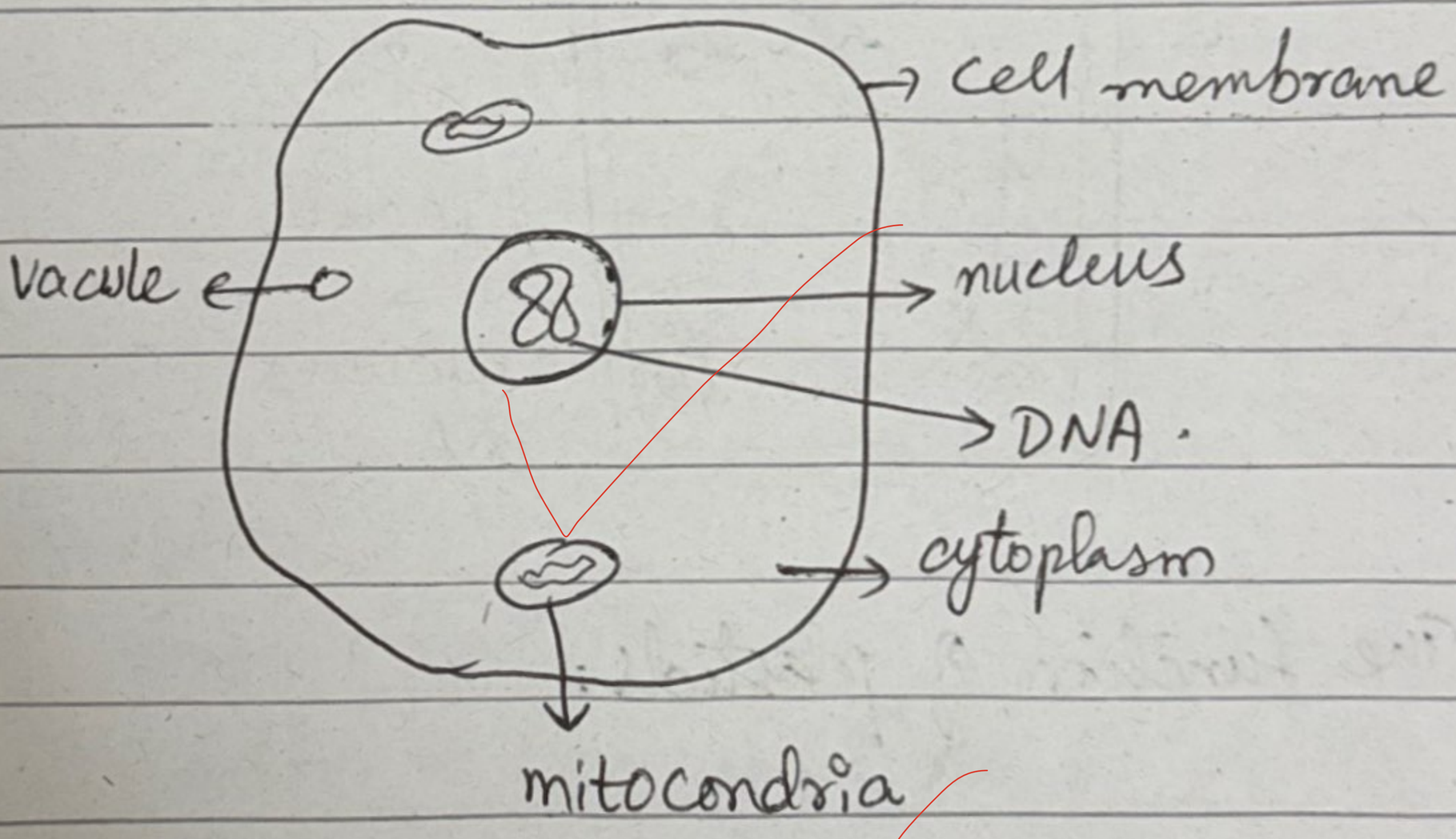
GSA Test 2

v. good 24/40

A- Structure and functions of a cell.

Cell is the building block of a living being. It was discavered in 1665 by Robert Hooke. It just like an atom make the body of living beings. They divide in humans following the process of mitosis and meiosis.

B- Structure of Animal Cell.

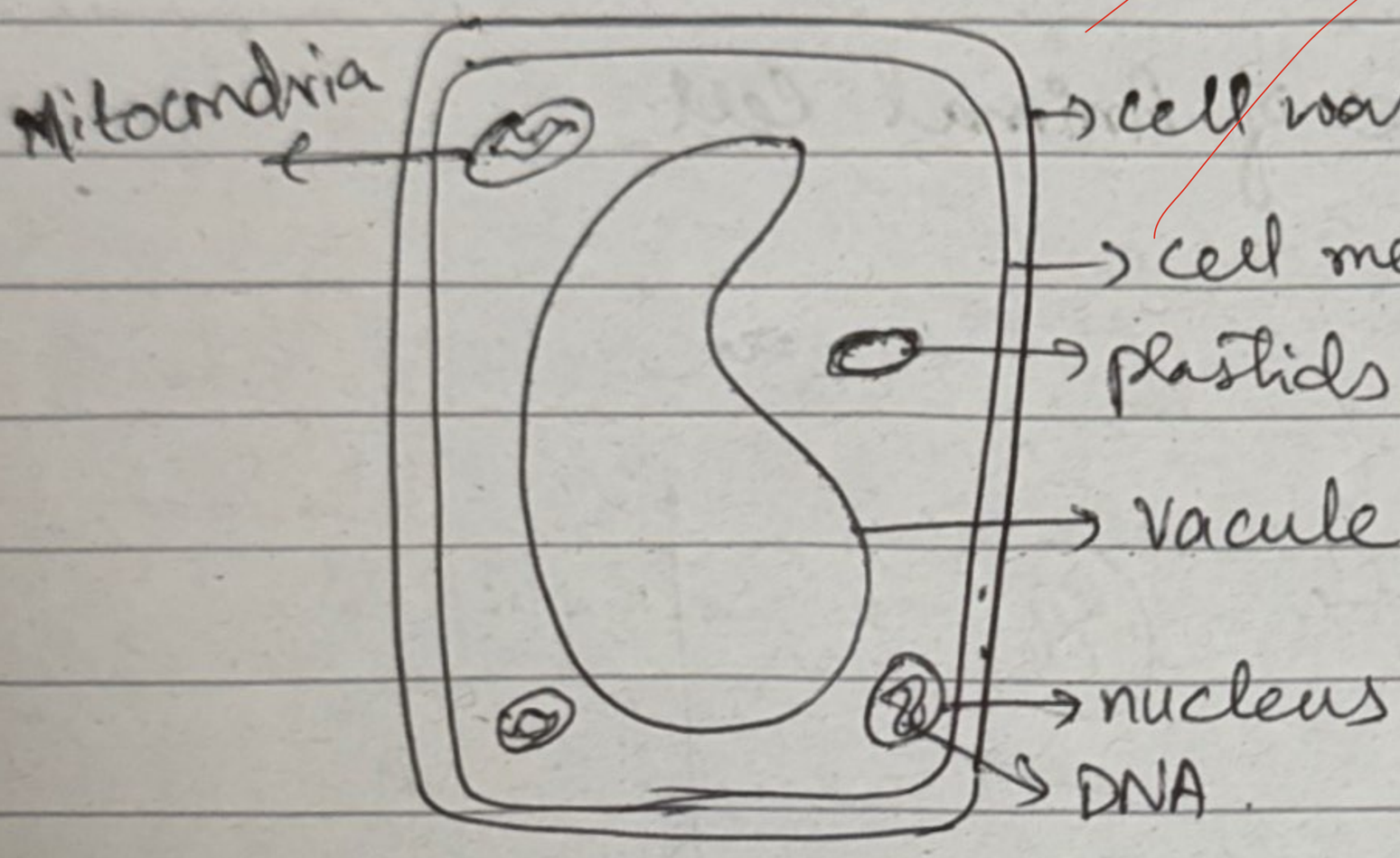


C- Functions of Nucleus and Mitocondria:

Nucleus: Segregales the De-oxyribo nuclic acid (DNA) from the rest of the cell organalies. It is where the cell divisions starts.

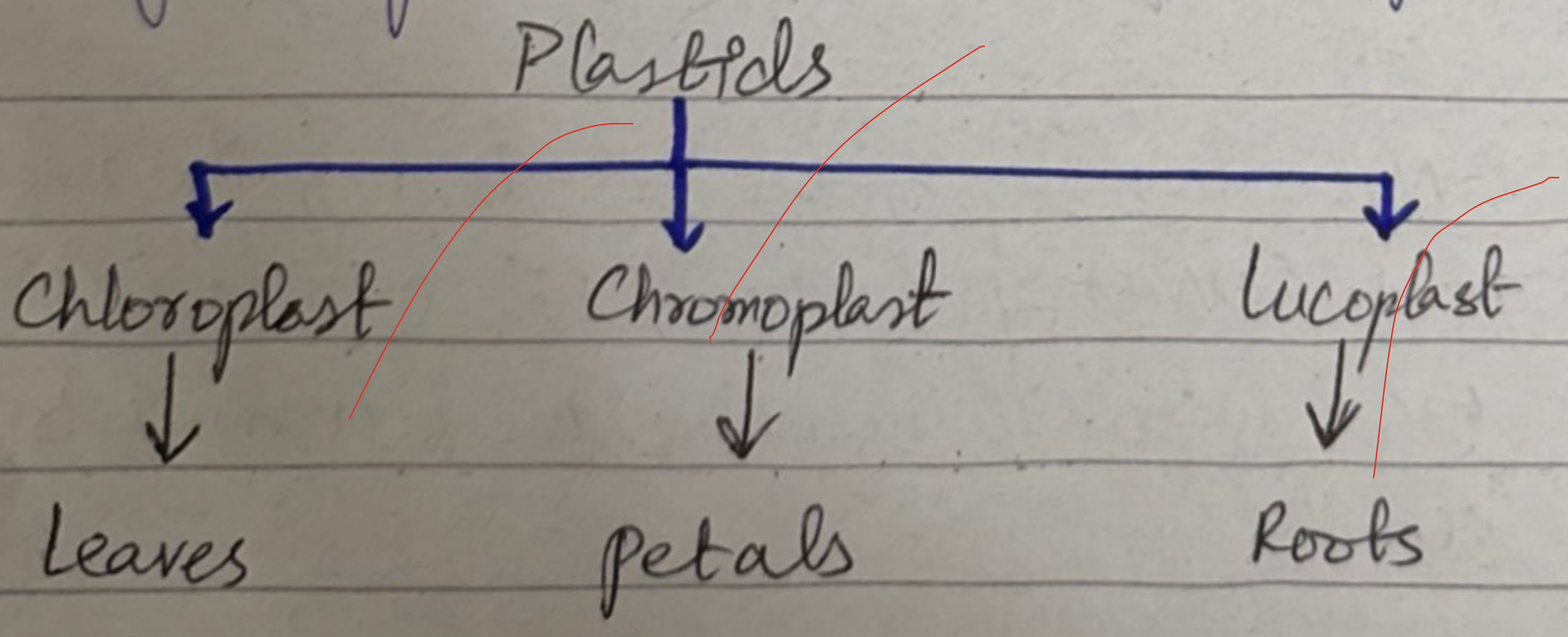
Mitocondria: It is the battery of both animal and plant cell. It provides energy to the cell for its growth and reproduction. The energy is in the form of ATP.

C- Plant Cell Structure



D- The function of plastids:

Plastids are found in plants only. They are devided into 3 categories:



1) Chloroplast:

Origin: Leaves

Function: Give green colour to the leaves that help in making the food for the plant through photosynthesis

2) Chromoplast:

Origin: Petals

Function: To give colour to the petals of flowers. The aim is to attract insects and they can aid in the reproduction of plants

3) Leucoplast:

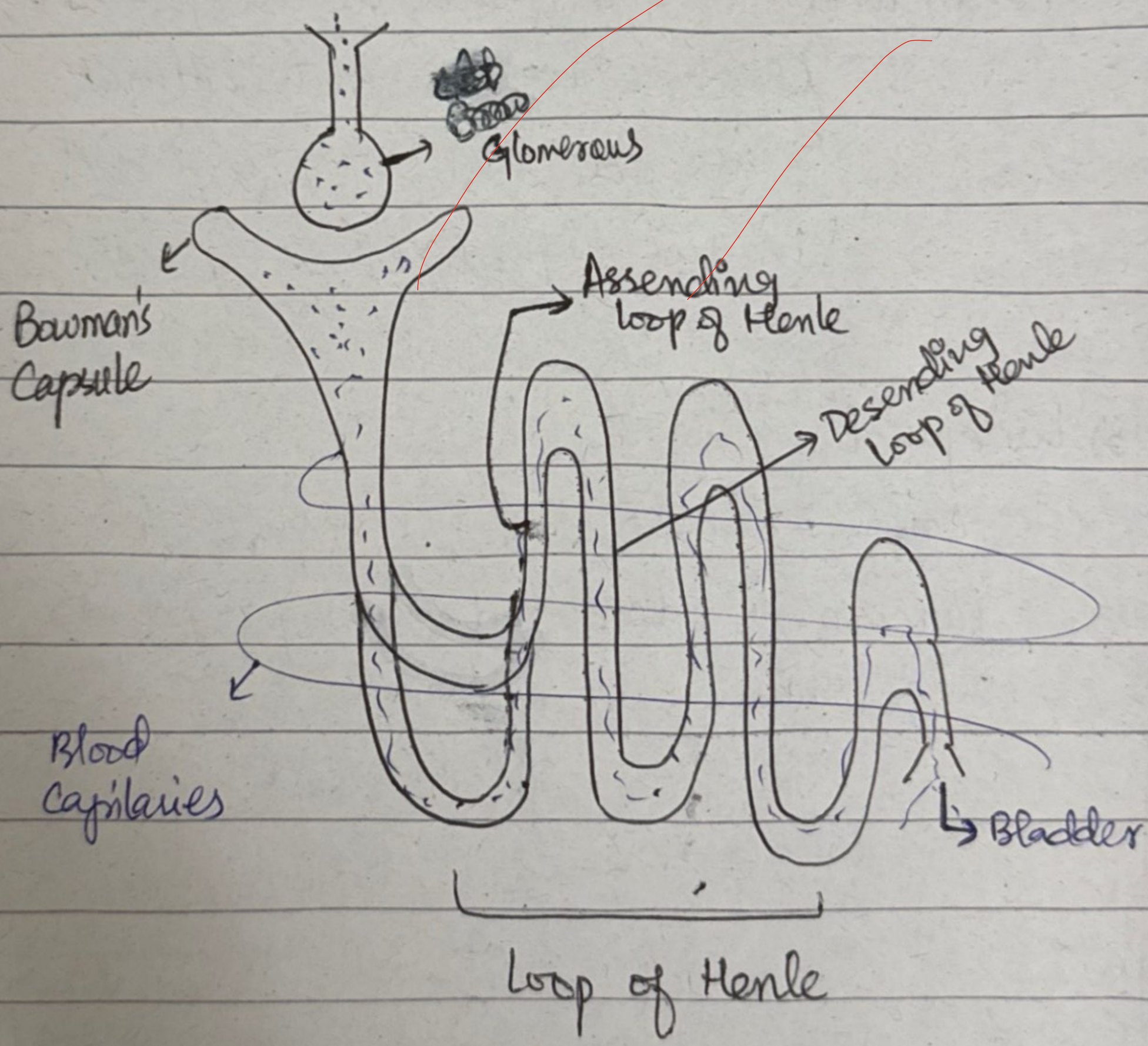
Origin: Roots

Function: To store nutrients for plants such as starch.

B) Nephrone basic unit of kidney: Structure and Function

Nephrone is a major part of kidney. It is where all the nutrients are absorbed into the ~~fl~~ blood and waste is taken to ~~Uterus~~ bladder for ~~excre~~ excretion.

A- Structure of Nephrone:

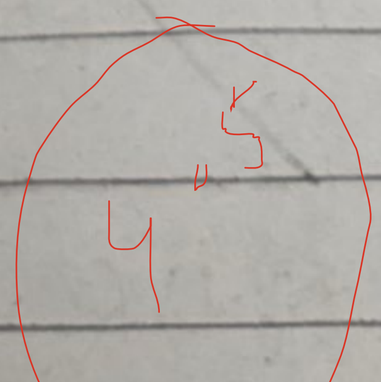


Glomerous: It is where the liquid is entered. This liquid has all the nutrients and toxins.

Bowman's Capsule: From glomerous the Bowman's Capsule nutrients and toxins are transfered. It has greater Surface Area to absorb maximum.

loop of Henle: This is a tubular structure which is enclosed by blood Capilaries. To enhance maximum absorbtion it is in tubular structure with asending and desending nature. This give more time to nutrients to be absorbed.

Blood Capillaries: The mesh of blood capilaries is to absorb the nutrients and leave the toxins to be extracted through urine.



C) Causes and Preventive measures of Smog:

The phenomenon of smog became popular after the Great London Smog. where for few days the great city was closed due to smog and caused multiple deaths. The phenomenon has now been common in every big industrial city. It is when smoke and smog combine together.

A) Causes of Smog

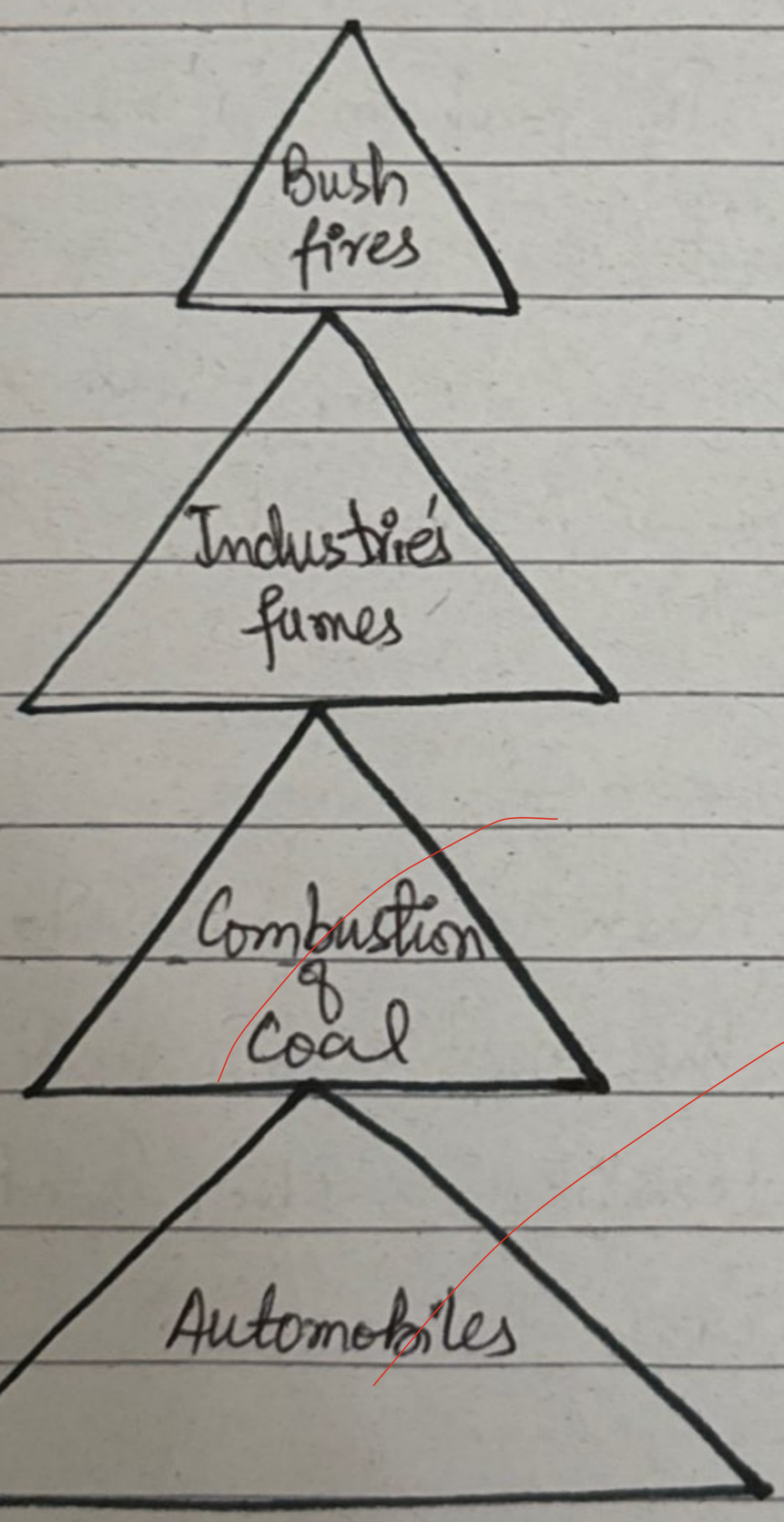


Fig:1) Causes of Smog

Bush fires: Mostly farmers burn the residues after harvesting. It is much easier to burn it as its ash gives nutrients to the soil and is easy task. This smoke helps in smog.

Industrial Fumes: Gases such as sulfates and carbonates are released into atmosphere without being treated causes smog.

Combustion of Coal: Combustion produce particulate matter into the atmosphere which aids in smog. Moreover, BBQs fumes from restaurants also causes smog.

Automobiles: Car's exhaust fumes that contains hydrocarbons which aids in smog.

Open Burning of waste: When waste is burnt by cities openly in air cause smog as they release fumes.

B) Preventive Measures

Agricultural Reforms: Prevent farmers from burning crops openly. Regulation and incentives to be given to faimers to prevent this activity.

Industries to be installed away from cities.
Industries to be set up away from cities to prevent its effluents causing smog.

4.6

Catalytic converters and other technologies to be installed to prevent smog.

Policies regarding car's battery healths need to be foomulated: To prevents cars from producing more fumes quality of fuel, and converters must be used. Plus, their batteries healths must be checked before going on road.

Normalise carpooling and local bus transport usage: If less cars come out on road the problem can be resolved so metro bus systems must be enhanced and such concepts must be normalised.

to be

Efforts made to use green energy:

From governmental level efforts be made to prosper green energy plants and people must be given benefits to opt green energy.

D) Solid Waste Management and its Weaknesses in Pakistan.

Solid Waste Management is a well organised method to collect, process and recycle waste. It is done through open dumping, composting and incineration in Pakistan.

A- Steps of SWM:

1) Collection of Waste

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2) Processing of Waste

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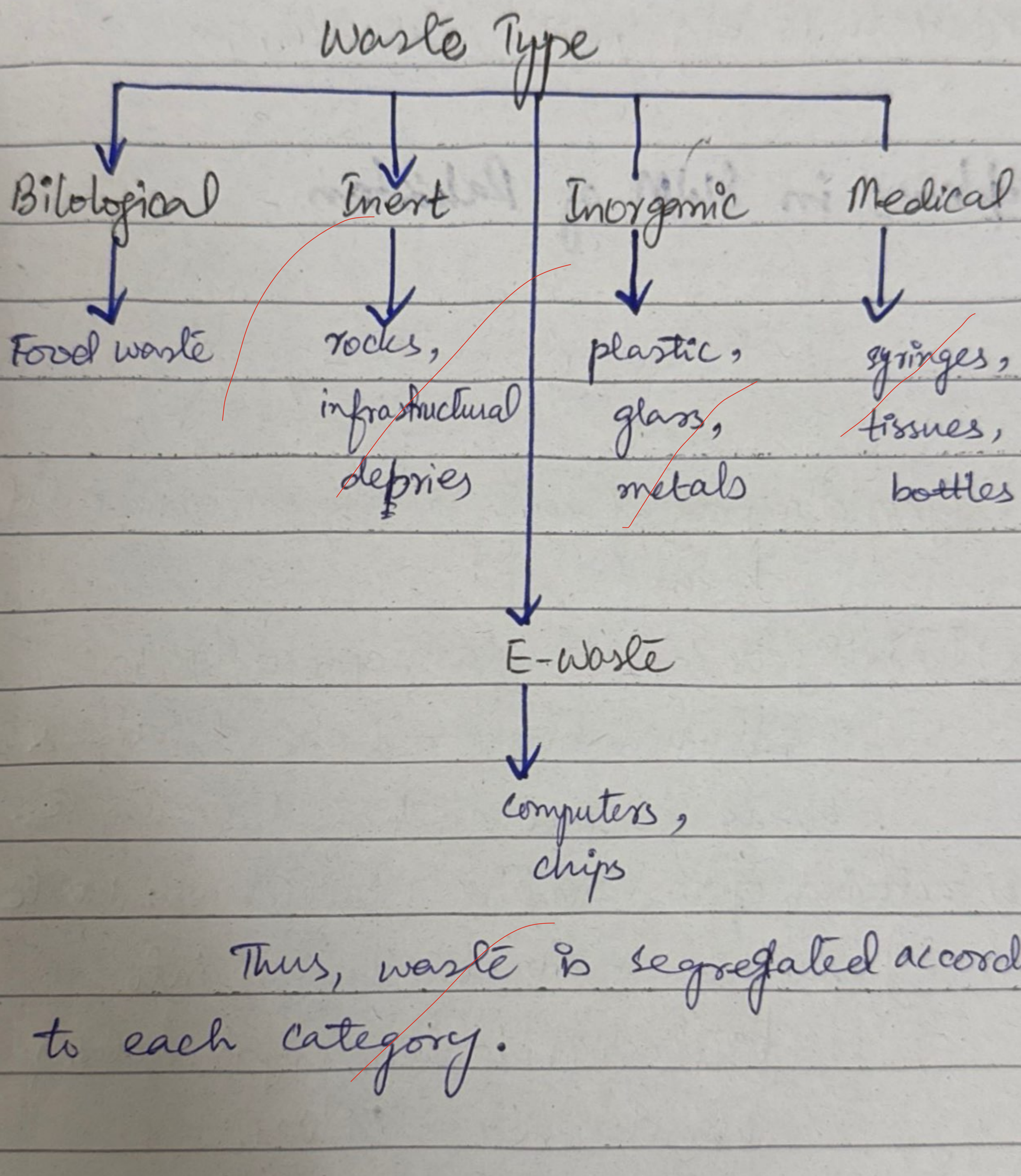
3) ~~Incineration~~ Recycling

B- Collection of Waste

The process starts from collecting waste. Government at municipal level collect waste.

Processing of Waste

The waste is then processes using following category of waste type:



Thus, waste is segregated according to each category.

Recycling

At this stage all the material that can be recycled is set aside and is bought by companies that recycle it e.g paper, plastics, glass etc.

8- Problems in SWM of Pakistan

Following are the problems:

1) Open dumping: Creates many environmental hazards

2) Inability to collect waste properly: In mostly undeveloped and even developed areas no facility to collect waste.

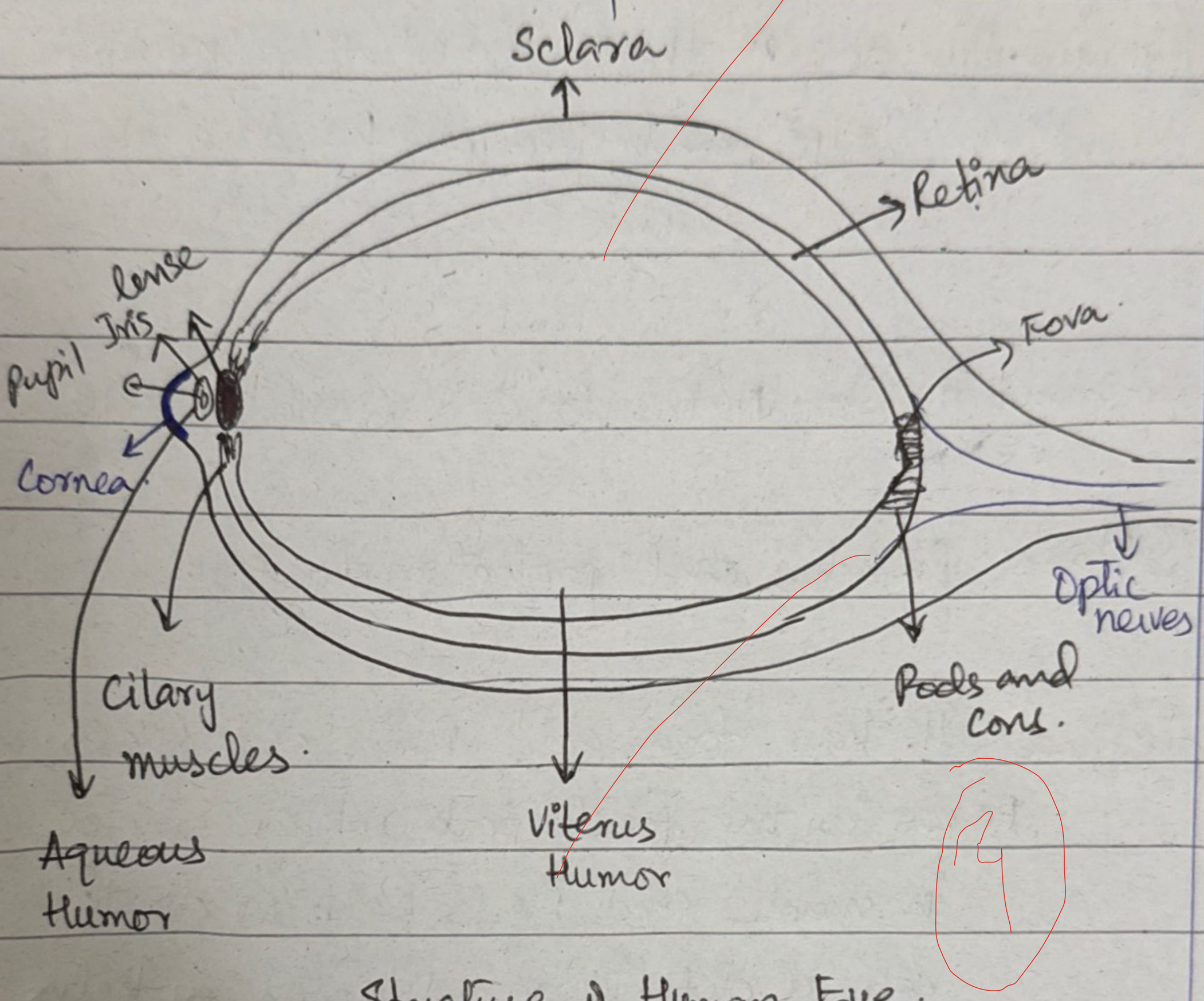
3) Factories open violation of SWM laws: Waste of factories is directly thrown into water bodies, lack of legal actions promote such activities.

4) Lack of funds: Due to lack of funds at state level SWM system can not be introduced.

5) Citizens lack of knowledge and efforts: Even at societal levels efforts are lacking to mitigate the SWM efforts.

Working of human eye:

Humans have two eyes and its structure is as follows:



Structure of Human Eye.

Working of Human Eye:

1. Cornea: Provide protection at the front of eye. Also bends light.

2. Pupil: The part where light enters the inside of eye. It contracts (bright light)

expands (darkness).

3. Iris: The pigmented part of eye

4. Aquous Humor: A thick liquid that nourish eye and provide bending of light

5. Viterous Humor: Nutrients and shape to eye

6. Sclara: Provides out protection to eye

7. Retina: It has fova and Rods and Cones. Fova is the focal poit where image is made and Rods help in dark colours detection and Cones helps in detection of colourful images.

8. Optic Nerve: Takes signals to the brain.

9. Ciliary Muscles: Thin muscles that holds the lense and contracts and relax to change shape of lense.

b. Lense: Hepls in focusing the image on Fova by contracting and relaxing. It helps in near and far sigutedness

B) Symptoms and Preventive Measures of Malaria and Dengue.

1) Symptoms of Malaria

- Body aches
- Feaver
- Nausea

2) Symptoms of Dengue

- Feaver
- Body aches
- Muscular Cramps
- Nausea and vomiting
- Headaches.

3) Preventive Measures:

Maralia and Dengue

1) Clean environment

2) Drain water bodies

3) Medication that ~~kids~~ has antibiotics

4) Mosquito propellent usage

5) Windows and doors covered to prevent mosquitoes entry.

6) Avoid going outside during sun rise and sun set to prevent dengue.