



Q a) What do you know about green house effect? How it is favourable? How it leads to global warming?

Answer

### Green House Effect

"Green House Effect is a thermal process."

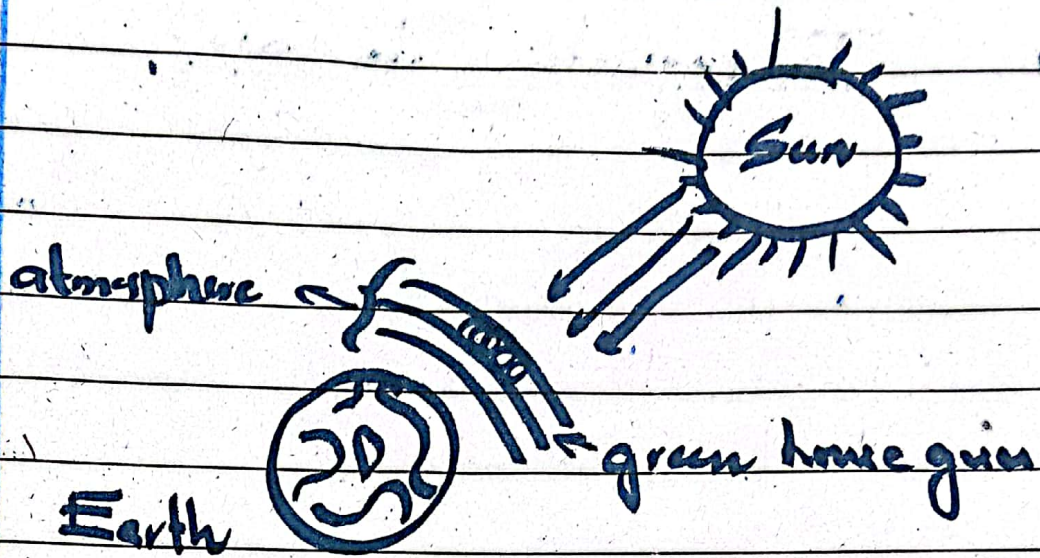
Green House Effect is a process in which green house gases (GHGs) absorb heat under GHGs from atmosphere. Hence, it is a thermal process.

### Green House Gases (GHGs)

Gases that have capability to absorb heat.  
 e.g.,  $\text{CH}_4$ ,  $\text{CO}_2$ ,  $\text{CO}$ ,  $\text{SO}_2$ ,  $\text{NO}_x$   
 etc

Below is diagram:





## Green House Effect

### Advantages of GAE

Following are advantages:

#### a) Warm the planet

GHE warms the planet.

It maintains life possible on the planet.

"GHE maintains temperature at  $15^{\circ}\text{C}$  ( $49^{\circ}\text{F}$ )" (-IPCC)

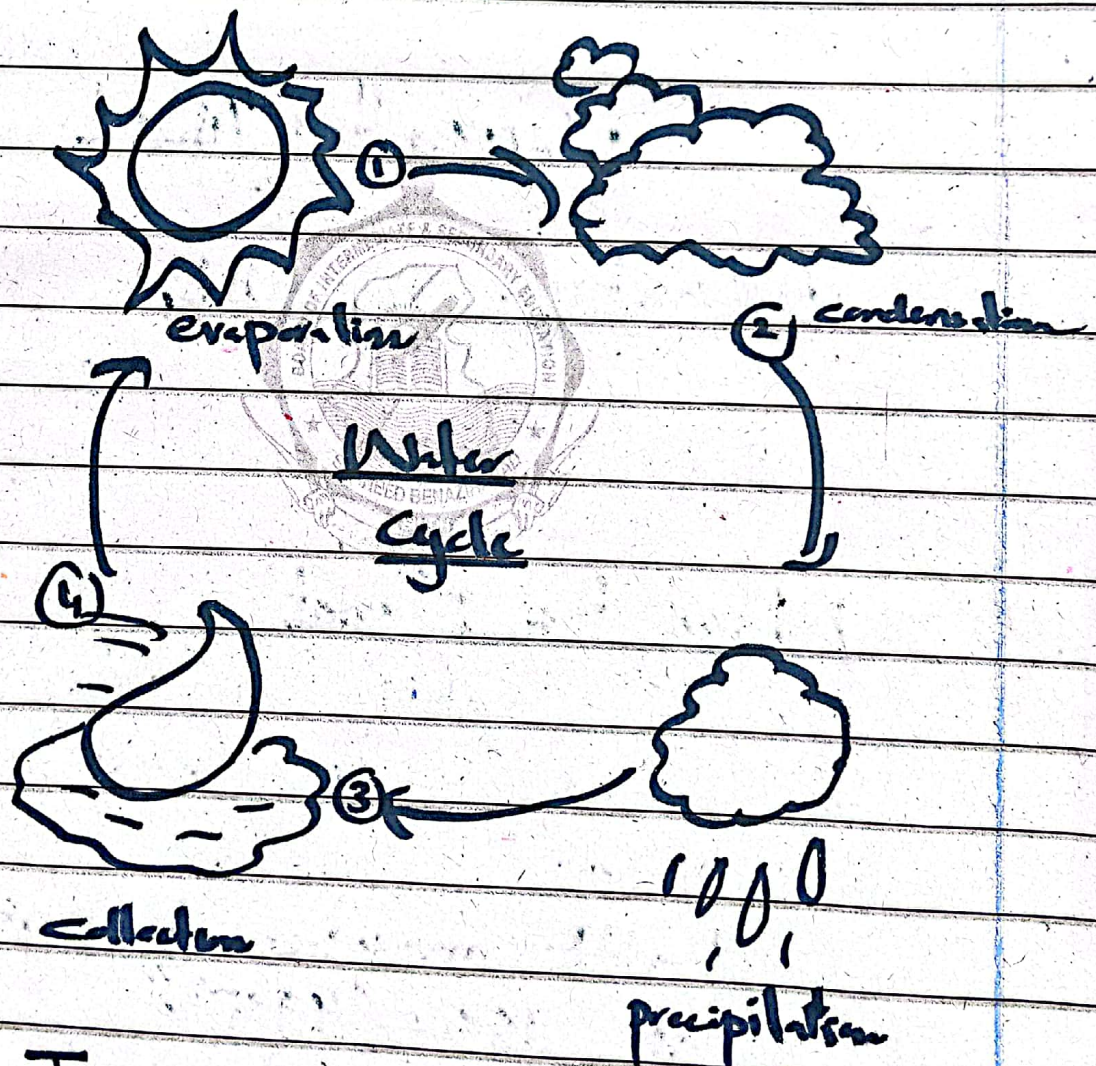
Therefore, GHA warms the planet.





b) To regulate water cycle

GHE regulates water cycle process. In fact, it melts glaciers and leads to evaporation. Hence, GHE regulates hydrological cycle.



c) To protect earth from harmful radiations

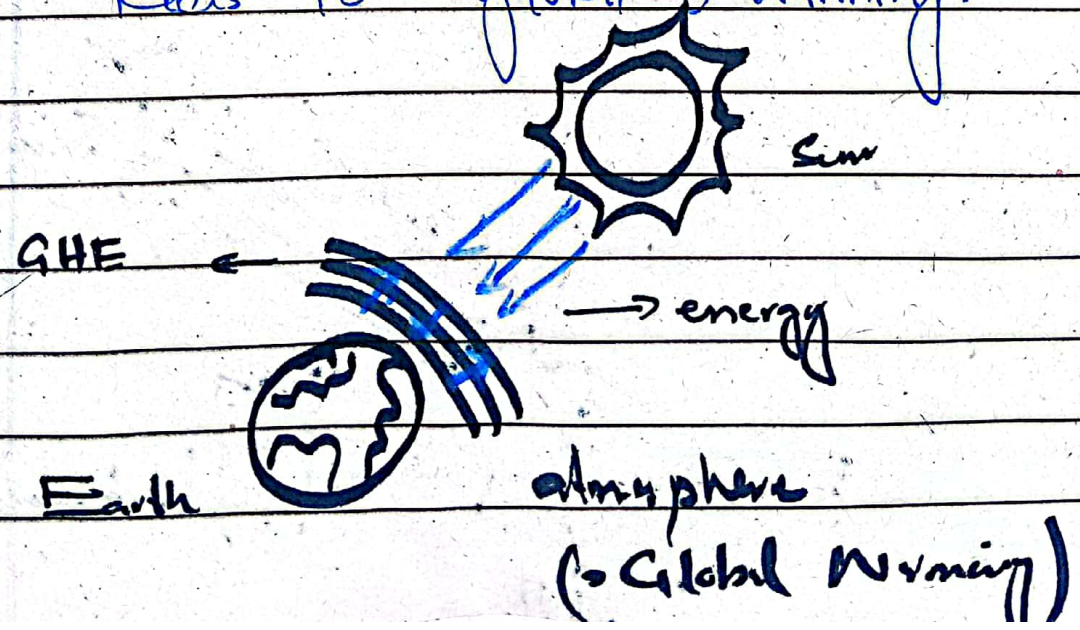


Moreover, GEF protects from harmful radiations. In fact, GEFs are ozone gases that stop UV rays to reach on the earth. Therefore, GFE protects from harmful radiations.

How GHE leading to GW?

"GHE is a normal natural process."

Green House Effect at certain normal level is not harmful. But, increased quantity of GHE leads to rise in temperature. Therefore, GHE leads to global warming.







Q b) What is global warming?  
What are its causes and effects?

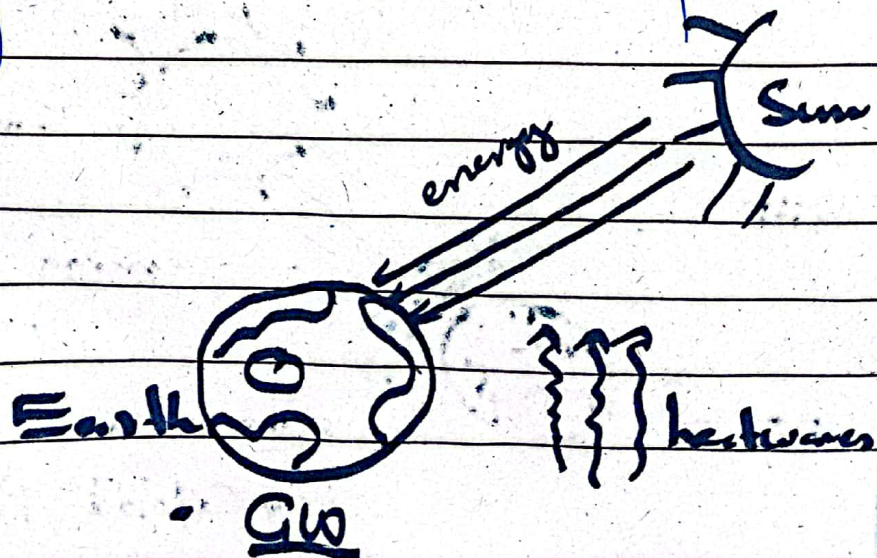
## Global Warming

The gradually and average increase in temperature of the earth is known

as "GW."

(IPCC)

Global warming is an international problem. In fact, it increases temperature of the Earth. Therefore, global warming is a thermal process.





# Causes of global warming

Following are main

causes:

## a) Green House Effect

GHE when increased at certain level leads to GW. In fact, GHE is a cause of GW.

## b) Deforestation at global level

Moreover, deforestation is another major cause of GW. Consequently, concentration of  $\text{CO}_2$  increased in atmosphere. Hence, deforestation contributes to GW.

## c) Industrialization growth

Further, industrialization also leads to GW. Certain harmful gases mix up with atmosphere leads to GW.





d) Burning of wastes in an open land

Burning of wastes in an open area also leads to GW. In fact, rise in smoke concentration increases temperature. Hence, burning leads to GW.

### Causes of GW

GHE

Deforestation

Industrialization

Burning

### Implications of global warming

Following are implications:



## a) Melting of glaciers

Melting of glaciers is an effect of c.w. Rise in temperature melts glaciers. Hence, melting of glaciers is a negative consequence.

## b) Unprecedented floods

Moreover, unprecedented floods is also an effect of global warming. Rise of temperature leads to floods.

"In 2022, the worst floods were recorded across Pakistan."

(- Irrigation Department)

Hence, floods are negative effects of c.w.

## c) Rise of annual temperature

Further, annual temperature increased. In fact,





temperature of the world is recorded at Delhi.

"Annual temperature would precede at  $1.5^{\circ}\text{C}$  by 2030."

(- The World Bank, 2023)

Hence, temperature of the world is increased.

### d) Humanitarian loss

Further more, humanitarian loss is another impact of CW. Disaster has disrupted human health.

"About 5 people were died in Jacobabad due to temperature

of  $5^{\circ}\text{C}$  in 2022."

(- Toqeer Hussain, human loss, 2022)

Therefore, humanitarian loss is also another impact of CW.



## Affects of global warming:

Melting of glaciers

Unprecedented floods

Annual rise of temperature

Humidification loss

Qc) What is Acid Rain? Define its adverse effects. Also recommend measures.

### Acid Rain

Rainfall or any kind of precipitation that is acidic is known as acid rain. In fact, acid rain is acid containing water fall that harms the planet life. Hence, acid rain is acidic precipitation.





## Adverse Affects of Acid Rain

Following are effects:

### a) Destroy water quality

Acid rain affects water quality. In fact, it makes water acidic.

### b) Destroy aquatic life

Along with water quality, acid rain also impacts aquatic life. In fact, acidic condition of water leads to danger to the life of water animals.

### c) Destroy soil structure

Moreover, acid rain also destroys structure of the soil. It makes soil acidic. Hence, it changes the nature of soil.

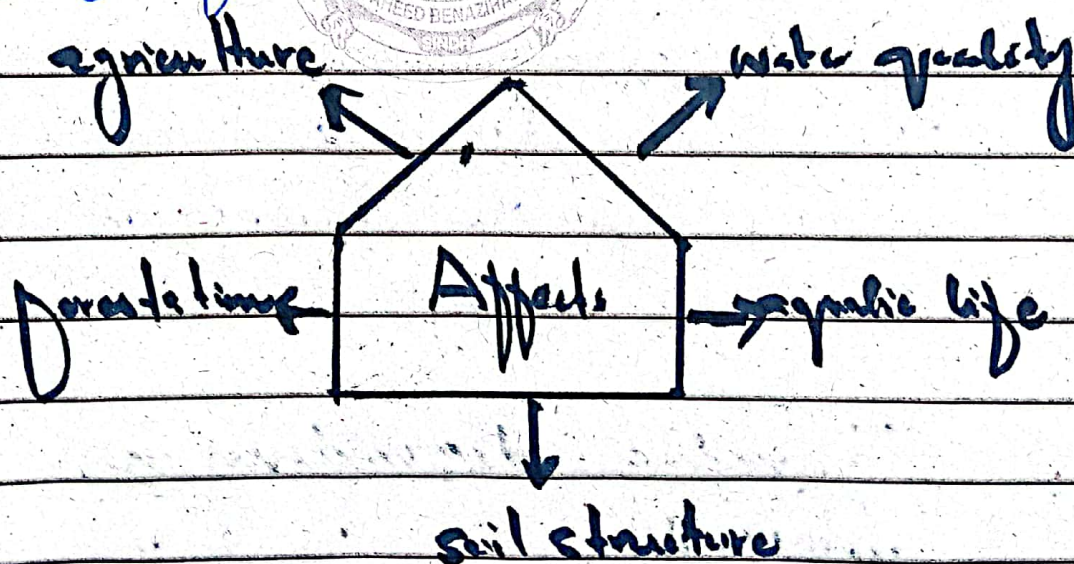


## d) Destruction of agriculture

Further, acid rain destroys agriculture. Acidic soil does not lead to growth. Hence, acid rain destroys crops.

## e) Destroy forestation and vegetation

Acid rain also destroys forestry. In part, acidic nature impacts quality and growth of vegetation. Thus, it leads to decline of forestation.



## How to reduce acid rain?





Following are measures:

a) To reduce emission of acidic acids.

By reducing emission of acidic acids, acid rain can be reduced.

e.g. nitric acid ( $\text{HNO}_3$ ), and sulphuric acid ( $\text{H}_2\text{SO}_4$ )

b) To reduce use of fluorescent electric appliances.

Moreover, limited use of fluorescent appliances will help in reducing acid rain. Thus, reduce use of fluorescence appliances.

c) To reduce dependency on geothermal.

Further, geothermal process must also be kept in



limitation. Hence, it will help in reducing acid rain.

Qd) What is national disaster cycle? Describe its phases.

Answer

## National Disaster Cycle

"Anti-disaster cycle,  
leads to disaster  
mitigated."

National Disaster cycle is a process that reduces impacts of disaster. Moreover, it also helps in recovering after disaster is occurred. Hence, national disaster cycle is anti-disaster impacts.

## Phases of National Disaster Cycle

National Disaster cycle has following four phases:



a) Negotiation phase

Negotiation phase deals with pre-disaster affects. i.e., sheltering of buildings

b) Preparedness phase

Preparedness is the second phase. In this phase, certain trainings are given to deal with the impact of disasters. i.e., education, skill, training etc.

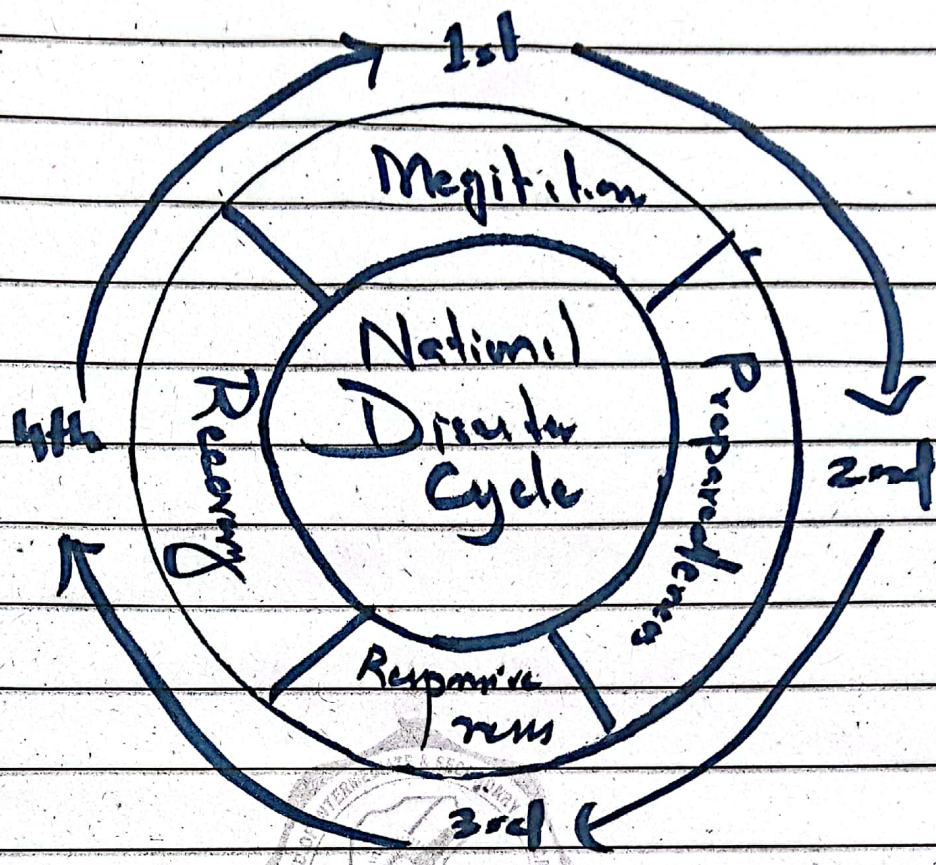
c) Responsive phase

Moreover, responsiveness deals with immediate affects of disasters. i.e., shifting residents

d) Recovery phase

The last is recovery phase. In this phase, life of disaster is re-structured. i.e., re-building





National Disaster Cycle