

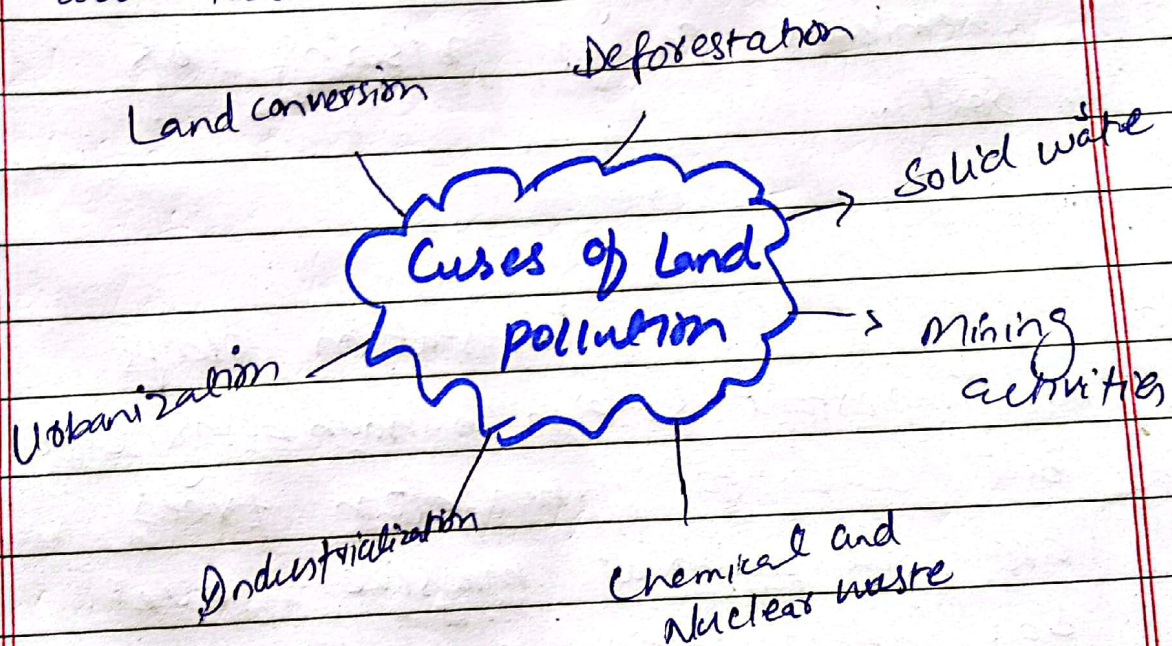
Final Mode  
September 2023  
General Science

## Part II

Q. No 4:-

### Land Pollution

Land pollution means degradation and destruction of Earth's surface of soil directly or indirectly as a result of contamination of human activities.



### i) Solid waste

Solid waste is one of the reasons of land pollution. Human produces a waste quantities of wastes in colleges, schools and factories and hospitals. Then these

Solid wastes are sent into landfills. As a result, it contaminates the land and ends up in polluting the environment.

## ii) Insecticides and pesticides

Due to increasing the population, the demand of food also increased.

Farmers used a huge amount of pesticides to get rid of insects, bacteria and germs from their crops. Resultantly, the overuse of chemicals causes poisoning of soil.

## iii) Deforestation

Forestation plays an important role in human being life.

But due to urbanization trees are cut down at massive level.

So, deforestation carried out to great<sup>day</sup> lands. Once the lands get dried, it will never converted its original shape. Thus, deforestation also has a great impact on a land.

#### iv) Chemicals and Nuclear waste

Nuclear plant can produce an huge of nuclear fission and fusion. The leftover radioactive material contains harmful and toxic chemicals that can effect human health. They are dumped beneath the earth to avoid any causality.

#### v) Land conversion

Land conversion is also another major cause. The original properties of lands are modified and converted. This cause a land pollution.

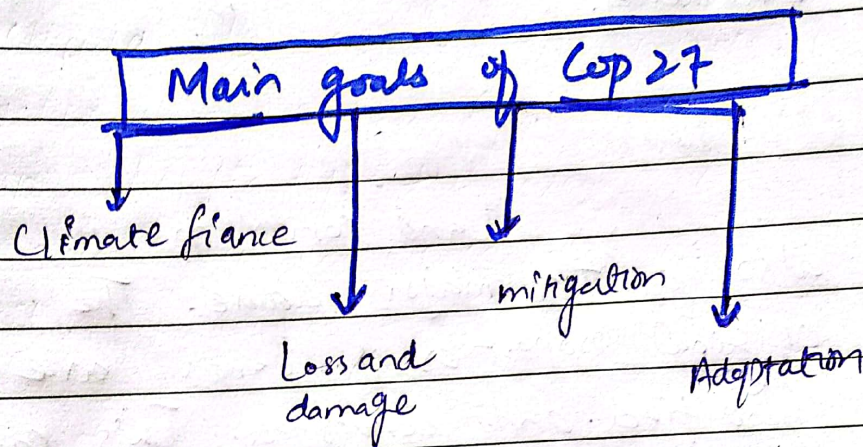
#### vi) Industrialization

Industrialization also has a great role to cause a land pollution. A vast amount of substances are used in industries in modern times. This resulted a <sup>amount of</sup> waste in the lands. Thus, the land gets polluted due to industrial

B)

Cop 27

<sup>of parties</sup>  
The 27th conference was held in Egypt. Around 200 countries leaders attended the conference in order to thrash out how to tackle the climate change. The theme of this year summit was "The implementation of cop".

i) Climate Finance

Climate finance is one of goals of Cop 27. It involves in allocation and mobilization of financial resources for the climate related countries, particularly in developing countries.

ii) Loss and damage

The main aim of Cop 27 was to establish

a loss and damage fund for the most affected countries. Loss and damage refers to the irreversible consequences experienced by countries due to climate change.

### iii) Adaptation

Cop27 played a great role to adopt the climate-related effects. Adaptation refers to measures taken to minimize the effects of climate change on communities, ecosystems and infrastructure. The framework was to respond guide countries to respond long-term challenges posed by the Climate change.

### iv) Mitigation

This is a key goal of Cop27 to limit a global temperature rise and to prevent a severe effects of climate change. Mitigation refers to reduce the greenhouse gas emissions and transitioning to clean and sustainable energy.

## C) Role of GIS

The environment is a crucial part of our lives. Our climate is changing, and we are experiencing horrible weather patterns. GIS is a powerful tool that helps organizations to collect, analyse and distribute information. GIS helps organization to save more trees and control the distribution of trees and forests. For example, GIS makes it easy to observe the distribution of forests using satellite images.

This technology is also used to manage conservation areas in order to help preserve the environment.

It also <sup>plays</sup> important role to gather the data about water resources.

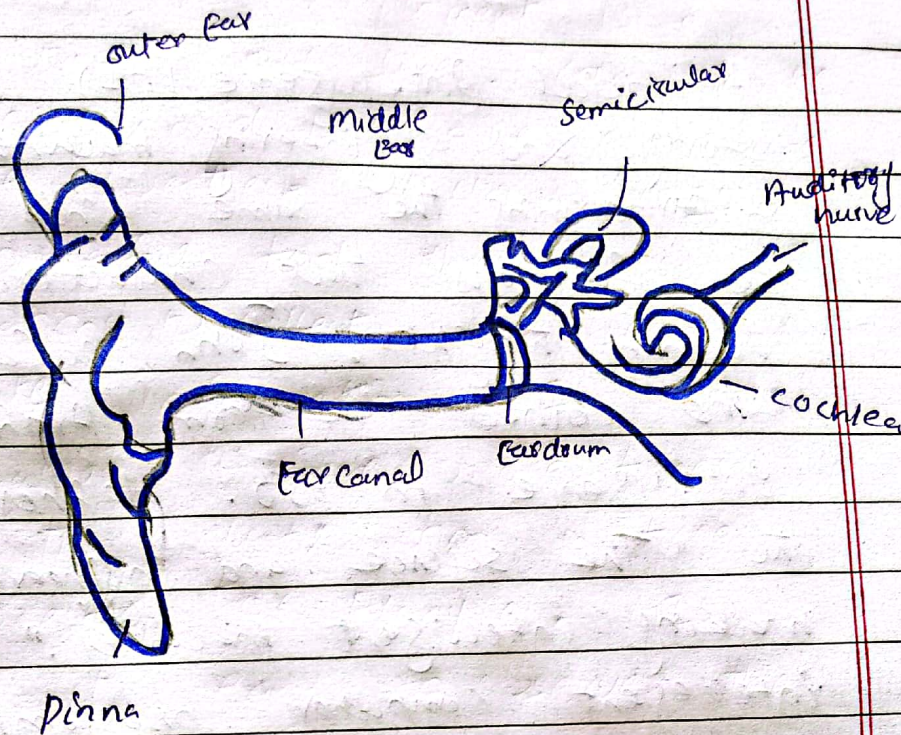
Using GIS technology, organizations can observe the level of pollution in water bodies. Lastly, GIS technology is crucial for creating an inventory of our animals and plants. Thus, GIS has a pertinent role in environmental sciences.

## D) Fundamentals of Artificial Intelligence

Artificial Intelligence (AI) is the study and engineering machines capable of performing the same kinds of the functions that characterize human thoughts. John McCarthy, who coined the term Artificial Intelligence in 1956, defines it as the "the science and engineering of making intelligent machines." especially intelligent computer programmes.

- AI creates such software or devices which can solve real-world problems very easily.
- With the help of AI, you can create your personal virtual assistance, such as Cortana, Google Assistant, etc.
- You can build such robots which can work in an environment where survival of humans can be at risk.
- AI opens a path for other technologies, new devices, and opportunities.

Q No. 5:



## Human Ear

### → Function of Human ear

Our ears are in charge of collecting sounds, processing them and sending signal to brain. And that's not all ears also keep balance. The ear is made up of three different sections: The outer ear, the middle ear, The inner ear.

The ears have two main functions: hearing and balance.

- 1- Hearing: When sound waves enter your ear canal, your tympanic membrane vibrates. This vibration



2- Passes on three tiny bones in your middle ear.

Balancing :

Your inner ear contains Semicircular canals filled with fluid and hair-like sensors. When you move your head, the fluid inside these loop-shaped canals sloshes around and moves the ears.

### D) Function of pituitary gland

The pituitary gland is referred to as the "master gland" because it monitors and regulates many bodily functions through the hormones that it produces including:

- 1- Growth and sexual development and functions
- 2- Glands (thyroid gland, adrenal glands, and gonads)
- 3- Organs (kidneys, uterus and breasts)

The pituitary gland is connected by a stalk to a part of the brain called hypothalamus.

Together, the brain and ~~pituitary~~ pituitary gland form the neuro-endocrine system. This system constantly monitors glands and organs to determine whether to send or to stop the chemical messenger that control their function.