

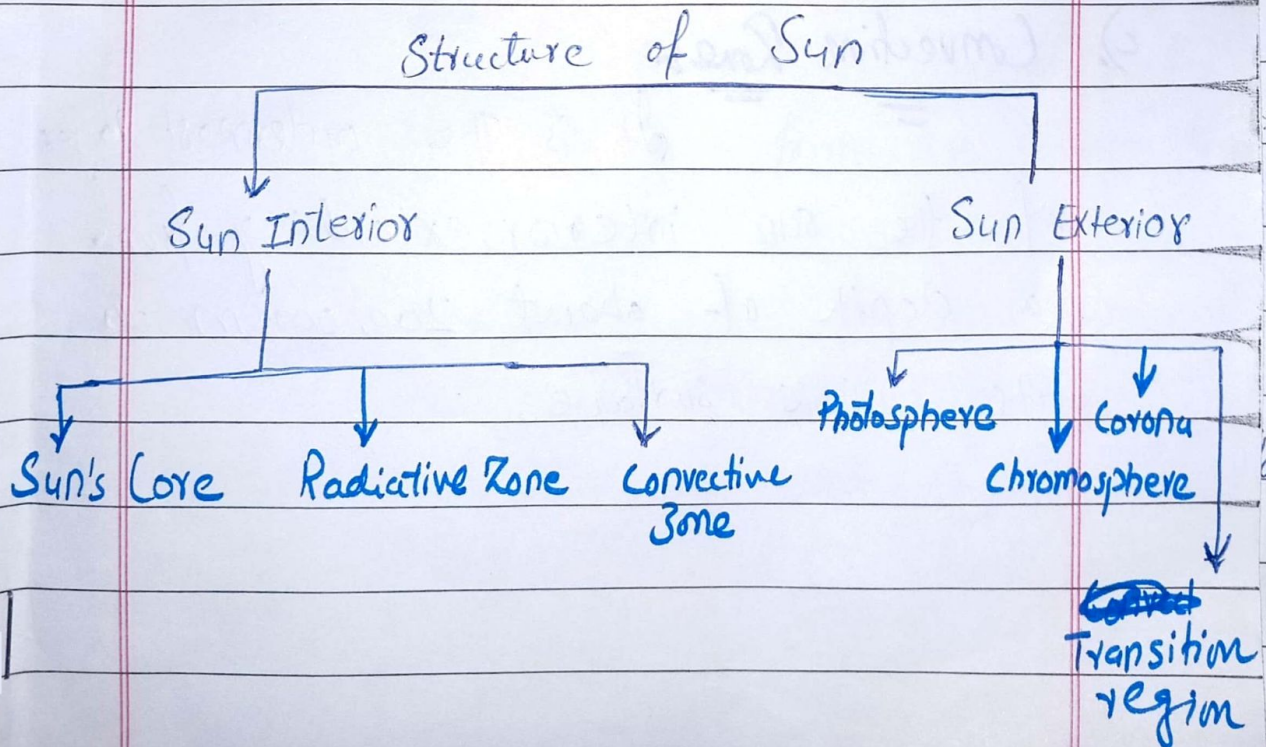
Q. No: 3

(a):-

Sun:-

Sun is a huge star filled up of gases, such as ~~hydro~~ hydrogen and helium. It is also the centre of our solar system, where all objects in the solar system orbit around the sun.

Structure of Sun



1). Sun Interior

It consist of the core, radiative and convection zone.

a) Core

Core is the central region of the sun, where nuclear reaction take place. It covers 25% of the sun. While its density is about 150 times the density of water.

b) Radiative Zone

The energy move outward from the core through this layer.

c) Convection Zone

It is the outermost layer of the sun interior, extending from a depth of about 200,000km to the visible surface.

ii) Sun Exterior:-

It consist of photosphere, chromosphere, ~~and~~ transition zone and corona.

a) Photosphere:-

The photosphere is the ~~deepest~~ deepest and visible layer of the sun, we can observe directly.

b) Chromosphere:-

The second outer layer of the sun, which is known as the coloured region of the sun.

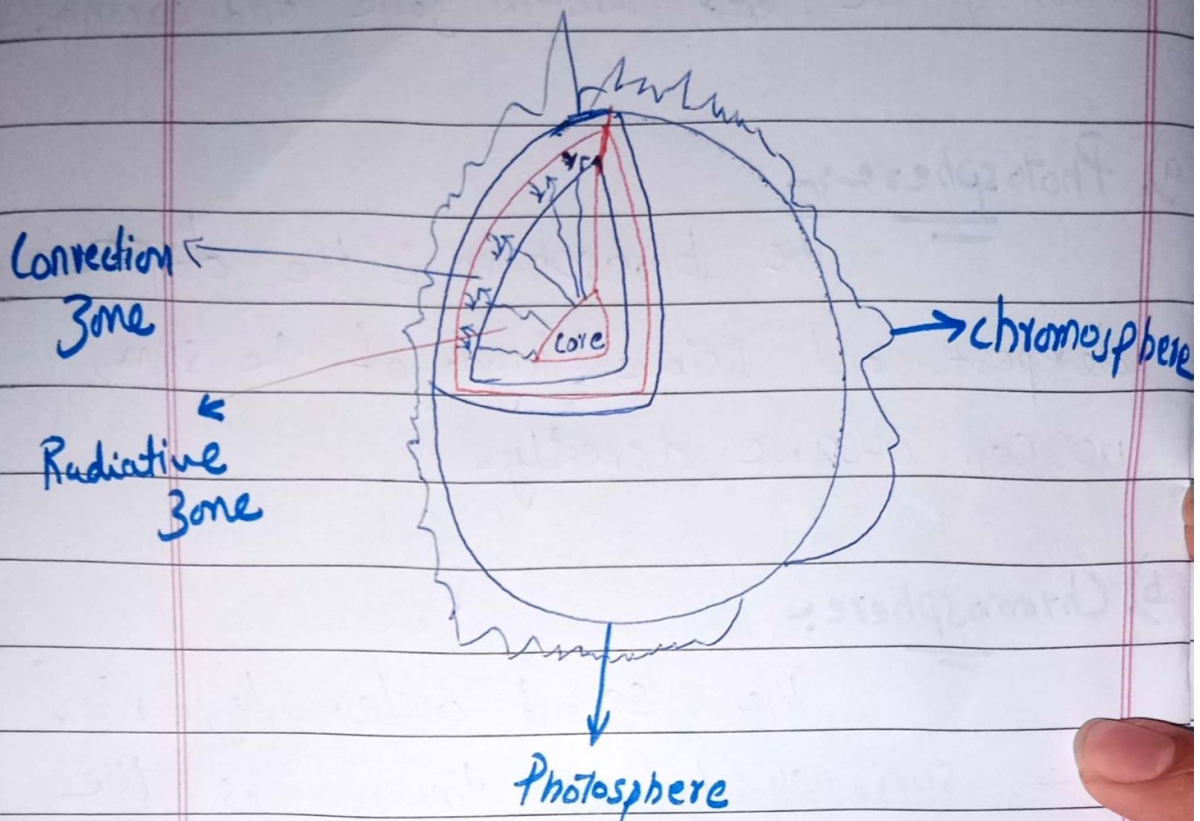
c) Transition region:-

A narrow layer that separate the corona from the chromosphere.

d) Corona:-

Corona, also known as outer atmosphere, is the outermost layer of the sun, starting at about 1300 miles above the solar surface.

Figure of the Sun Structure



Figure(i):- Sun Structure

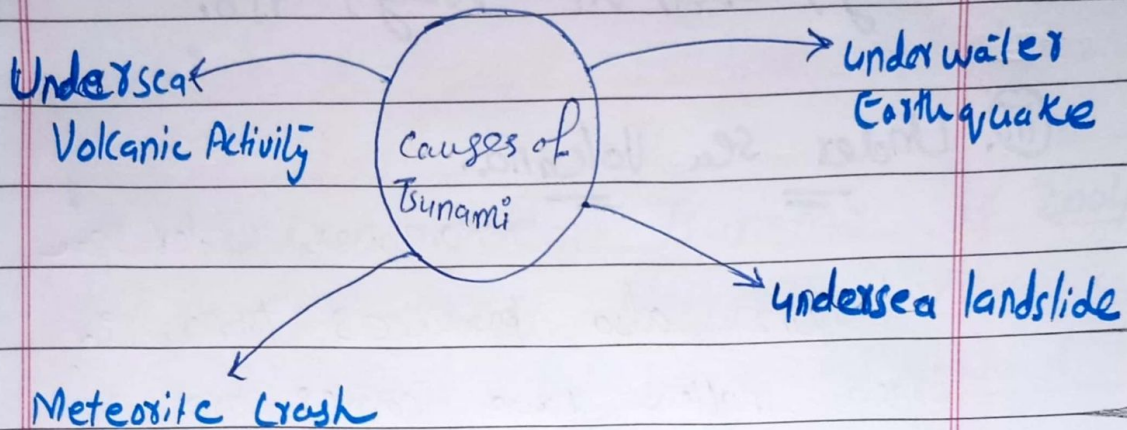
Q.No:3 Part (b):- Tsunami

What is Tsunami?

Tsunami is a series of waves caused by the displacement of a significant volume of water. It is a Japanese word which means 'Harbour Wave'. However, around 80% of the tsunamis

occur within the 'Pacific Ocean
'Ring of Fire'.

How it Generates:



i). Underwater Earthquake

Tsunamis mainly occur due to underwater earthquakes.

According to Global Historical Tsunami Database, since 1900, over 80% of the ~~Earthquakes~~ Tsunamis were generated by Earthquakes.

ii). Undersea landslide:

Another major reason behind tsunami generation is under sea landslides. Whenever, an under sea landslide occur, a large mass of sand, mud,

and gravel move down the slope by producing tsunamis. One of the most famous example of landslide-induced tsunami is the tsunami in Lituya Bay, Alaska, on 4, July, 1958.

(iii). Under sea Volcano:-

Moreover, under sea volcanism also produces tsunamis. When molten lava comes out of the earth surface, it produces a kind of shock by moving the earth centre.

(iv). Meteorite Crash:-

A meteorite crash can also cause a tsunami. When a large space body strikes ocean, the released energy displaces a significant quantity of water by creating a tsunami.

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(iii). Under sea Volcano:-

Moreover, Under sea volcanism also produces tsunamis. When molten lava comes out of the earth surface, it produces a kind of shock by moving the earth centre.

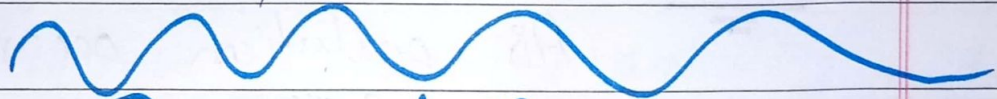
(iv). Meteorite Crash:-

A meteorite crash can also cause a tsunami. When a large space body strikes ocean, the released energy displaces a significant quantity of water by creating a tsunami.

Recent Example of Tsunamis

~~According~~ The most recent example of a tsunami is the tsunami occurred in Tonga, on January 15, 2022. It was generated by a volcanic activity.

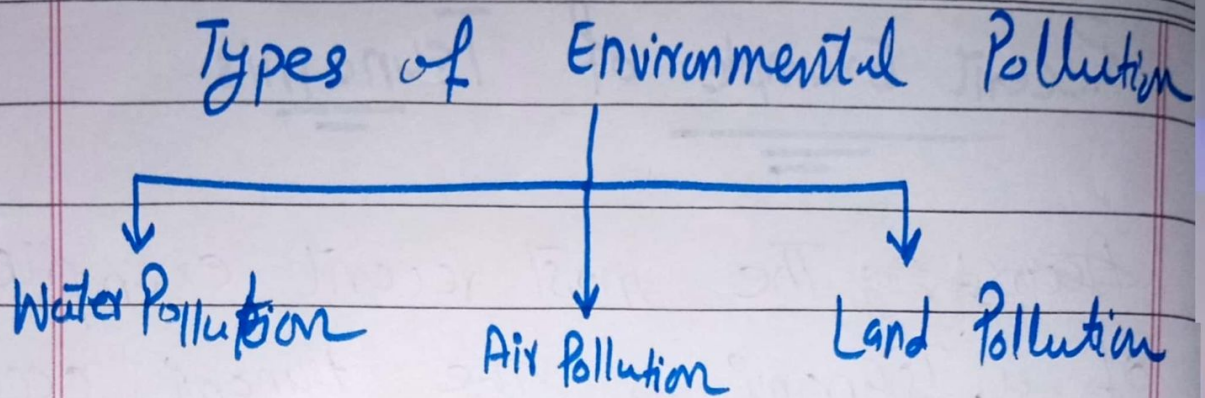
Another most recent tsunami was the Indian Ocean Tsunami of 2004. It was the most destructive tsunami of the world which killed around 230000 people.



Part (c) of Q.No: 3

Environmental Pollution

Environmental pollution is an any undesirable change in the physical, chemical or biological characteristics of environment. Environment pollution is of ~~two~~ ^{three} types: Water pollution, air pollution and land pollution.



i). Water Pollution

Water pollution refers to the contamination of water bodies by human activities.

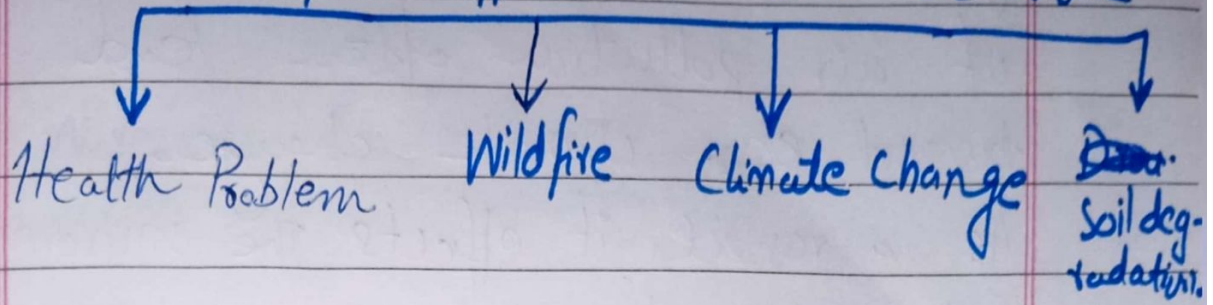
ii). Air Pollution

Air pollution occurs when the air contains ^{excessive} quantity of gases, dust fumes or odour in harmful amount.

iii). Land Pollution

Land pollution refers to the degradation ~~ation~~ of earth's surface as a result of human activities.

Harmful Effects of Env. Pollution



i). Health Problems:

Environmental pollution leads toward different types of health problems. For instance, the presence of pathogens in water leads in the spread of infectious diseases through contaminated drinking water.

ii). Wildfires:

Environmental pollution can also cause wildfires. For instance, air pollution can be hazardous to wildfire, leading toward the death and destruction of animals and plants.

iii). Climate Change:

Climate change is also one factor that ^{can} result from environmental pollution. For example, the increase in greenhouse gases leads to global warming.

greenhouse gases as a result of air pollution often lead toward ~~env~~ climate change.

As a result, it effects the environment and biodiversity.

iv). Soil degradation

lastly, soil degradation is an effect of environmental pollution.

Measures to Curb Env. Pollution



Part (d) of ~~Experiments~~ Q.N.4

Wireless Communication

Wireless communication refers to the transmission of information and data without the involvement of a wire. It helps to transfer data with the highest speed. It is also less costly than wire installations. Therefore, it helps to transfer data internet without the use of any type of a wire.

Types of Wireless Communication

- Satellite Communication
- Wireless Fidelity
- Bluetooth Device Communication
- Microwave Communication
- Infrared Communication

y: _____ Date: _____

Working of a Satellite

Satellites

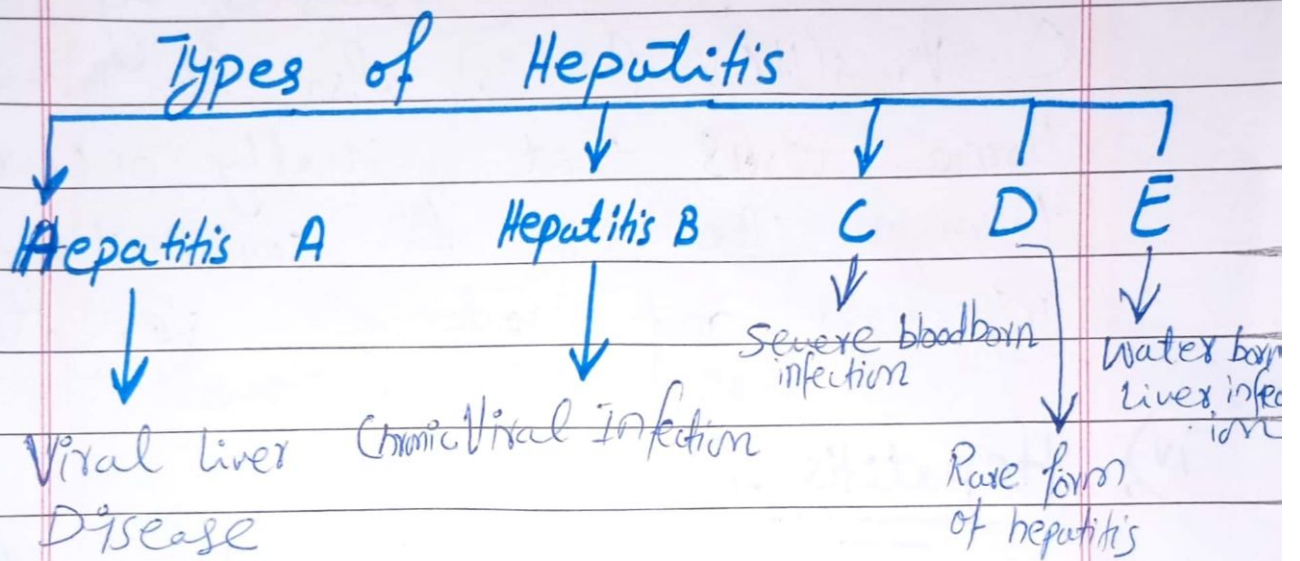
Satellite is any object that revolves around other planets in circular path.

Working of a Satellite

Initially, satellites receive information from transmitters present on the Earth's surface. These transmitters amplify the information, and send them back to the Earth receiver or downlink.

Q. No: 4 Part (a)

Hepatitis Hepatitis is an inflammatory diseases of liver. There are several types of hepatitis ~~do~~ disease.



Causes of Hepatitis

i) Hepatitis A

It is caused by exposure ~~to HAV~~ to HAV in food or water. In other terms, Hepatitis A results through ingestion of contaminated food and water, and being in contact of an infectious person.

ii). Hepatitis B

It occurs due to contact with a blood or bloody fluid. It may also occur through vaginal infection.

iii). Hepatitis C

It is caused by hepatitis C virus (HCV). It is also a blood borne virus that usually occurs through the use of contaminated injection and inadequate sterilization.

iv). Hepatitis D

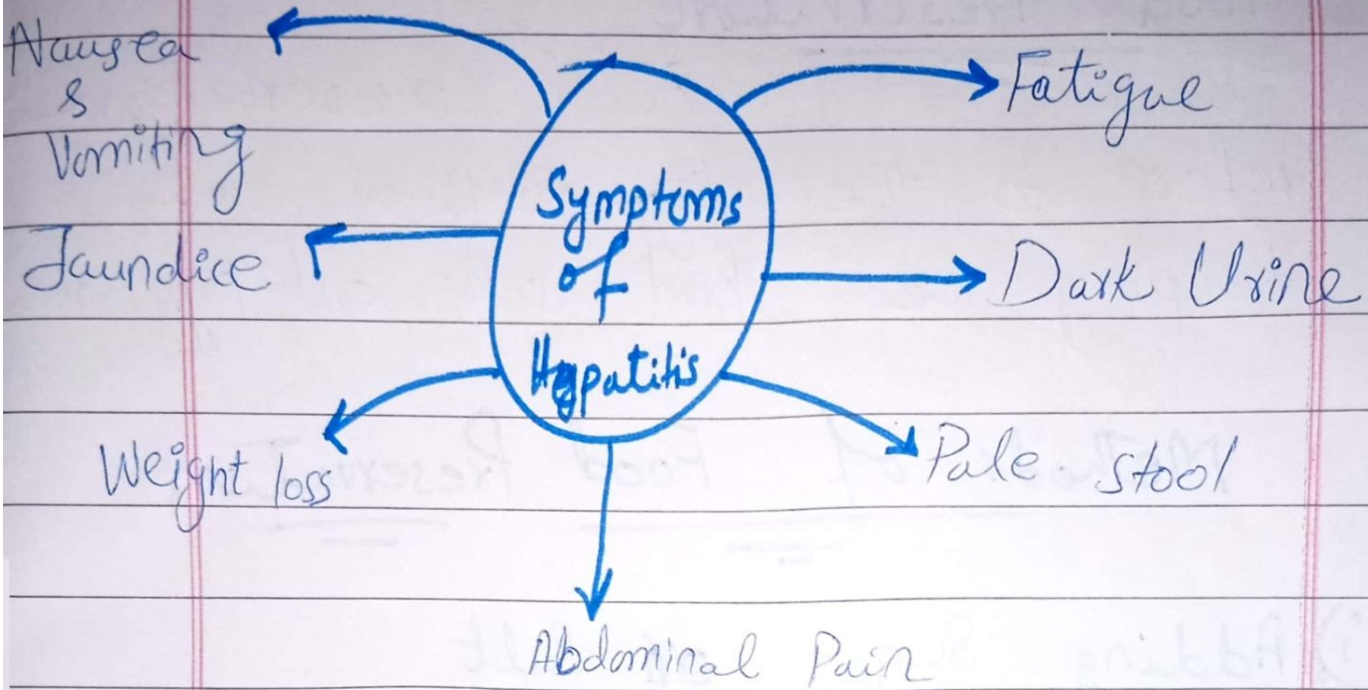
It occurs only with in association of Hepatitis B virus.

v). Hepatitis E

It occurs in the same way as hepatitis A. However, it causes acute infection.

~~Hepatitis~~

Symptoms of Hepatitis



Prevention of Hepatitis

Prevention of Hepatitis

- Vaccination
- Proper Sterilization
- Hygienic Food
- Safe Drinking Water
- Limiting Alcohol Consumption

Date: _____
Q. No: 4 Part (b)

Food Preservation

Food preservation refers to the ~~big~~ method of keeping the food safe and hygienic.

Methods of Food Preservation

i) Adding Sugar or Salt

Sugar and salt help to preserve food for a longer period. For instance, certain fruits can be preserved by adding sugar in it. In the same way, meat can be preserved by adding salt on it.

ii) Use of Smoke

Smoke can also play a vital role in food preservation. Smoke contains preservative chemicals that do not allow food to get fungus or bacteria. For instance, ancient people used smoke to preserve meat and fish.

iii). Cold Storage

Cold storage is the most viable and lasting method used for food preservation. Around 80% of the people around the world use cold storages for this purpose. By using this method one can preserve any type of food.

iv). Chemical Addition

lastly, chemical addition can also be used for food preservation. For instance sorbic acid, sodium ~~acetate~~ propionate and ethyle formate etc.

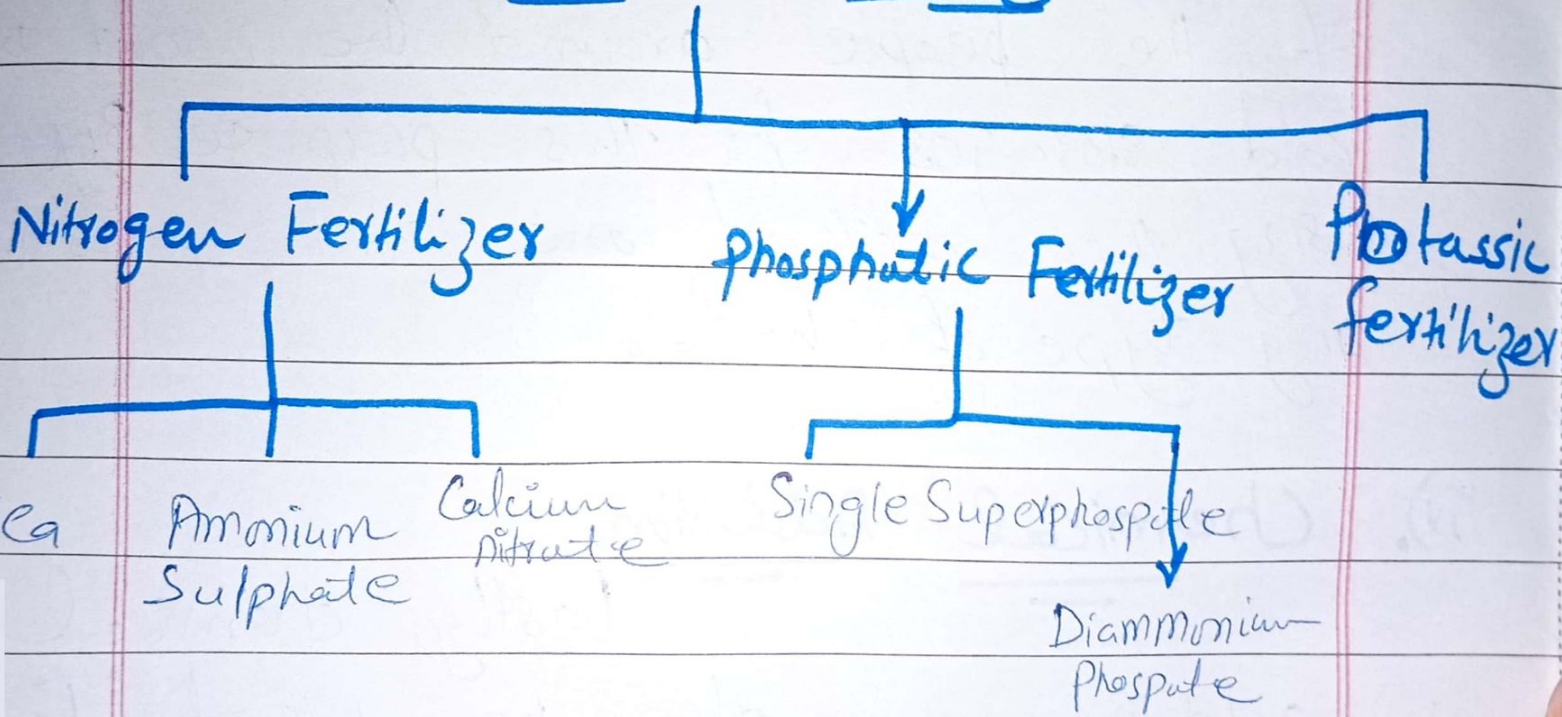
Q. No: 4 Part (c)

Fertilizers

Fertilizer is a material which is added to soil for its proper growth. Fertilizer plays a vital role in the productivity of a

a plant Fertilizer contain Nitrogen, Phosphorus, and potassium.

Types of Fertilizer



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Types of Fertilizer

