

30-7-2026

(Part - II)

Section-1

Q#2:-

(c)

Primary Causes and effects of Global Warming ----

Causes

- Earth is enveloped by a layer of gases that never allows heat to release or escape at once it reaches from sun to earth.
- These gases are called green house gases (GHG) i.e. CO_2 , CH_4 etc.
- Human activities are major contributors to rise the level of these gases. For Example: Fossil fuel burning,
- Animal manure, Fertilizers are also major sources.

Effects

- Rising temperature of the earth with the passage of time.
- Changing seasonal patterns such as prolonged summer with intense temperature.
- Melting frozen water reservoirs and glaciers.
- Fresh water content.
- Diseases outbreaks due to activation of dormant viruses in high temperature.

- Green house effect is an example of global warming.

- Agricultural production is affected badly and disturbs the sustainable supply of food chain.
- Famine, Droughts, floods all are the effects of global warming.

Role of Human activities:

- (i) Burning of fossil fuels such as Coal, oil and gas.
- (ii) Vehicular emission such as SO_x NO_x .
- (iii) Sub-standard Coal burning for power generation.
- (iv) Using extensive fertilizers, emission of CH_4 from paddy rice field.

Potential Strategies for mitigating its impacts:

- (i) Use Renewable energy sources instead of extensive reliance on non-renewable energy sources.
- (ii) Use 3R Strategy to minimize

Organic or inorganic waste. Strategy of Recycle, Reuse, Re

(iii) Bind the developed Countries (major polluters) into some Environmental Concern Agreement such as Montreal protocol, Paris agreement, Kyoto protocol etc.

(iv) Raising awareness about the Sensitivity of matter among people especially in developing and under developed Countries.

(d) Key Components of Disaster management plan ---

“ A plan design to deal with the natural Hazardous activities or to minimize the impacts of natural disasters are called disaster management plan (DMP). ”

It Key Components

Pro active measures: Early precautions in the Hazardous prone areas to minimize the impacts on social life. (Resilient environment)

Active measures: Measures to deal during the disaster situation.

Recovery measures: Measures to re-start a life with normal activities are recovery measures after passing any disaster.

- Rebuild Buildings
- Early warning sys
- Access to affected area
- Recover Communication System
- Collect data (life loss) at affected area
- provide all facilities again to begin life

= Some Key Components of disaster Management Plan

Importance the :-

preparedness, Response & Recovery

- | | | | |
|-------|--|--|--|
| (i) | It is a 1 st phase prior to face any disaster. | It is 2 nd phase during the disaster situation. | It is the last phase after the damaging of disaster. |
| (ii) | It makes a resilient city ready to face any challenge. | It makes to minimize the loss of life. | It makes to re-gain the strength to start life. |
| (iii) | It will help to minimize the impacts degree in upcoming situation. | It will help to reduce impacts by saving affected life or infra-structure. | It will help to recover from affected phase and ready for the next disaster phase. |

Examples of Successful disaster management Strategies:

Japan make flexible buildings because it lies on fault line, an earthquake prone region. (pro active measures)

Early warning system in Sea shore regions of America for rapid evacuation during Tsunamis.

(b)

Big Bang Theory:

A small structure with extreme temperature, burst almost 450 billion years ago and formed a universe. Consist of many galaxies with their own solar system.

Significance.

This theory explain how this universe was formed. Many precis calculated theory (mathematical theories) failed to prove the origin of this universe. Some evidence also prove or supporting Big bang theory.

Initially when small structure burst, temperature was very high 30000°C

Then opposit type of elements were formed called **electron & proton**. but some remains neutralie Neutron. With time temperature were reduce and suitable for these elements to attract each othe and form an atom. this is how life begins.

Evidence:

Red and Blue Shift theory prove the big bang theory. Because thoes settelites that are far from our planet are moving with high speed (similarly higher speed of shorter red wavelength) and thoes that are near the planet are slow in speed. (Blue longer wavelength with less speed).

(a)

Benefits and Challenges of AI...

Benefits

- (i) To find the treatment method of any disease. Artificial intelligence assist to present different arrangement method of

Challenges

- It is not easy to handle AI because a minor human error

enzyme to prepare medicines.

(ii) It helps during the operation to find out minute or precise detail about the location of effected body part.

(iii) It help to find solution within short time period instead of investing year and year to find a clear solution.

of handling may lead to generate undesirable associated results.

- The implication of wrong results of AI can cause mass loses worldwide.

- For example a wrong/faulted vaccine can cause death of millions.

AI on patient Case & medical diagnosis:

AI in medical field use for diagnosis diseases. For example, It is difficult to find out the problem Cancer-malignant and Benign tumor. It assist to prescribed the methods better for a patient during the time period of treatment.

Q#4:

(b)

Remote Sensing :

It is a technique use to monitor the object without any physical connection with it (observation from some distance)

Usage in Environmental Monitoring :

Remote sensing applications in environment monitoring are :

- (i) Determine the seasonal impacts on crop production periodically.
- (ii) Determine the impact due to flood, earth quake, Tsunami, Tornadoes, Avalanches and many other disasters.
- (iii) RS help to monitor the ongoing climatic situation and warn for the up-coming days. (Forecasting)
- (iv) It help to collect data during any disease outbreak.

Advantages & Disadvantages :

→ Changes in land use, vegetation and climate :

Managing the activities practices on land, such as (production) Construction of dams projects, power	It Can't predict all these activities how much give benefits in future
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projects and roads
Constructions etc.

RS help to monitor
Crops production on
land such as vegetation
cover expand over a
certain piece of land.

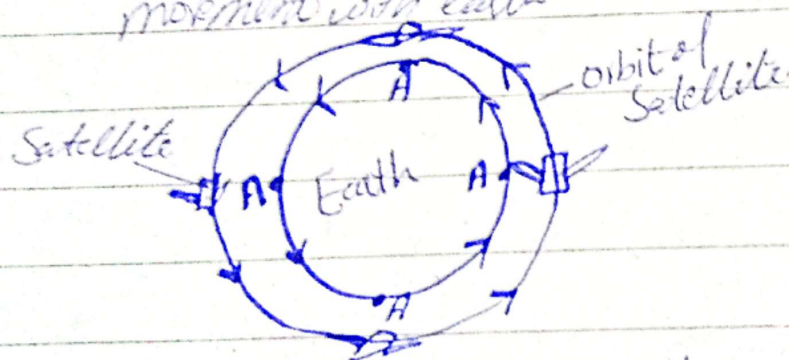
It help to monitor
temperature, precipitation
level, rain forecasting,
prediction about floods
etc.

or just go in waste
a patch of land.

It can't provide
you data in quantitative
form of output
of these crop
land.

It can only help
during precise handling
of data. Sometime
may error in data
spread wrong information.

For tracking changes in land
use vegetation and climate it
is mandatory it has synchronizing
movement with earth.



Satellite revolve around the earth.

(C)

Different Types of Vitamins:

There are different types of vitamins

Vitamin A

Vitamin B

Vitamin C

Vitamin K

Vitamin D

Vitamin E

All these are essential vitamins. Some are water soluble and some are fat soluble. It helps to maintain human health.

Vitamin in maintaining healthy skin, hair and eyes:

Vitamin **A** helps to maintain healthy eyesight.

Vitamin **E, C, B** help to maintain healthy skin.

Vitamin **K** helps for healthy hair.

Consequences of vitamin deficiencies:

Vitamins are essential part of our lives. Its deficiency may cause serious diseases or life-time disabilities.

Vitamin		impact of deficiency	Source
(i)	A	Night blindness, weak eyesight	Carrot
(ii)	D	Bone deformation, Rickets	Sun
(iii)	Essential	These are required either by food or through supplements	Fruits, vegetable, medicines
(iv)	Non-essential	These are prepared by its own in our body. They all do in numbers	Human Body

(a)
poliomyelitis (polio): polio virus is transmitted through virus in blood. This virus suitable for warm temperature and in cold temperature, remains in dormant situation.

Global efforts:

This virus is completely eradicated from the whole world except few ones such as **Pakistan and Afghanistan** among them.

Pakistan made a lot of efforts to complete end this disease, yet compete with it. Different **Vaccine Campaigns** are continue in Pakistan. But due to illiteracy among people hamper these campaigns especially in **Balochistan and KPK**.

WHO (World Health Organization) announced it's complete eradication at Global level.

Importance of vaccination:

Vaccination is a process to boost the immune system and prepare body

for any external bacterial or viral attack

Vaccination in preventing polio also having many significance.

(i) It stimulates the body to start preparing antibodies against antigens (polio virus)

(ii) Dormant polio virus injected in the body (it is unable to harm the body) But immune system became stimulated and accumulated antibodies.

(iii) If a real healthy virus entered in body, it could be unable to spread any disease because already immune body kill this virus easily.

(a)

Characteristics of tropical cyclones:

- Cyclones are the circular movement of water in seas and oceans with high intensity.
- When the pressure of air high, its intensity will also increase.
- It affects the coastal areas by

damaging infrastructure, buildings,
and territories. Current damage is form
of life loss.

Q# of Part II (B)

A, B, C, D in proportion of
 $5 : 2 : 4 : 3$

Share of C = $D \times 1000$

Share of B = ??

→ Share of C $\Rightarrow 3 \times 1000$

" = 3000

$5 + 2 + 4 + 3 = 14$ \$

Total = 1000

$C = 4/1000 = 250$ \$

$B = 2/1000 = 500$ \$