

Read the question carefully and address exactly what is asked, **Date: _____**
avoiding unnecessary deviation.

103:

Start with a clear and relevant introduction that shows understanding of the topic.

Structure the answer logically: introduction, explanation/analysis, and a brief conclusion.

Use correct scientific terminology (e.g., biodiversity, sustainability, carbon cycle, eutrophication).

Explain concepts clearly and accurately, avoiding vague or generalized statements.

Support answers with relevant examples, preferably from Pakistan or global case studies where appropriate.

Include data, statistics, or facts (e.g., temperature rise, deforestation rates) when relevant to strengthen arguments.

Incorporate environmental laws, agreements, or protocols (e.g., Paris Agreement, Kyoto Protocol).

I. INTRODUCTION

Global warming is defined as the warming of the atmosphere of the Earth. The globe is seen getting warmer every year due to human expansion and rising consumption. It poses great threats to humanity due to its impact on food security, water availability, and development metrics and beyond.

Global warming is one of the main drivers of climate change and brings with it a wave of disasters that are detrimental to humanity.

II. THREATS POSED BY GLOBAL WARMING

(a) Increased risk of natural disasters like floods

Global warming aids the onset

of flooding and intense rainfall. Every 1°C rise in temperature is linked with 7% more moisture.

This results in heavier rainfall. High temperatures also speed up glacial melt, eventually increasing the intensity of floods.

(b) Food security compromised amid low crop output

Global warming also affects the agricultural sector. High temperatures often lead to droughts and damage the crops. According to the FAO, temperature rise over the last 10 years is linked with 7% loss of crop output in the world. Thus change harms output.

(c) Threat to health amid intensified heatwaves

Amid soaring temperatures, the onset of heatwaves has also intensified globally. According to report by Dawn, around 700 people die every year in Pakistan due to

intense heatwaves.

(d) Speeds up water insecurity especially in low income countries

The high temperatures also drive up the need for water resources. Especially when low rainfall occurs, the need for water goes up. Iran faces an intense water crisis in Tehran amid low levels of water in dams.

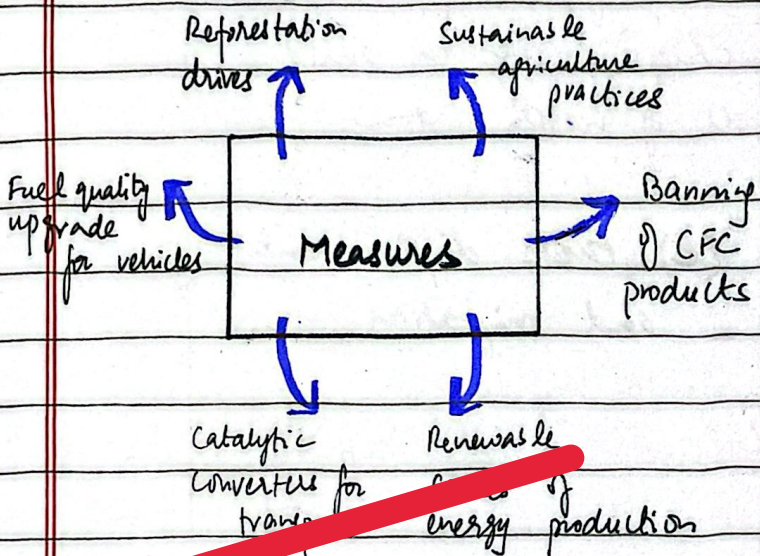
(e) Fuels displacement and migration

Global warming initiates mass migration of people. This is more persistent among coastal communities. Sea level rise due to global warming threatens island nations, thus leading to a shift away from the coastal areas.

(f) Declining air quality amid high pollution that leads to warming

Air quality is disrupted by incidence of pollution. The AQI has generally gone down especially in least developed nations. In Pakistan, the AQI reaches 400+ in some places. Result is an average 3-4 years of ~~lost~~ lifespan, according to WHO.

III. MEASURES OF CONTROL



IV. CONCLUSION

Global warming presents a dark picture of the future of humanity. Impacts all ranging from food, health and water. Initiatives, however, in the form of sustainable practices can help deter the threat to humanity.

I. INTRODUCTION

'Bio' means life and 'diversity' means many. Biodiversity thus, refers to a range of living organisms including plants, animals and micro-organisms. Biodiversity is important for any region as it helps regulate the natural processes in environment and promotes a healthy surrounding.

II. CAUSES AND EFFECTS OF BIODIVERSITY LOSS

(a) Urbanization and population rise leading to loss of vegetation

The population growth in the world is driving greater urbanization. This means forests and vegetation is converted into commercial spaces. Such loss leads to low cover, thus reducing

Day: _____

Date: _____

Carbon sequestration ~~is a key~~
global warming as a result.

(b) Overextraction of resources
to cater to needs, leads
to loss of medicinal
resource

many modern medicines
are derived from plants, fungi
and marine organisms.

Overextraction and damage to
such species amid huge
demand results in a long
term loss. Such resources are ~~as~~
a lifeline for population and
its loss has grave impacts.

(c) Economic loss amid
heavy industrialization, threatens
agriculture and marine
productivity

The shift of economies from
primary to secondary sectors
driven by heavy industrialization
is also a key source of
biodiversity loss. Industries
take up land and pollute water

sources, especially rivers and coasts. This harms life on land and in water. Fishing and agriculture are a key source of earning for people, and gives employment to many. Thus its loss is severely impactful.

(d) Climate regulation impacted as forests are cleared, accelerating climate change

Forests and trees serve as regulators of nature. They play a role in natural processes. Trees are involved in the carbon and water cycles. Disruption of processes acceleration the climate change phenomenon. Thus biodiversity loss is severely harmful.

III. MEASURES TO COUNTER LOSS

- 
- Increased conservation efforts
 - Legal protection of Biodiversity
 - Awareness campaigns
 - Community driven management
 - Afforestation/Reforestation programmes
 - Global Biodiversity Frameworks adopted

IV. CONCLUSION

Biodiversity is an important part of the environment. It carries great importance for the survival and well-being of all organisms. Thus several steps in the form of conservation action, awareness and global action is required to ensure biodiversity is not lost.

Q.06:

a) Population explosion

I. INTRODUCTION

Population explosion refers to the unprecedented or unsustainable rise of population. Production of more humans without having more capacity to accommodate creates huge problems.

II. CAUSES

a) Lack of access to contraception

b) Lack of awareness and low literacy

c) Religious motivators for large families

d) Absence of family planning facilities

e) Early marriages in certain cultures

III. IMPACTS

- Pressure on limited resources
- Exacerbated food/water insecurity
- Security concerns and civil unrest if not utilized
- widens poverty and inequality
- Great pollution and environmental damage
- Increased rate of urbanization

IV. SOLUTIONS TO CURB

- (a) National level policies to limit children like China's one child policy
- (b) Family planning clinics and awareness
- (c) low cost or subsidized contraceptives provision

V. CONCLUSION

Population explosion is a serious problem that needs to be dealt with accordingly through policies and actions.

(b) Food Insecurity

I. INTRODUCTION

According to the UNFAO, food security is when everyone has access to quality food at all times. Insecurity refers to the lack of access to food. With rising population and climate change, food security is threatened.

II. CAUSES OF INSECURITY

a) Rapid population growth

World population has seen enormous rise, reducing the availability of resources for all.

b) Climate change effects

Food production is impacted by climate change. Intense droughts or rainfalls reduce output.

c) Water scarcity

Lack of efficient irrigation systems of ~~due~~ food insecurity.

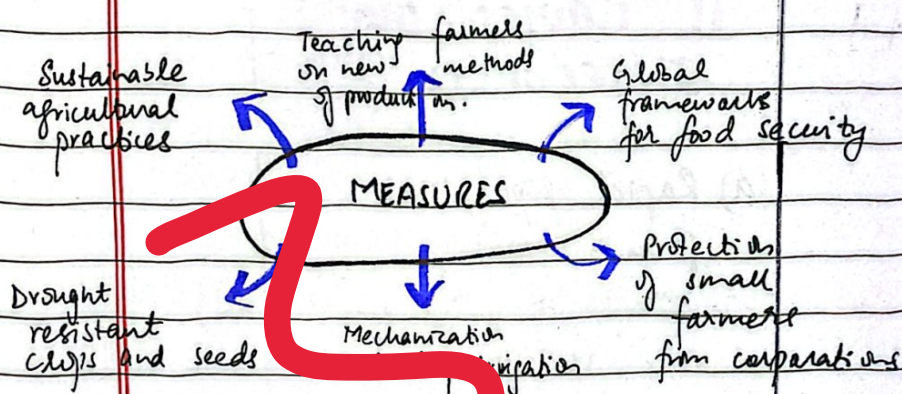
d) Global conflicts

Conflicts like the Ukraine war disrupted supply chains, driving food shortages.

e) Over cultivation of agricultural lands

Over cultivation reduces soil fertility, impacting output and thus aiding food insecurity.

III. MEASURES TO REDUCE INSECURITY



IV. CONCLUSION

Food insecurity is driven by many factors including population growth, urbanization and unsustainable practices.

New methods including mechanization and technological innovation are needed to improve food security.