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Question No. 1 (a)

Food Adulteration:

The intentional addition of a substance into food in order to increase it quantity. and the extraction of severd substance from the food or substitute it with other substance is called Food adulteration.

Health Risk:

They pose a health risk when the adulterant is toxic. Moreover, it also pose risk to health when the essential nutrients are removed or substituted.

Example: water in milk and filler to spices.

Food contamination:

The inadvertantly presence of substances in food is called contamination.

⇒ They occur naturally or as a result of environmental activities or during

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harvesting, processing, packaging or transporting.

Examples:

It includes the presence of bacteria, viruses, chemical (pesticides) and physical objects (glass or metal fragments)

Controlling Measures Of Food Adulteration:

Strict policies:	The govt should implement strict polices to mitigate adulteration
Implementation Mechanism.	The government should develope implementation mechanism by making teams to raid on shops or factories.
Awareness among public.	Awareness should be spreaded in people, not to buy adulterated substances.

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b

Food Preservation:

It is a process of treating and handling food to stop or greatly slow down the spoilage of food.

Methods of food preservation.

Following are the methods used for the Preservation of food.

① Freezing:

By freezing, the temperature of the food become low, which slow down the growth of bacteria, yeast and mold. Therefore, extending its shelf life.

Example:

Freezing preserves meat, seafood and frozen vegetables for months.

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② Pickling:

In this the food is immersed in a solution of acid, usually vinegar or salt. It creates an environment that inhibits the growth of bacteria.

Example:

By applying salt on meat it can be stored for months

③ Drying (Dehydration)

The moisture drawn out in this process which inhibits the growth of bacteria & fungi

Example:

powdered milk and instant coffee.

④ Canning:

To seal the food in the container, which create vacuum seal, preventy the growth of microorganism.

Example:

Prepared meal such as soup and beans in cans.

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(5) Radiations

In this process food is exposed to radiations like x-rays and gamma ray. There rays kill the microorganisms present in the food, which delay ripening of food.

Example:

Fresh fruit like mangoes are irradiated to delay ripening.

Weather:

weather describes the conditions of the atmosphere for the short period of time like days week or months.

Weather Variable:

There are different variable which describe and defines the weather condition of an area. Some of them are.

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① **Temperature:**

It describes how hot or cold the atmosphere is.

→ It can be below the freezing point (0°C) or also can be above the freezing point.

→ It is the most important variable of the atmosphere because other variable like pressure and humidity depend on it.

② **Pressure:**

Atmospheric pressure is the force exerted by the weight of the air or the substance in any point on the earth.

→ Its significance is that high pressure is often associated with the calm weather while low pressure brings storm and winds, clouds and percipitation.

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③ **Humidity:**

It is the measure of present of water vapours in the atmosphere.

→ It results from the evaporation and transpiration of water. It is measured in g/cm

→ The amount of water vapour in a volume of air or atmosphere is called **Absolute humity**

→ The amount of water vapour present in air as compared to when the air is fully saturated. is called **Relative Humadity.**

Earthquake:

A sudden release of energy in the form of seismic waves which set the earth crust in the vibration as a result of abrupt movement of

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tectonic plates: Abhimanyu

Causes:

The main reason of earth to occur is the movement of plate teetonic. There plates have covered the entire earth surface. These plates are constantly in motion. In some region they rub against each other, in some region they sink beneath a plate and in some region they spread apart from each other.

The motion of these plates are not so much smooth. The plate may stuck with the other plate, while rest of its body body. So, this develope a strain at that point. As the motion continue So a time come, when the rock can not further withstand and it move abrupt. Thus release all of strain in the form of energy, which cause earthquake to occur

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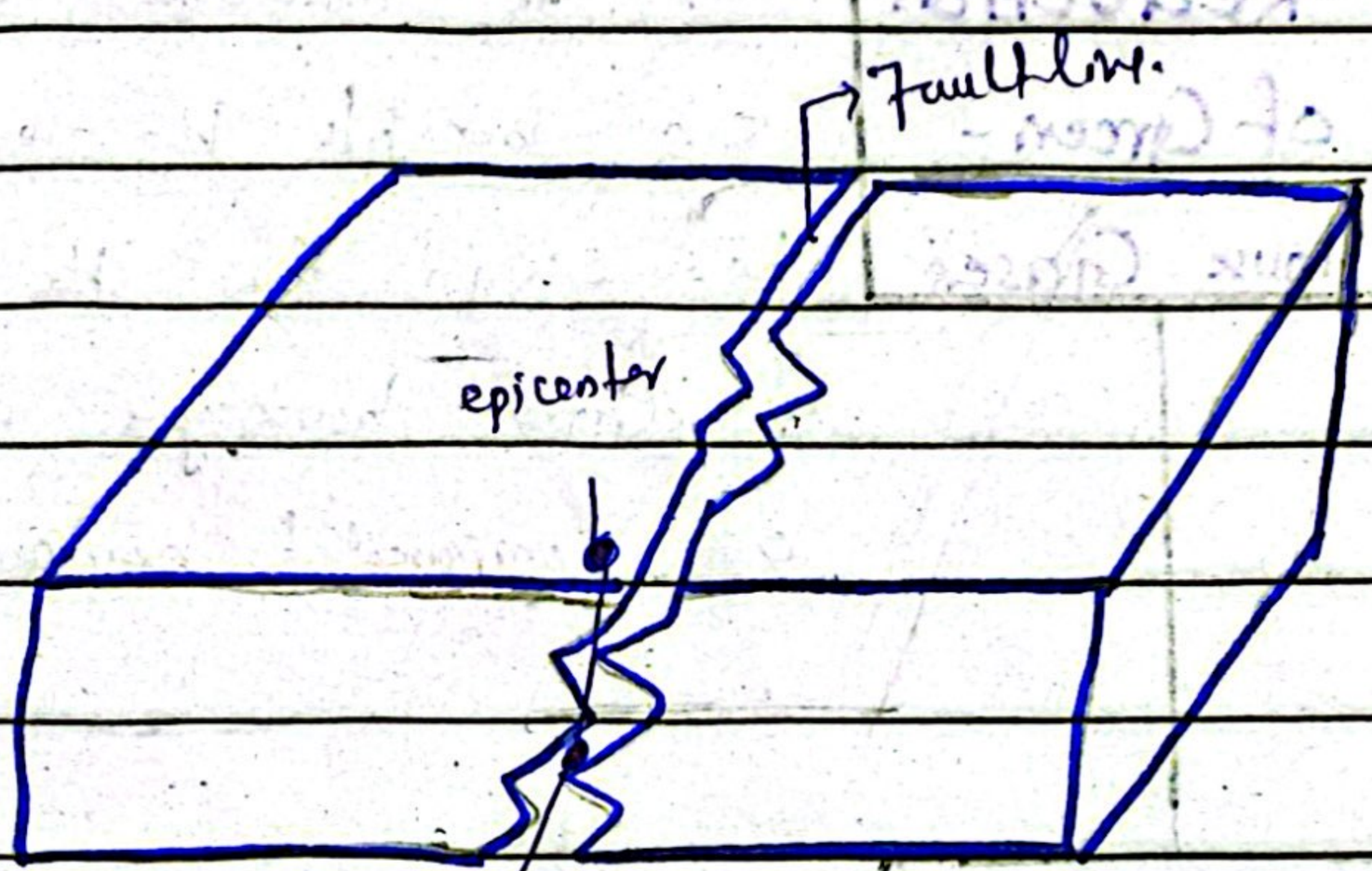
- The earth quacle can also occur due to Volcanic erruption, heavy drilling and Nuclear expenments.



Question 2. (a)

Renewable Energy:

The energy obtained from those source that can replenish themselves over time and are considered inexhaustable.

Importance of Renewable resource to ~~Enivo~~ Environment:

Following are the

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importance of renewable Sources to the environment

Reduction of Green-House Gases

→ The renewable resource can benefits the environment because in this the emission of Green house gas in negligible as compared to non-renewable.

Mitigate global warming

- The Renewable source can be used as a tool to mitigate global warming (a) Because it emits no green house gases.

Minimize water pollution

The renewable sources can also be used to minize water pollution, because the shipment of it don't pollute water. in case of non-renewable. the oil ~~imp~~ goes to water which pollute it.

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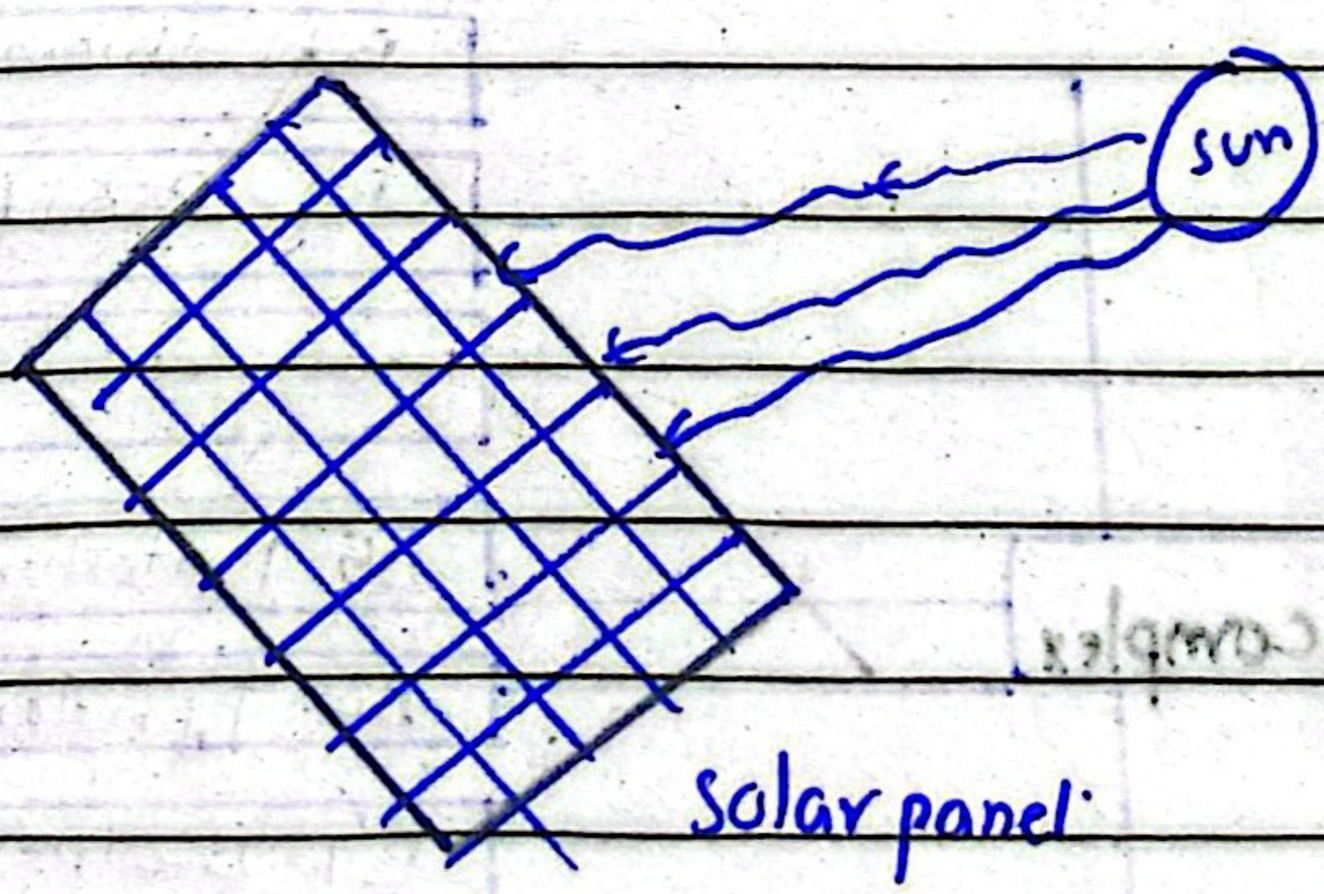
Solar Energy:

The energy derived from sun ray and is harnessed using technologies such as photo-voltain cell or solar panel.

Explanation:

When the sun rays fall on the solar panel it set free the electron from the atom which then produce electricity. It is a clean source of producing electricity.



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(d)

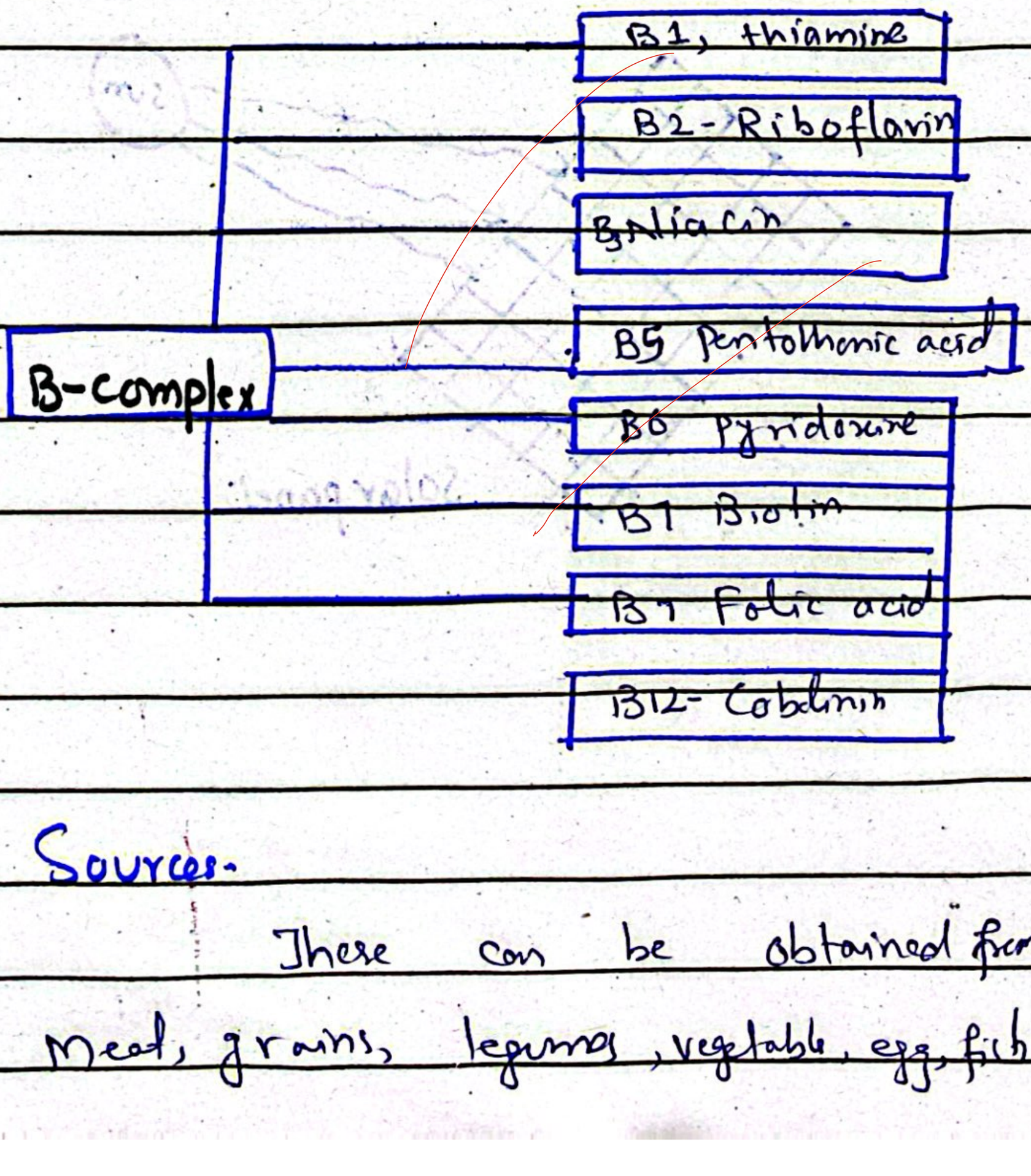
Water Soluble Vitamin:

vitamin which can dissolve in water are called water soluble vitamin.

→ These vitamics are vitamin B complex and vitamin C

B complex:

vitamin B complex include the following B vitamins.



Sources.

These can be obtained from meat, grains, legumes, vegetable, egg, fish etc.

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Function

They are essential for immune system, reproductive role, formation of red blood cell, nervous system and cellular respiration.

Deficiency:

Their deficiency cause Beriberi, vitiligo, kidney store, and loss of co-ordination.

Vitamin C:

They are also called Ascorbic Acid.

Function:

They play their role in collagen formation in teeth, bone and connective tissue of blood vessels.

Sources:

Orange, lemon, green leafy vegetable and tomatoes.

Deficiency:

Scurvy (bleeding gum)

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C

	Saturated Fats	unsaturated Fats
①	It contain Single bond between carbon atoms	contain one or more double bonds in their structure.
②	They are solid at room temperature	They are liquid at room temperature
③	It can increase the cholesterol level in the body increasy heart attack chances.	It can improve the cholesterol level and support heart health.
④	It can be obtained from Animal product such as meat, butter and Cheese.	It can be obtained from plant oils (olive, sunflower) and fatty fish.

Function of Fat:

The following are the function of fats.

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Function of Fat

- Maintain body temperature
- Act as energy source
- protect vital parts, like heart

B

Rocks:

Rock is any coherent naturally occurring solid material consisting of one or more minerals. They form the earth's crust.

Types of Rocks:

(1) Igneous Rocks:

They forms from the cooling and hardening of magma or lava.

Example.

Granite, Basalt

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② Sedimentary Rocks.

Formed from the accumulation compaction and cementation of sediments like sand, clay, and organic materials.

Example:

Sandstone, Limestone.

③ Metamorphic Rocks.

It formed when the existing rocks are transformed by heat, pressure or chemical process.

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Rock cycle: Transition to Igneous:

When the lava or magma solidified it produces an igneous rock.

Transition to Metamorphic:

The rock exposed to high temperature and pressure can be changed physically or chemically to form a different rock, called metamorphic.

Transition to sedimentary:

Rock exposed to the atmosphere are very unstable and subject to the processes of weathering and erosion when it break down into smaller fragment and carries away dissolved material. Sedimentary rock form from deposits that accumulate on Earth's surface

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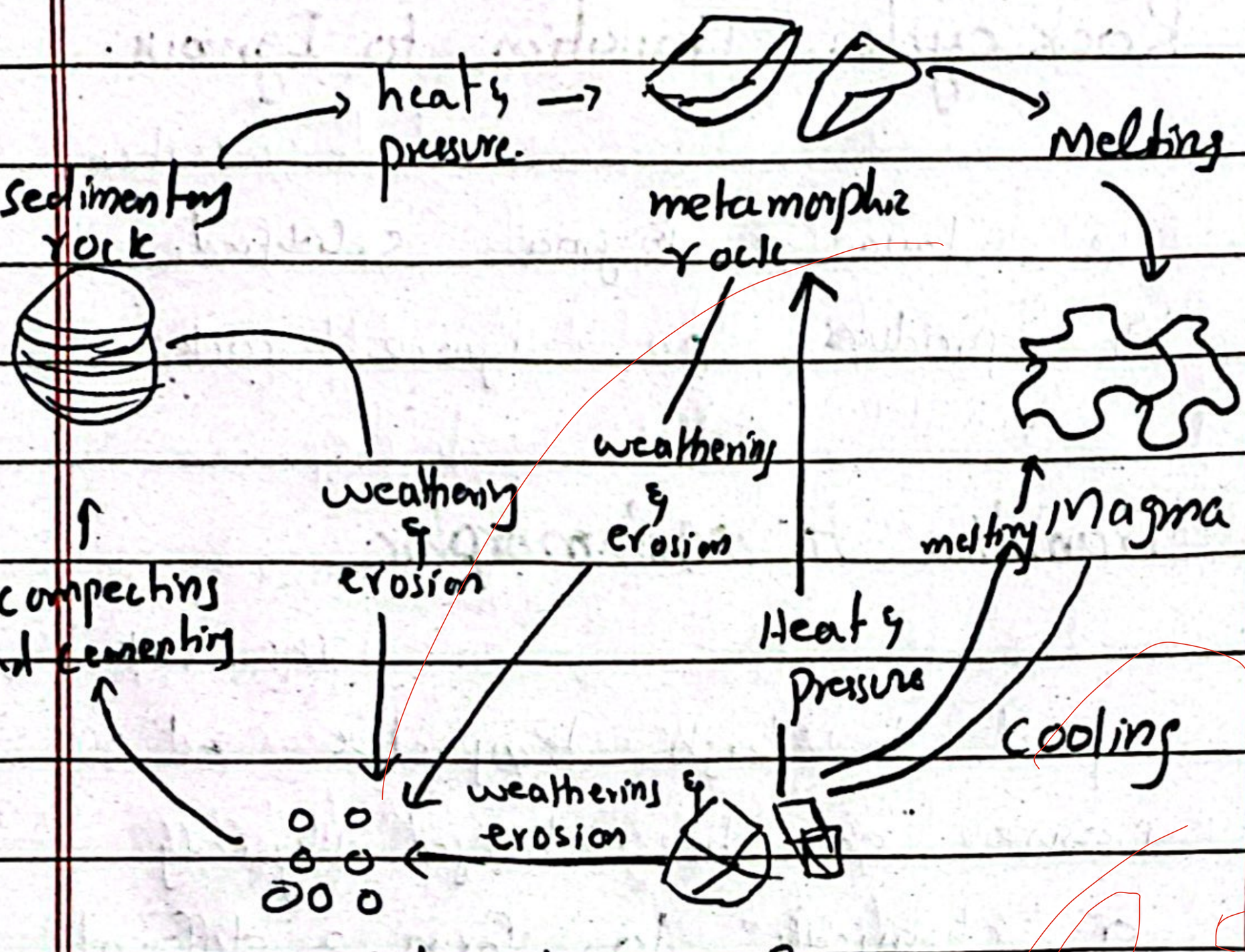

Rock Cycle