

(A)

Food Adulteration - a definition

Food adulteration is a process in which certain substances are added into food to enhance the shelf life of the food.

Defining Characteristics

Substances are deliberately added:

In food adulteration, substances are intentionally added to draw results for increase in shelf life.

DATE: ___/___/___

Food Contamination - a definition:

Food contamination happens due to the violation of standard procedures, by which food quality could see a decline.

Characteristics of Food contamination:

It happens during packaging or preparation:

This happens due to violation of standard procedures in various stages of food preparation or packaging.

It severely impacts quality of food:

The quality of food sees a sharp decline.

DATE: ___/___/___

Difference between Food contamination and Food adulteration

Food
adulteration

Quality
is maintained

is done
intentionally

no marked
impact on health

Food
contamination

Quality is
likely to see
a surge

happens due to
error

can invite health
complications

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Following additives
are caused in food
adulteration

Antioxidants are used:

For food adulteration, antioxidants are added to enhance shelflife of food.

Thickening agents are employed

These agents are included to increase life.

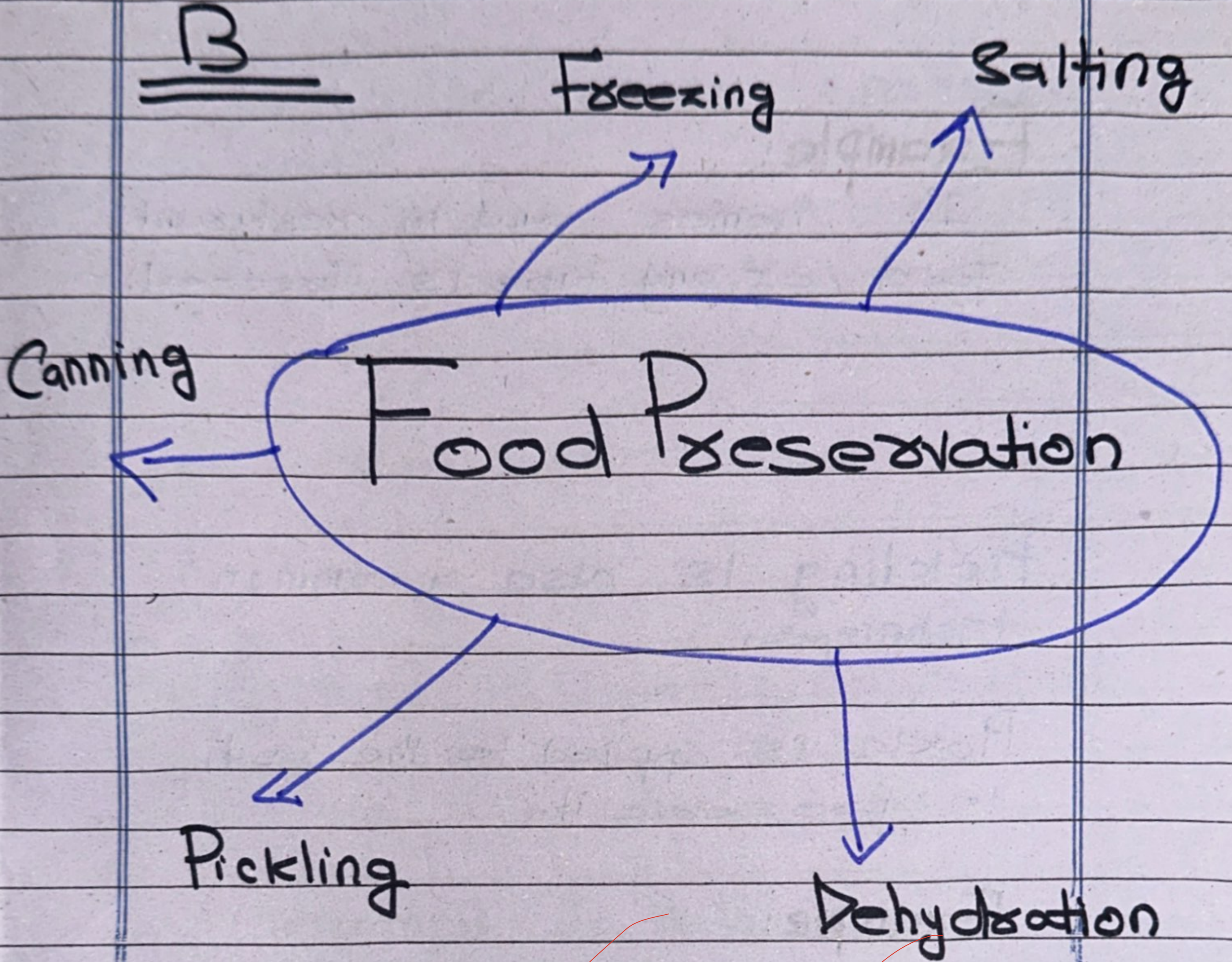
Preservatives are widely used

To downplay the impact of free radicals, preservatives are used

Colouring agents are also included

This is added to add colour to the food.

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These techniques are widely used to preserve food in the homes and for commercial purposes.

The phenomenon of freezing

Any type of food is put in a freezer to lower the temperature.

Example:

In homes and in restaurant, food, of any type is frozen.

Pickling is also a common technique.

Pickle is applied to the food, to preserve it.

Example:

An ~~acts~~ organic compound acetic acid is applied over fish to preserve it.

Canning - a process for travelling.

In cans, food is preserved.

Examples: The food is added to cans, most predominantly by restaurants to send to other cities.

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Salt is applied to preserve food:

Salt is applied to meat or fish to preserve food

Example: Fish or meat

Another technique is dehydration

Dehydration means to take entire liquid out of the food

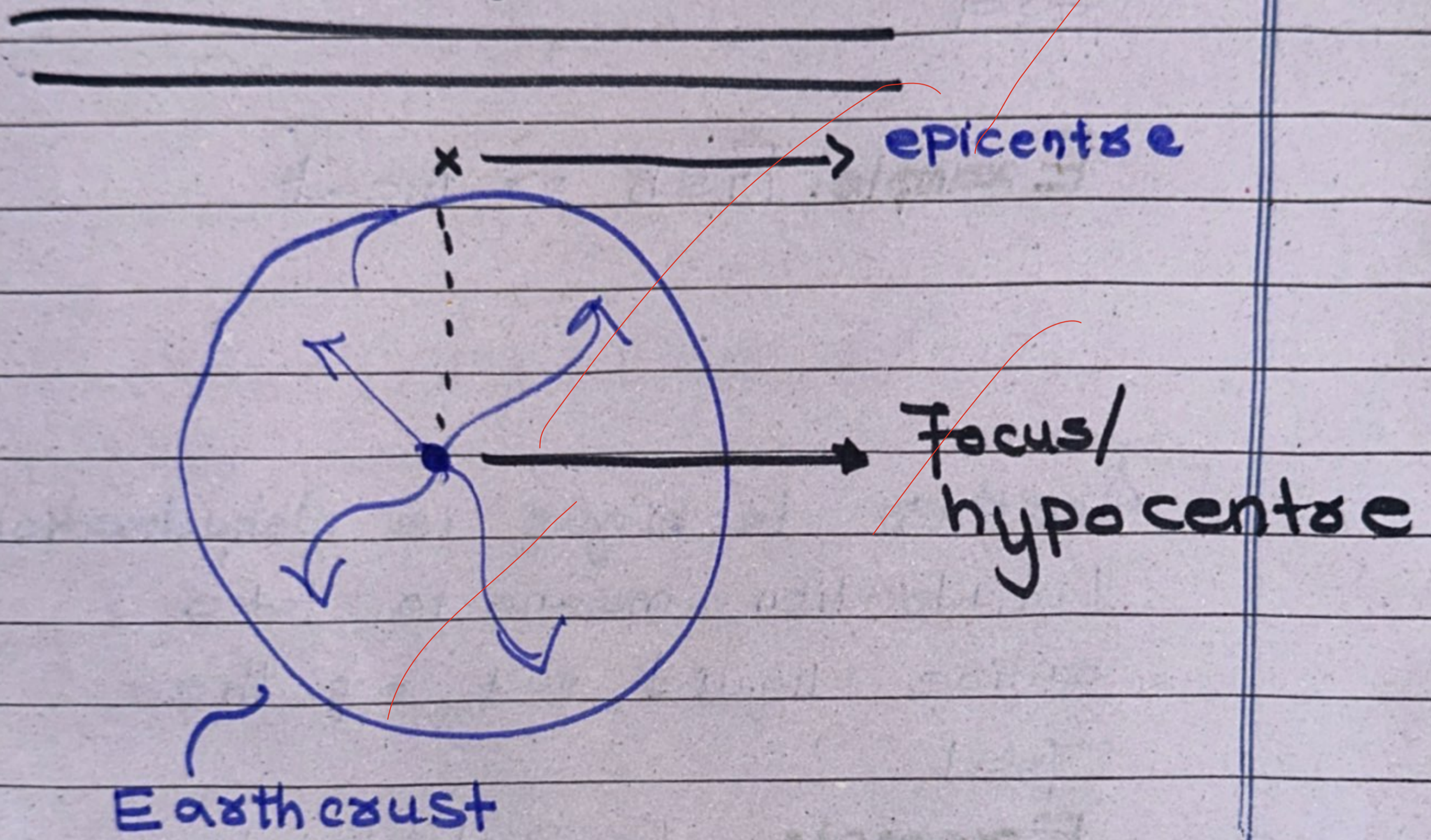
Example: In Baluchistan, landhi ka gosht is dehydrated.

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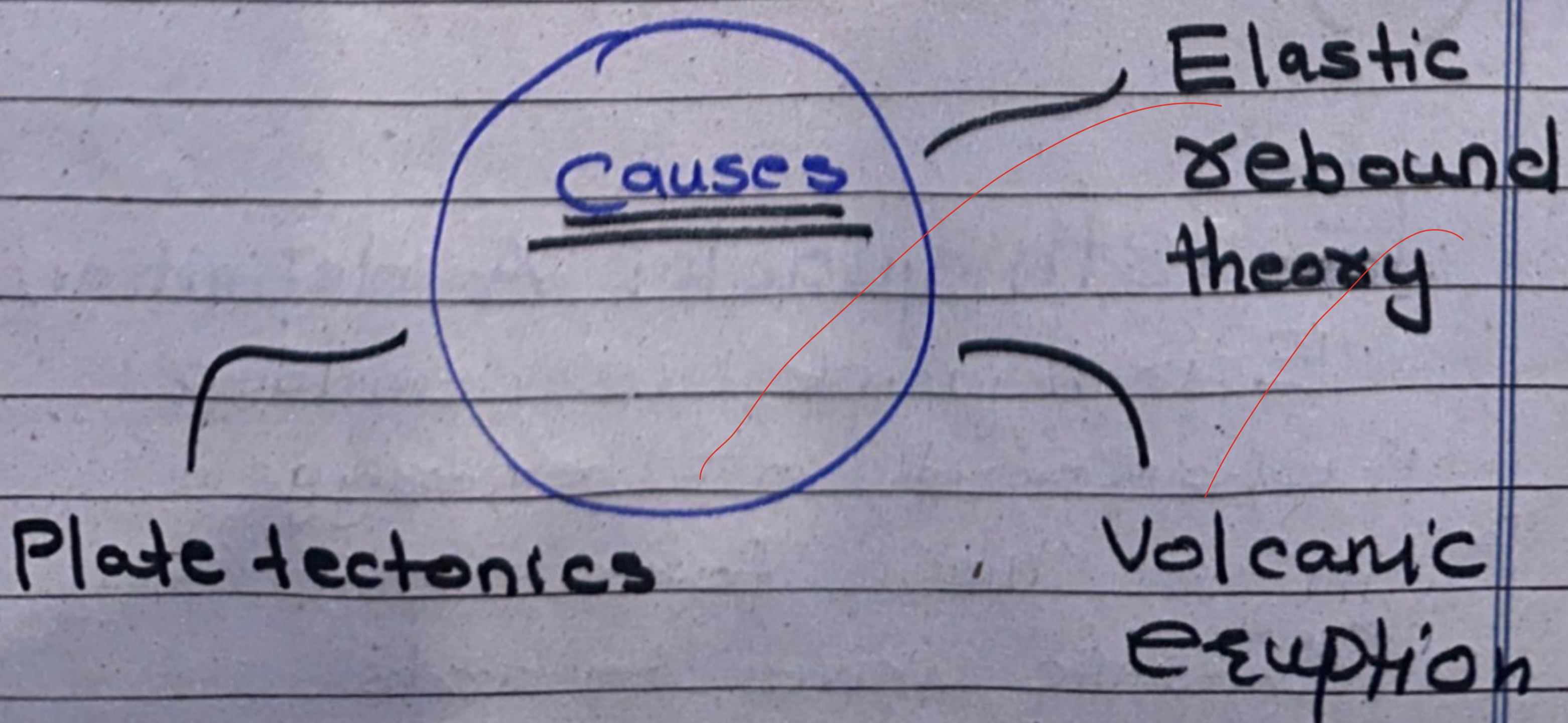
Earthquake: A definition

Earthquake is sudden released of energy in the form of seismic wave towards earth crust in all directions.

Anatomy of Earthquake



Causes of Earthquake



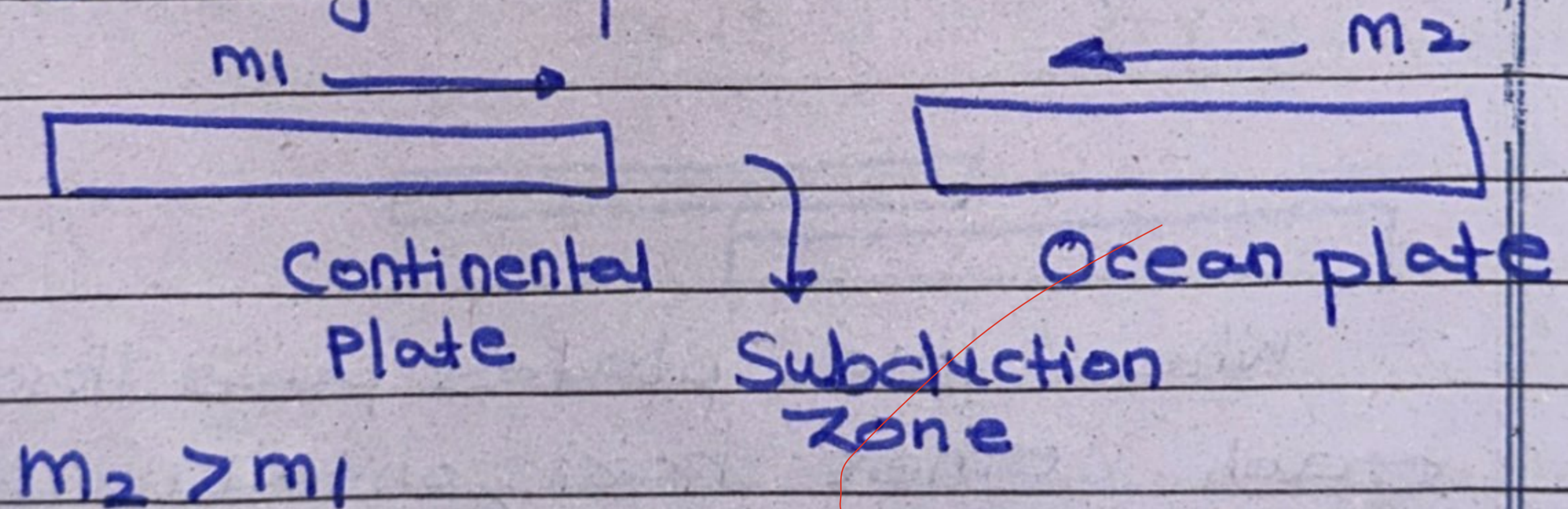
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Elastic rebound theory

When stress is applied along fault, the rocks deform to released energy in the form of seismic waves.

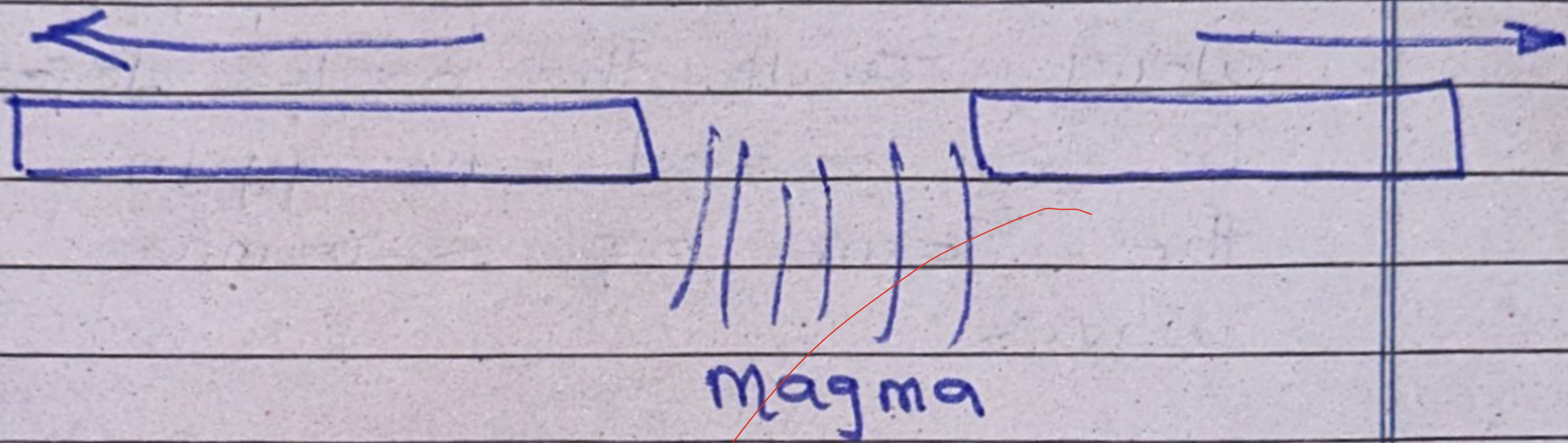
P Plate tectonics

Convergent plate boundaries



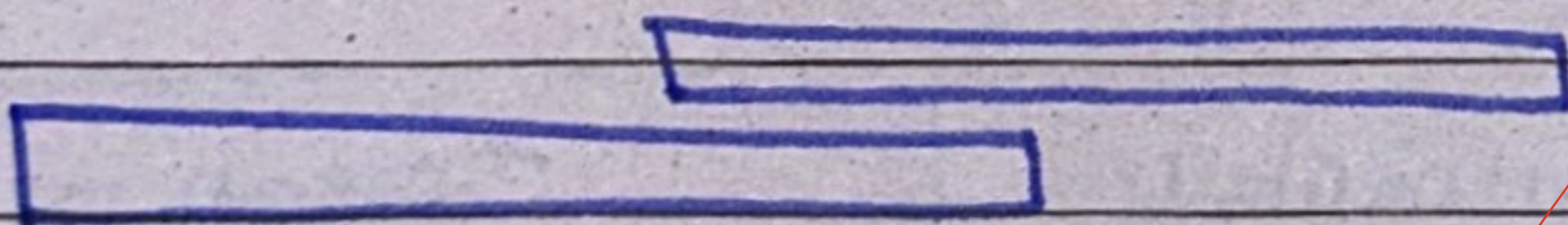
This leads to release of energy as energy is restored.

Divergent Plate boundaries



The rise of magma leads to seismic activity

Transform boundaries:



When two plates pass through each other horizontally, seismic waves are generated.

Types of Earthquake on intensity

Intermediate

70-300km depth

Earthquake

Shallow

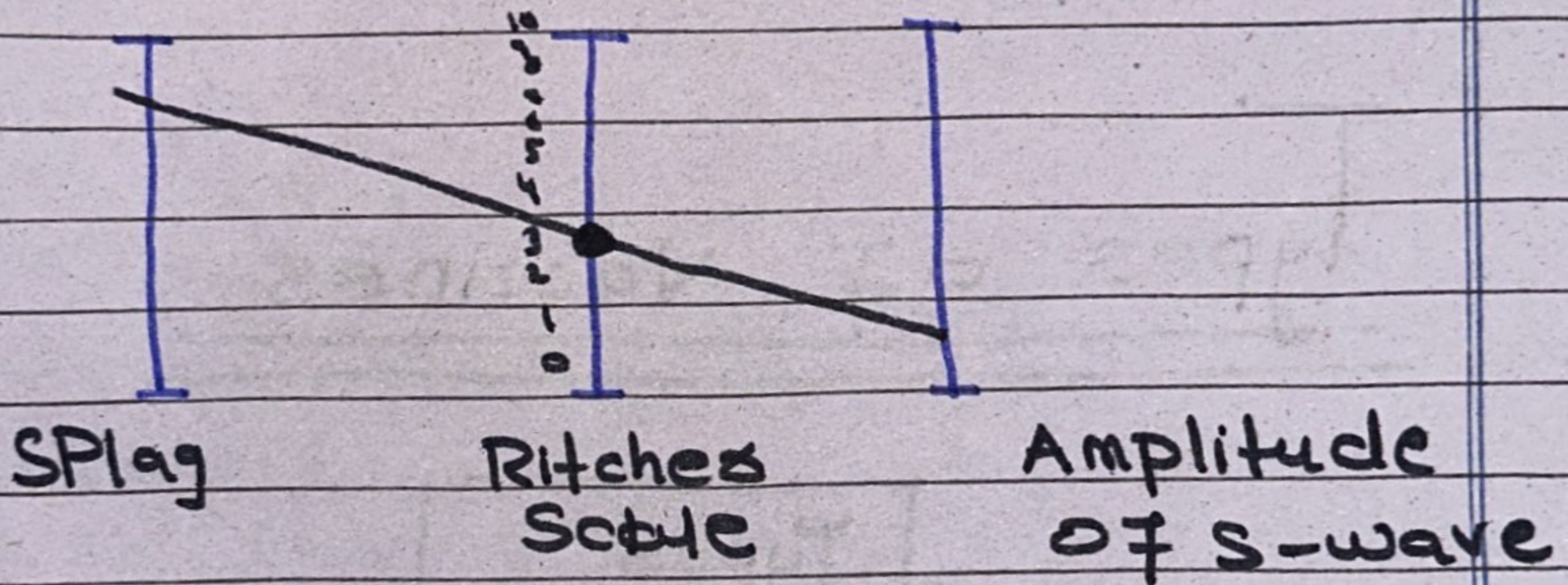
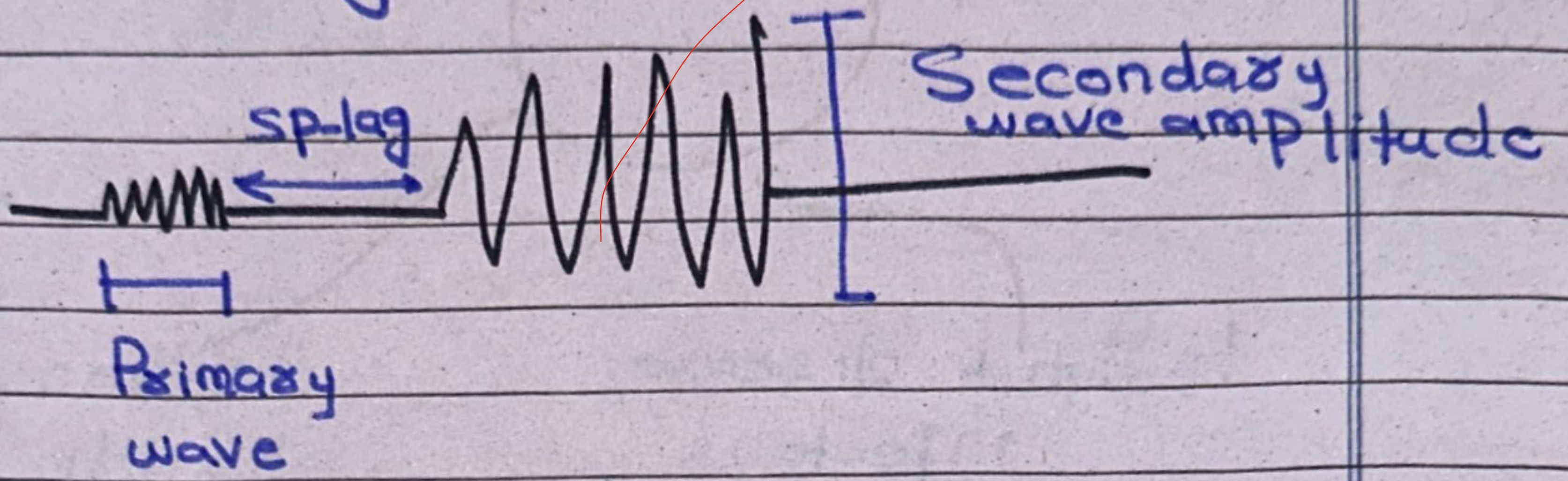
depth 0-70 km

most destructive

Deep (depth = 300-700 km)

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Seismograph wave form



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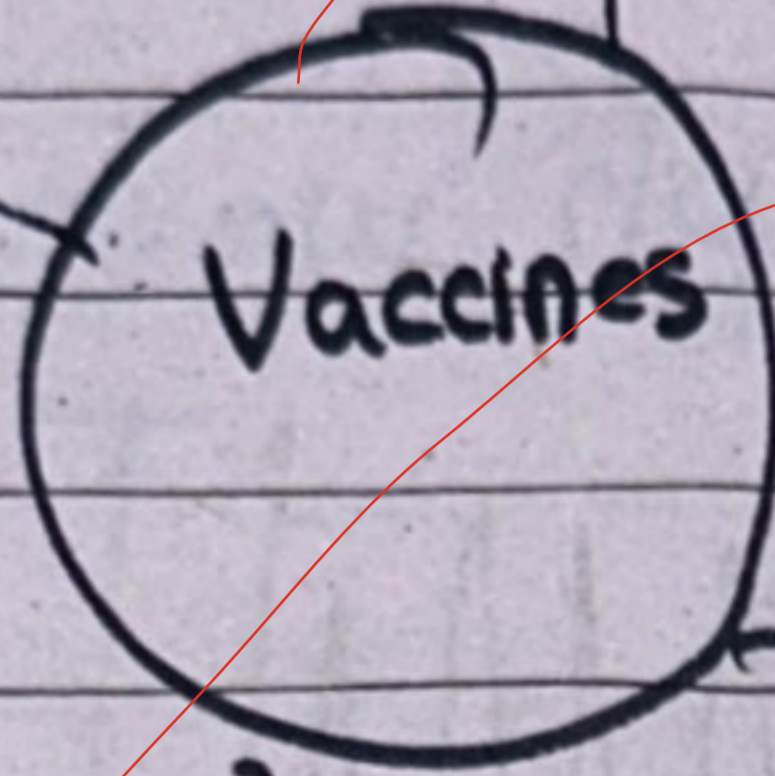
Vaccines:

A vaccine is biological pre preparation added into the body to acquire immunity.

DATE: ___/___/___

to take pre-emptive measures.

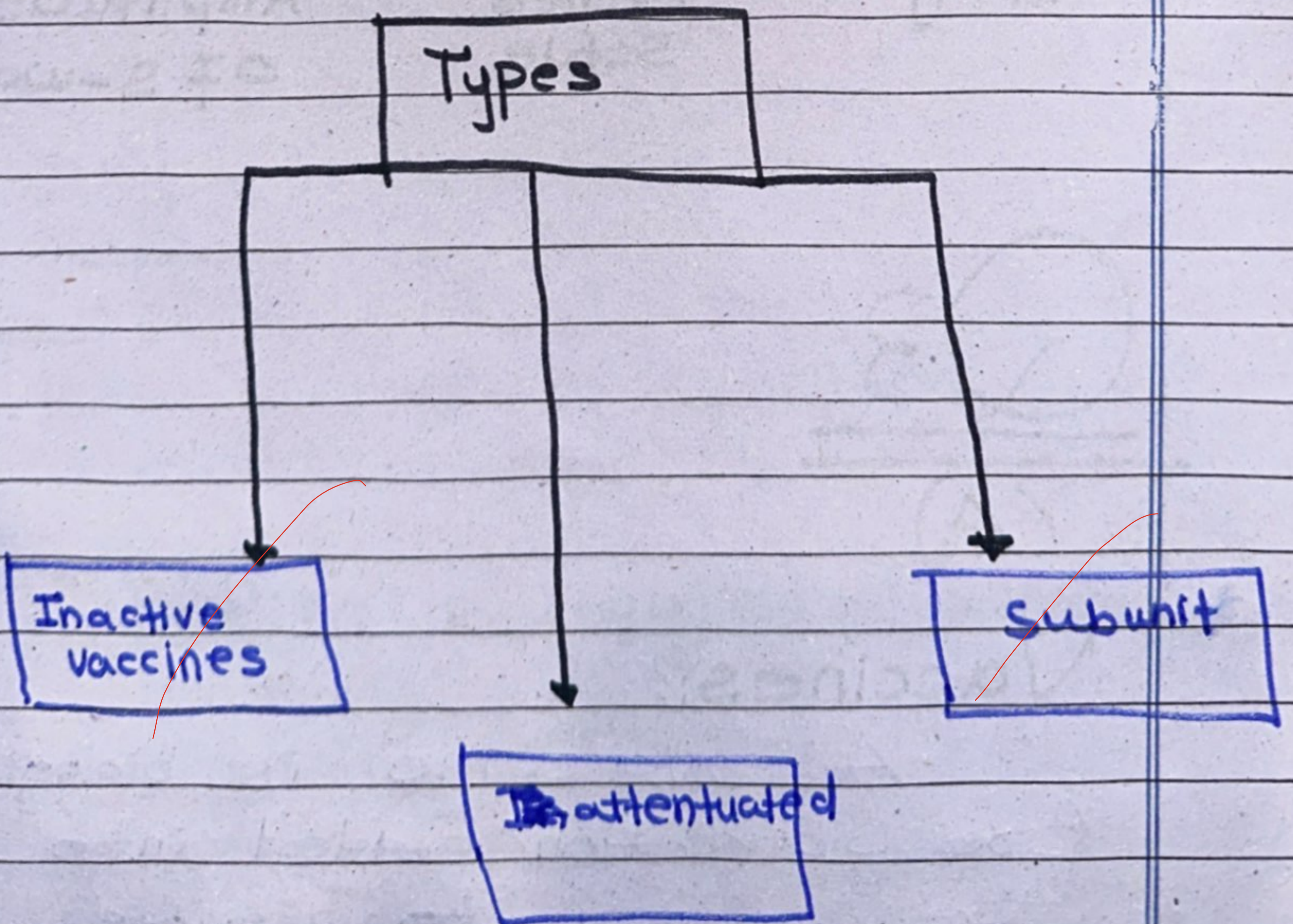
to acquire immunity



to fight + disease, infectious

to boost health

Types of Vaccines



Inactive vaccines include inactivated pathogens

These vaccines are added to the body to acquire immunity. These vaccines carry dead organisms.

Attenuated vaccines carry weakened organisms

Such vaccines have weakened pathogens to aid human body.

Subunit vaccines carry a particular component

These vaccines have only a component or two of pathogen to invite immunity.

Examples

Covid-19
Vaccine

Polio
Vaccine

B

Defining balanced
diet:

A balanced diet
is consumption of macro
and micro nutrients in
right proportion.

Balanced diet

taking
Carbohydrates,
Proteins and
Fats in
right proportion

taking minerals
and vitamins
in right
amount

Sources of micronutrients.

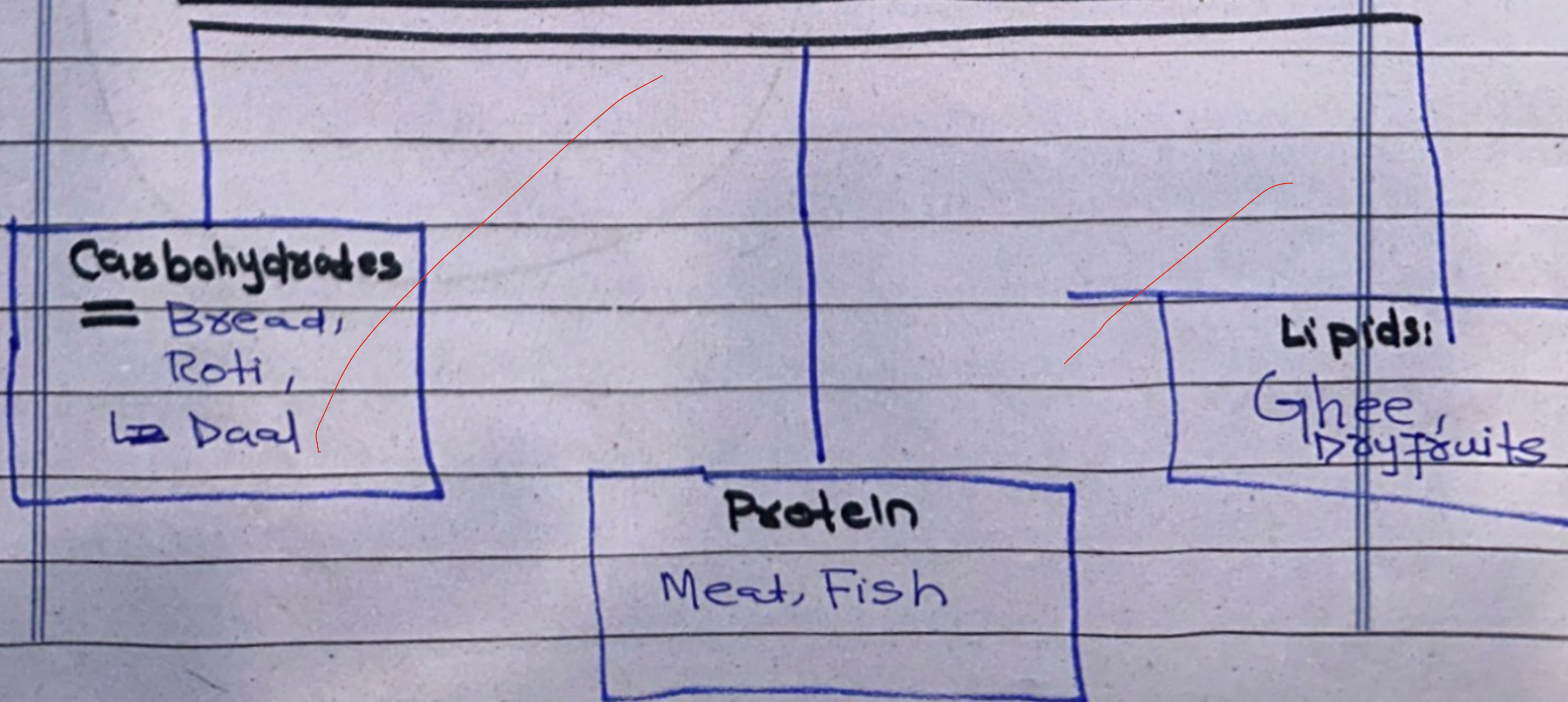
Vitamins are found in fresh vegetable, juices and seeds:

One could take these vitamins from fruits, leafy vegetables and seeds.

Minerals can be taken by consuming vegetables:

By taking vegetables, minerals are introduced, such as zinc.

Sources of macronutrients



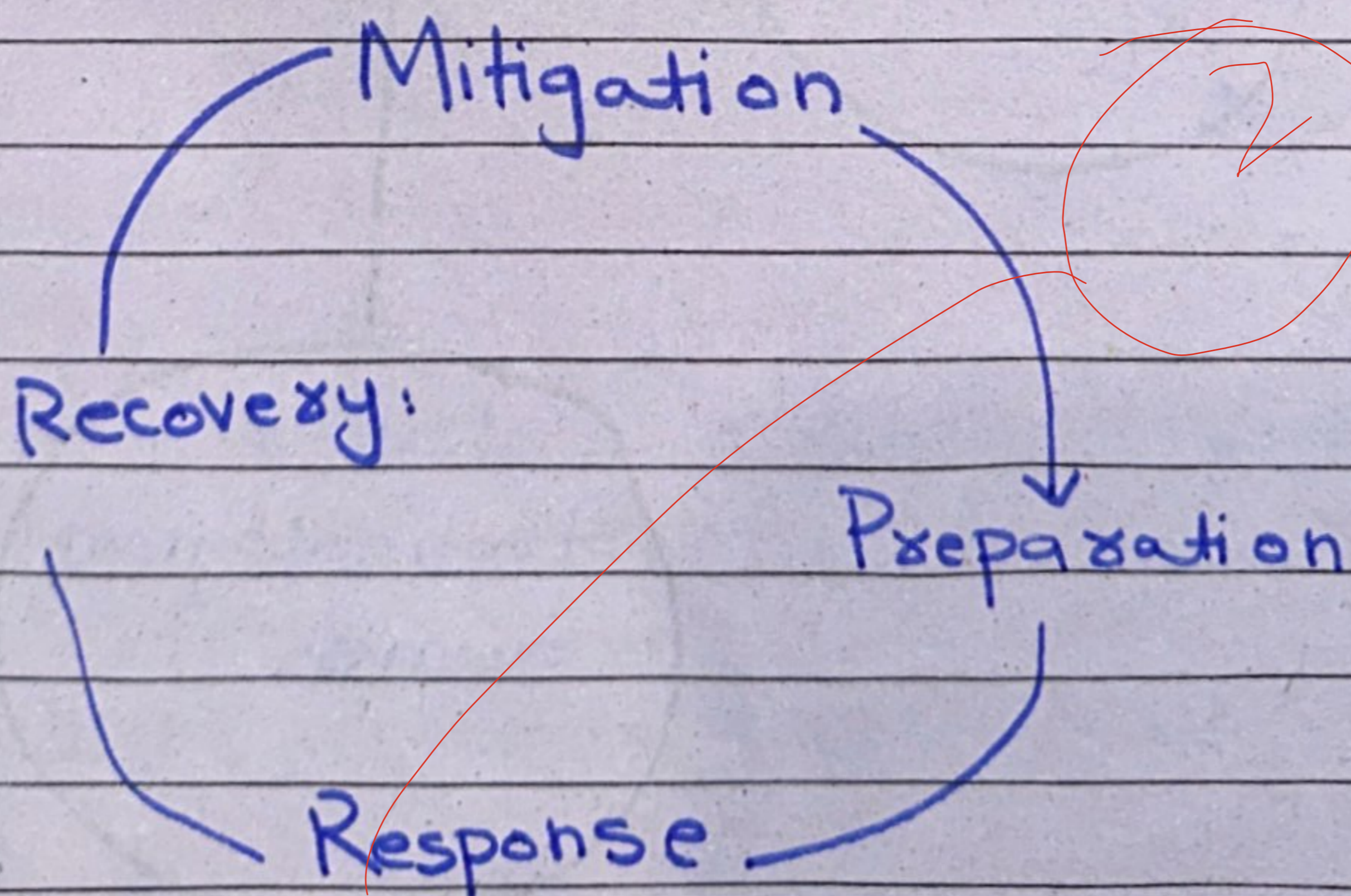
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Note: According to Food and Drug Authority, an individual should consume at least 41g Fat, 150g Protein and 200g Carbs.

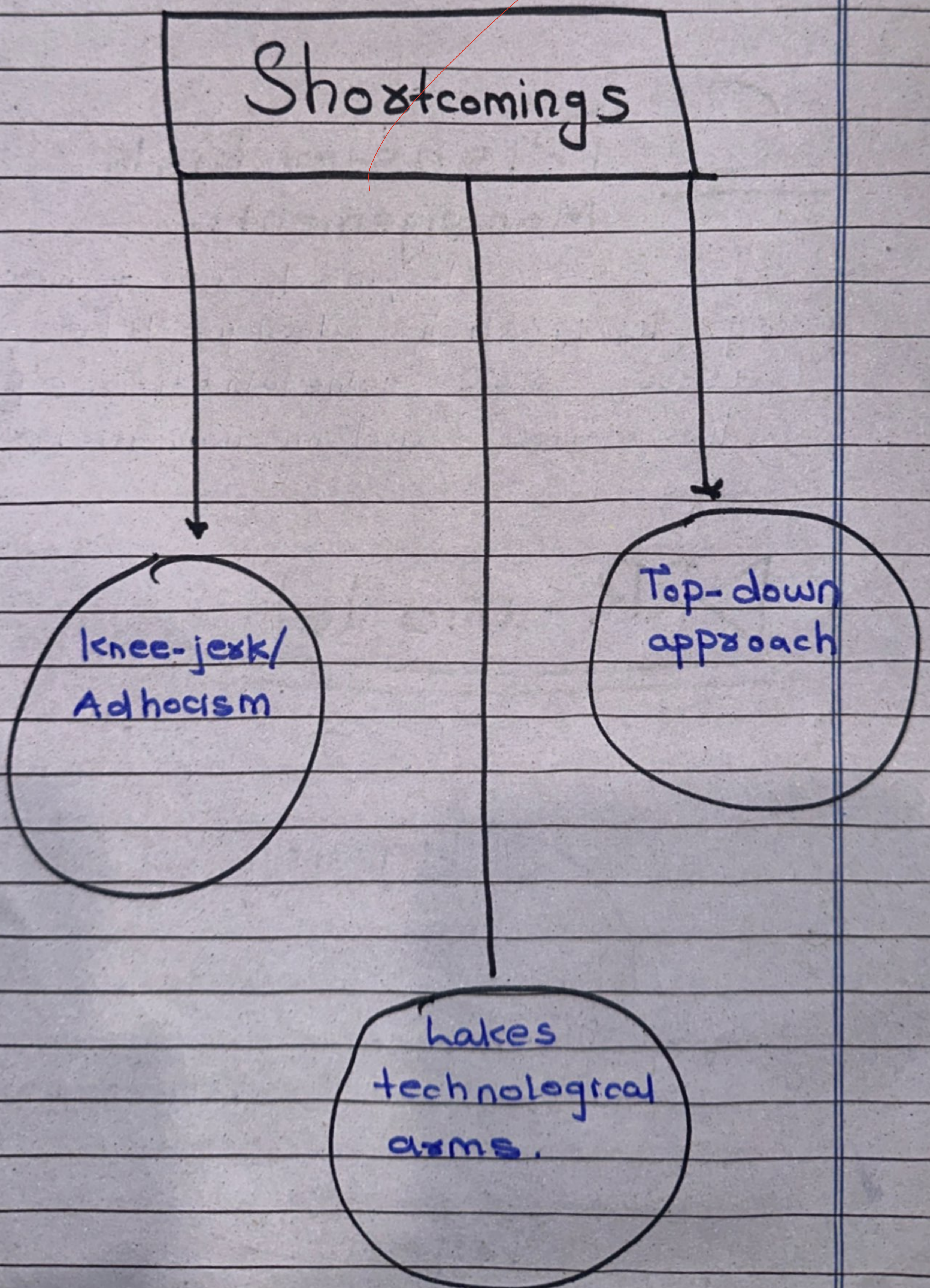
C Disaster Risk Management:-

It is defined as framework of institutions designed to assess risk vulnerabilities of disaster and mechanism to cope it.

DRR-model



Weaknesses in Pakistan's DRM approach



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Pakistan's approach is closely tied to ad-hocism. Only when disaster occurs we come to react. There is not much effort preceding crisis.

Technological devices are hardly integrated.

Technology is brushed aside for many seasons. Human resources are not too equipped either.

It is too centralised for a too vast country.

In a centralised approach, much much is left to be desired. District Disaster Management authorities are barely operational, often, govt outsource management to deputy commissioners in extra ordinary situations.