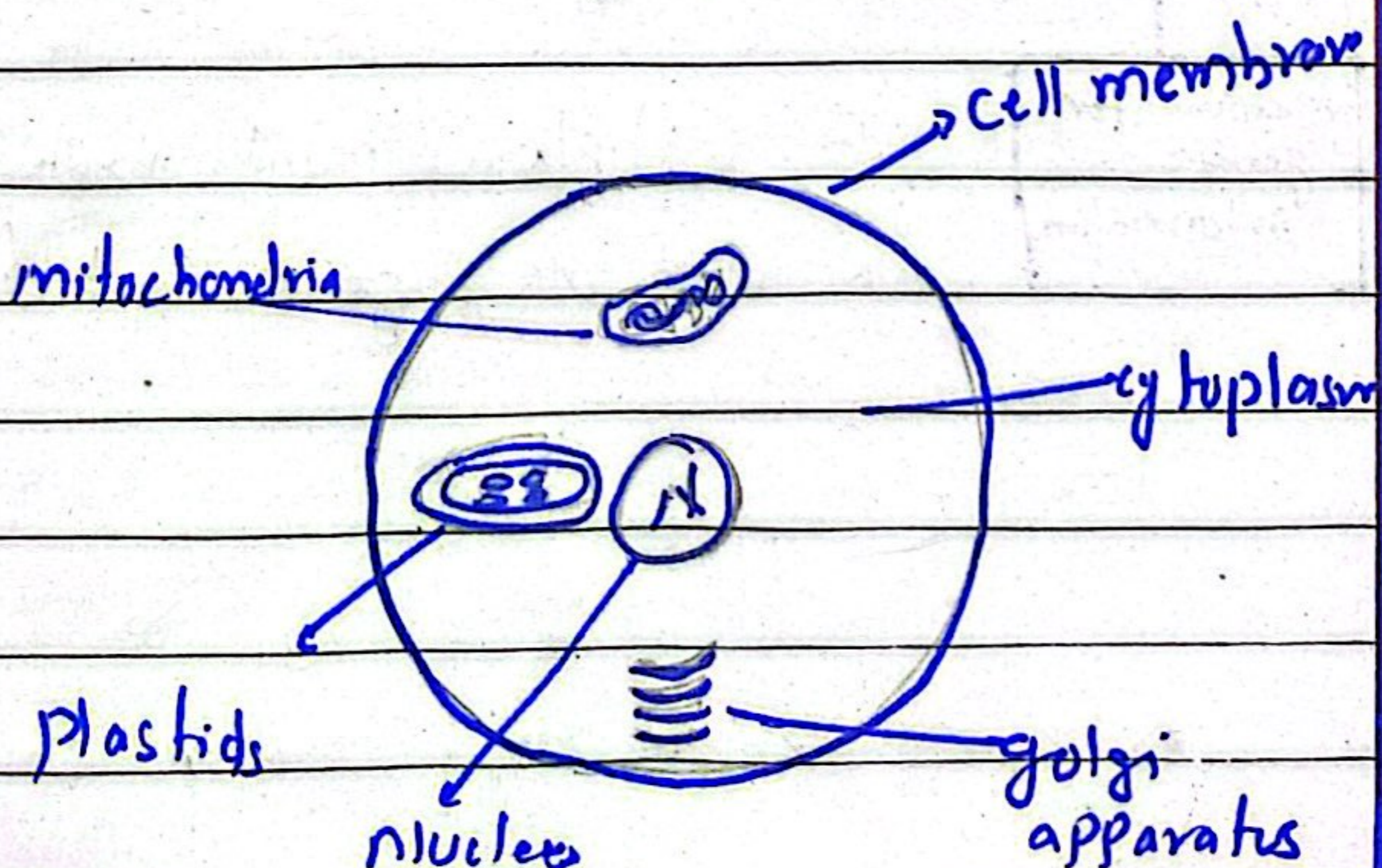
↳ The word cell has been derived from "cellula" which means room.

Cell is the basic structural and functional unit of living organisms.

Cytoplasm:

It is a semi-fluid and jelly like material present between nuclear membrane and cell membrane.

Structure of Cytoplasm:



The ~~cell~~ ~~is~~ cytoplasm contain 90% of water and 10% of other mineral. It contains other organelles like golgi bodies, mitochondria and lysosomes etc.

Functions of cytoplasm:

Medium of Communication

The cytoplasm acts as a medium of communication among the organelles present in the cytoplasm.

Provide site and protection

It provides and protection to the other organelles present in the cytoplasm.

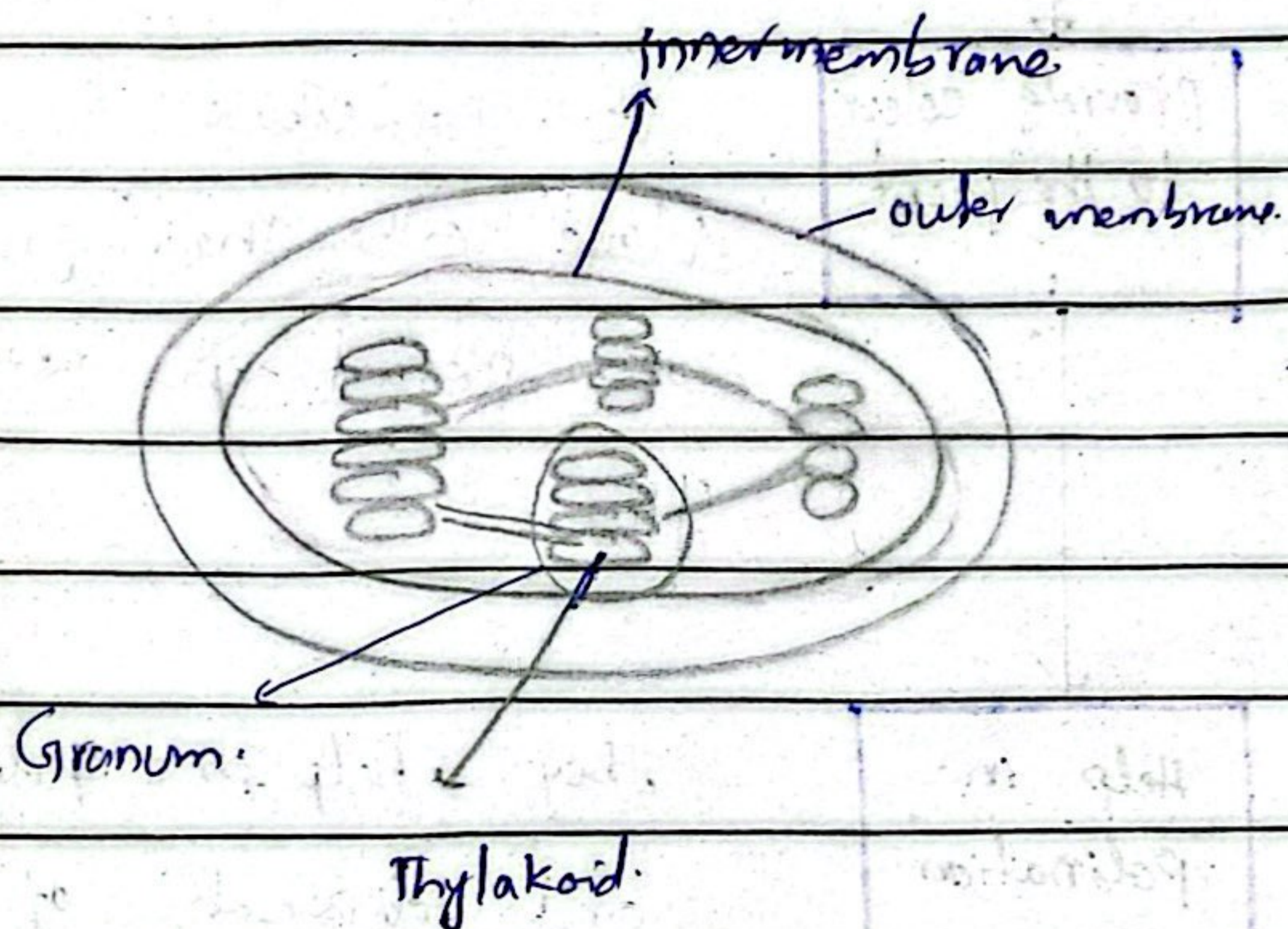
Medium for genetic information

The cytoplasm provides medium to pass the genetic material.

Plastids:

These are organelles found in the plant cell. They take care responsible for photosynthesis and storage and production of metabolites.

Structure:



In plastid, there is an inner and outer membrane which surrounds

the granum and thylakoid. The thylakoid combined to form granum

There is aqueous fluid inside

the plastid that is called

Stroma.

Functions of Plastids.

carried out
Photosynthesis

It contains the green pigment called chlorophyll, which help the plant to absorb light and prepare food.

provide colour
to the plant

It contribute in colour of plant other than green. They are present in petal of flower

Help in
Pollination

They help in pollination and dispersal of food.

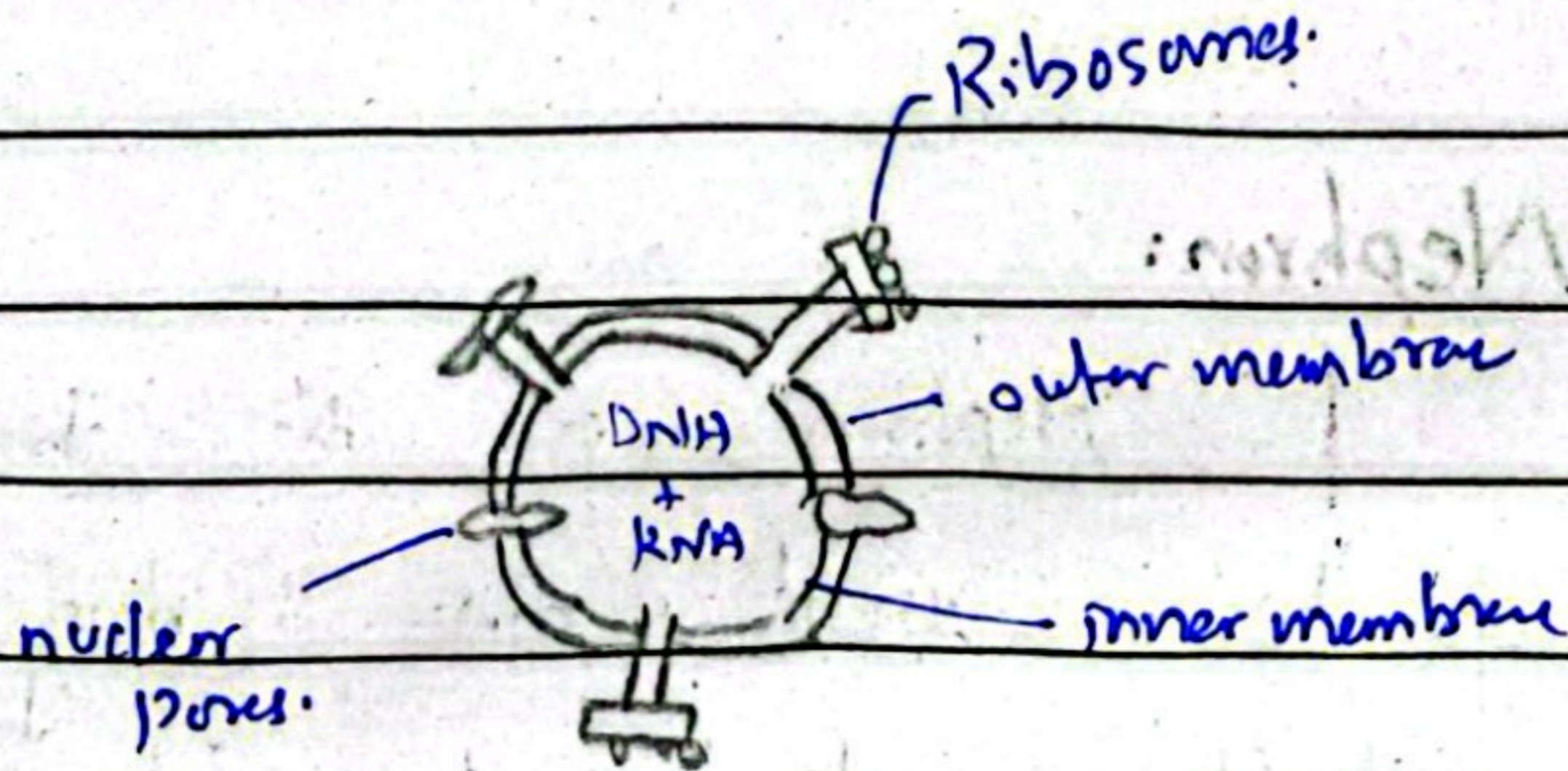
Nucleus:

Nucleus is called the brain of a cell. It control all the activities of a cell.

Structure.

It is enclosed by a double membrane. It contain chromatin.

and nucleolus.



Functions of nucleus:-

Formation of genetic information	The formation of genetic information takes place here. It also store & protect these genetic information.
Regulate cellular activities.	Nucleus generally regulates all the cell activities take place in the body.
Control cell Division	It controls cell division and growth replication of DNA

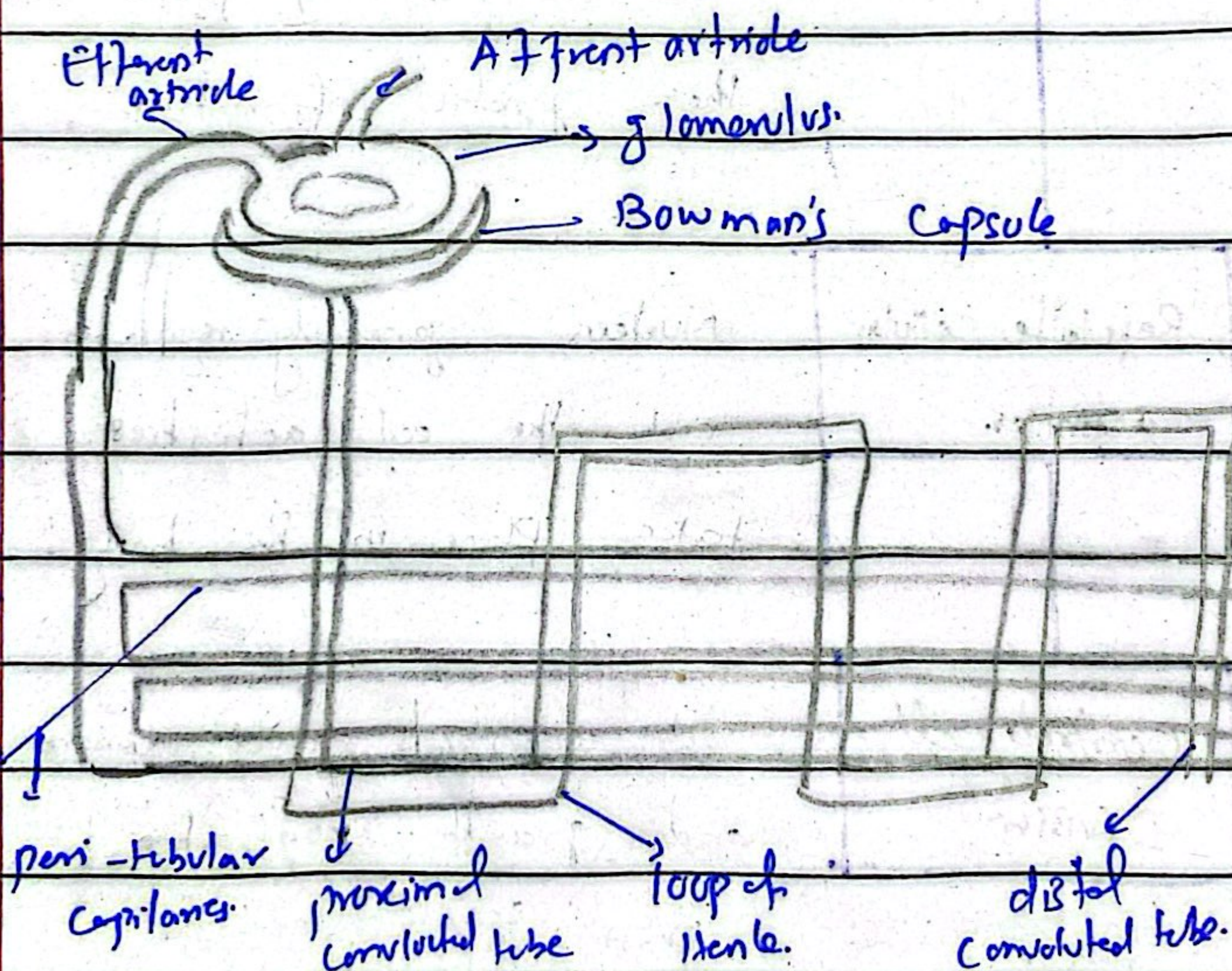
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Nephron:

Nephron is the basic function unit of kidney. It actually cleans the blood in the kidney.

There are about 1 million of nephrons in each kidney.

Structure of Nephron:



Nephron is consist of glomerulus as a network of capillaries. A cup like structure surrounds

the glomerulus that collect
 the filtered fluid called filtrate
 There are tubes like proximal
 convoluted tube and loop of
 henle; moreover, there are also
 distal convoluted tubule and
 the final is collecting duct
 that collect urine.

Functions of Nephron.

① Filtration of Blood.

Nephron is basically responsible for the filtration of blood. The blood is filtered in the glomerulus and water ions, glucose and small molecules pass into Bowman's capsule.

② Reabsorption.

Useful substances are reabsorbed into the blood as the filtrate passes through

The renal tubule.

③ Regulate Blood Pressure.

Nephron regulate
blood pressure of the body
via ~~the~~

④ Excretion.

The final urine composed
of water and salt is collected
in the collecting ducts and
sent to the bladder for
excretion.

C

Smog:

Smog is a harmful
mixture of smoke and fog
carried by air pollution.

Causes of smog:

① Green house Gases:

The green house gas emitted from different sources like industries, fossil fuel burning and emissions from vehicle when react with sunlight. It create smog.

② Deforestation:

The uncontrollable deforestation is another cause of smog. It reduce the sink of CO_2 that is the ~~main~~ primary responsible for the formation of smog.

③ Rapid industrialization:

The rapid industrialization has frequently disturb the natural

Sitting. It produces SO_2 , NO_x and CO_2 and other harmful gases that are involved in the smog formation.

Preventive Measures.

① Afforestation and reforestation.

Green house gases can be controlled by the plantation of trees which will ultimately control the smog.

② Mitigate Greenhouse gases.

The emission of green house gases should be mitigated. The world should move from fossil fuels to clean and renewable energy which emits no green house gases.

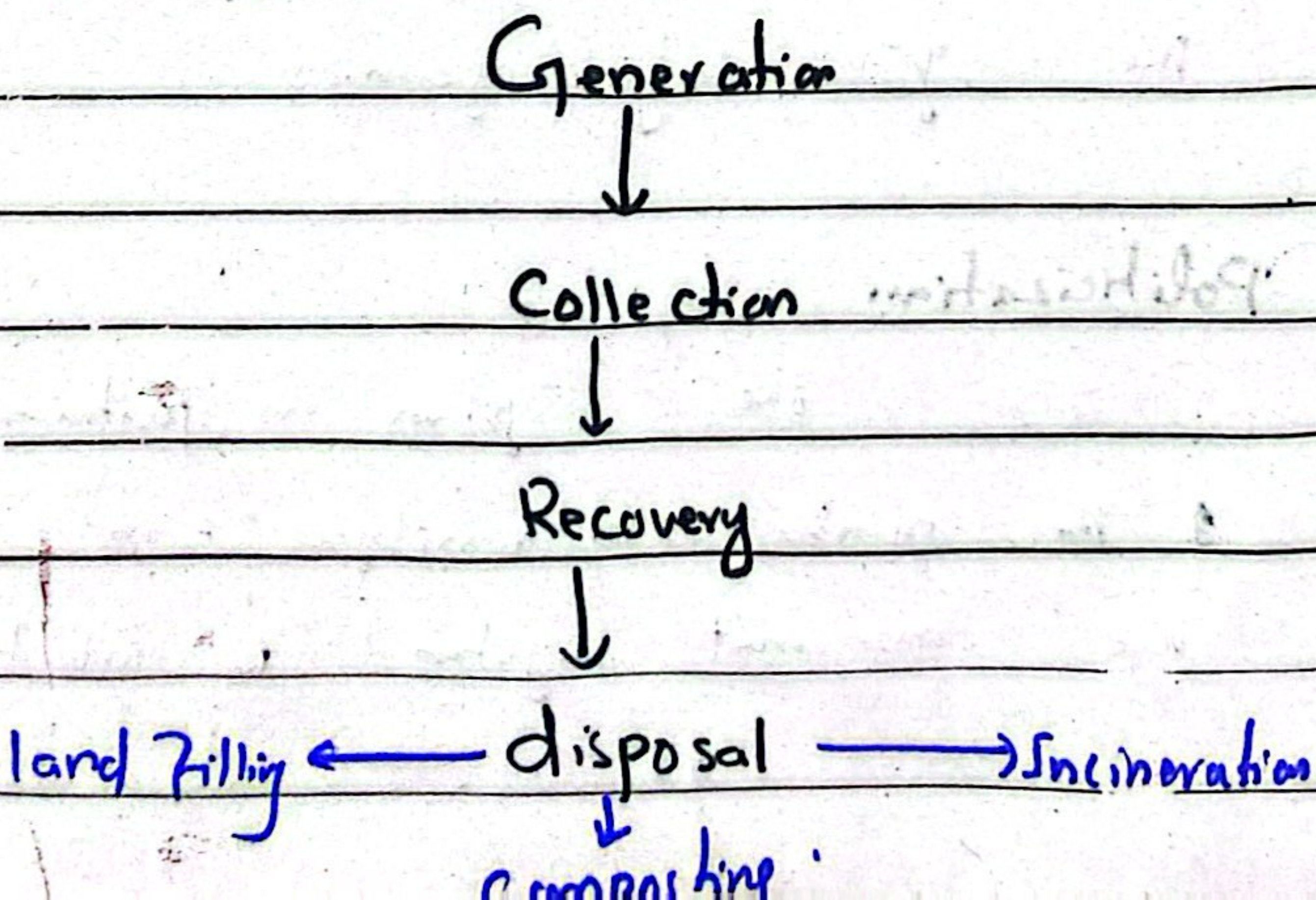
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Promotion of sustainable transport

transport should be promoted, decent public transport system should be launched. The use of private vehicle should be discouraged and the word should move toward electric cars.

Solid waste management

It is the supervised handling of waste from its generation point, collection through recovery process upto disposal.



④ Weakness in Pakistan Solid waste management.

① Low number of human Resources.

In Pakistan the municipal workers are much less than required due to which the process does not go smoothly.

② Lack of technology:

In Pakistan's waste management system, there is lack of technology the ~~people~~ collection is often done on the costs and old cars which that spread out in the city again.

③ Politicization:

⑤ The system is politicized & the number of employees in the management system is reduced

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through political affiliation who often remains absent due to which the system is not working properly.

④ No proper process of recovery:

There is not process to segregate the waste collected from generation point. all the material are collect and dispose together without segregation.