

—(Q.NO-2)—

A. Defining Food Preservatives, Additives, Food Adulteration, and Food Contamination.

Food Preservatives:

Food preservatives are the substances that play crucial role in food industry. It can be defined as

— All those compounds that are added into food to preserve the flavor, aroma, texture, color, and other sensory appeals of food.

Moreover, they are also used to increase the shelf life of food year-round availability of food —

- Food and Agriculture organization (FAO)

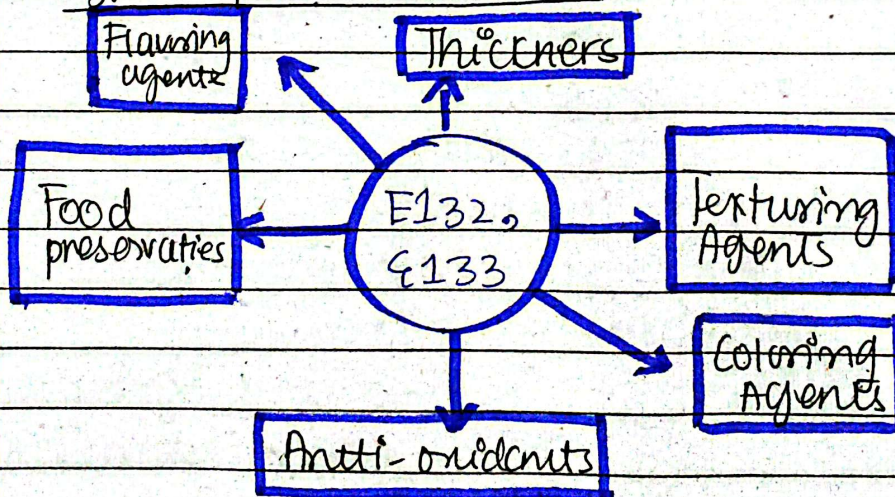
Example: Sodium Benzoate

Food Additives:

Food additives can be defined as:

— All those chemical substances that are added into food to enhance taste, color, texture of the food. Food additives also include anti-oxidants and food preservatives —
— Britannica

Types of Food Additives:



Examples:

- Sweeteners
- Vitamin E
- Sodium Benzoate
- Tartrazine

Food Adulteration

The adulteration of food can be defined as:

— The intentional addition of harmful components through dilution or other processes into food products is called Food Adulteration. This is generally driven by economic needs of business companies—

Quick Review

Example

False packaging & Mislabeling

Addition of starch, water and wax for increasing volume

Consequences

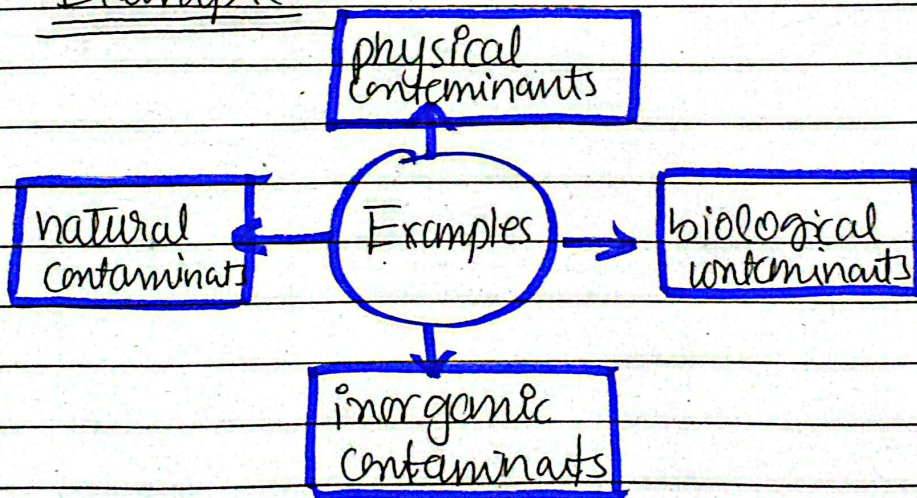
- Diseases
- Food poisoning
- Allergic reactions
- food spoilage

Food Contamination:

— The unintentional / natural addition of substances into food that contaminates food is called food contaminants —

— Food and Agriculture Organization .

Examples,



Consequence,

- Nutritional loss
- Economic losses
- Allegies
- Agricultural yield Destroyed

B. Human Activities Destroying Atmospheric Conditions and Measures to Control:

Human Activities Destroying Atmospheric Conditions:

following are the human activities that destroy atmospheric health:

1. Over Consumption Of Fossil Fuels Resulting in Global Warming and Disturbed Weather Patterns.



2. Urbanization and Rapid Migration Resulting In Deforestation and High Risk of Diseases (Respiratory).



3. Industrialization disturbing Green House Effect and Ozone layer

Controlling Measures to Protect Atmospheric Conditions Destroyed By Anthropogenic Activities:

1. Shifting to
Renewable Energy
Sources



2. Green-Zones Over
Fly Overs to
capture Carbon.



3. Carbon Capturing
Plants i.e Mustard
and Sunflower



4. Work From Home
and Afforestation
Movements to
reduce Carbon
Foot-print

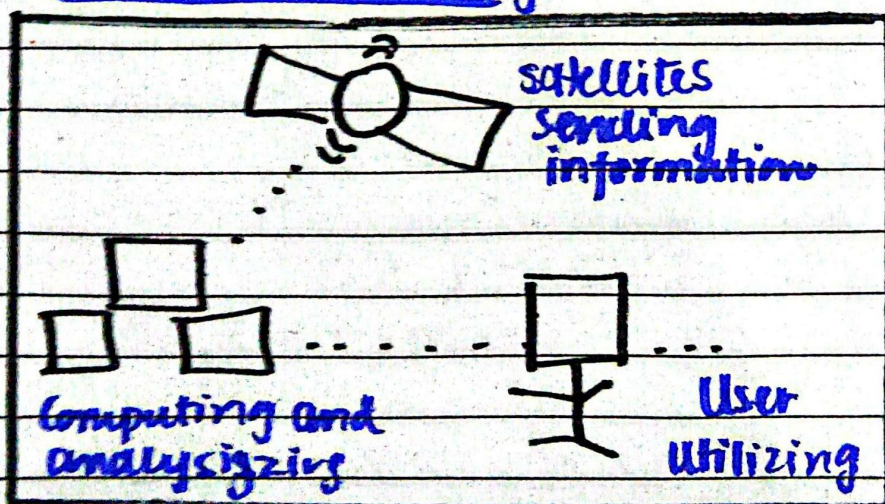
c. Defining Remote Sensing, Helping In Environmental Science:

Defining Remote Sensing:

A satellite based technology can be defined as:

- A Sensing Technology
Used to perform
multi-faceted tasks.
The remotely sensing
allows to mitigate
effects of natural disasters,
weather forecasting and
doing the needful for
environmental sustainability —
— Quick Review

Visual Representation of Remote Sensing:



Remote Sensing In Environmental Science and Environmental Management:

1. Weather Forecasting:

Remote sensing can be efficiently used in forecasting

2. Flood Management and Identification of Vulnerable Areas: The identification of flood-prone areas can also be done.

3. Urbanization Control and Management of Natural Resources - Urban planning and resource management helps in preserving environment

4. Disaster Risk Management - a major help in environmental science

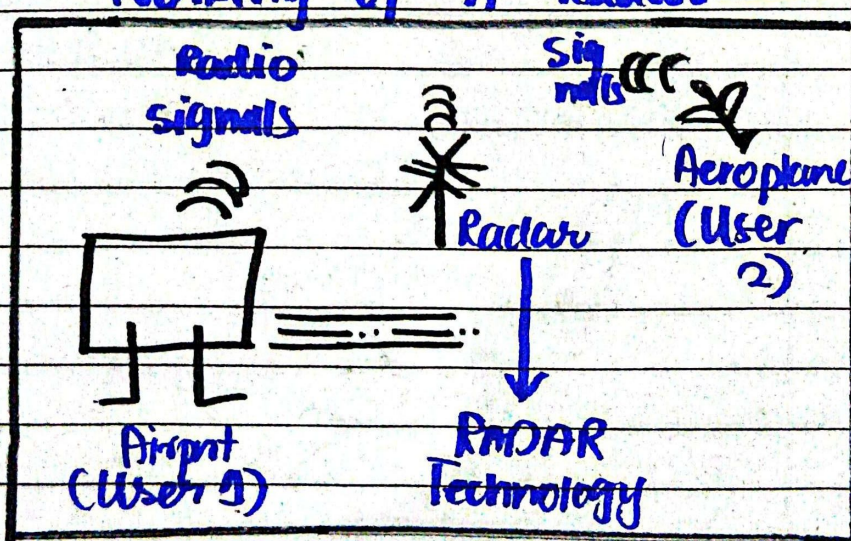
5. Solid Waste Management and Agricultural Yield Protection -

Agricultural development, eutrophicated areas can be evenly managed by remote sensing.

D. Working of RADAR:

— A technology used to transmit radio signals and waves for smoothly communication between two users segment —

— Visual Representation of Working of a Radar —



— (Q-No.1) —

A. Explaining Green House Effect Of Global Warming:

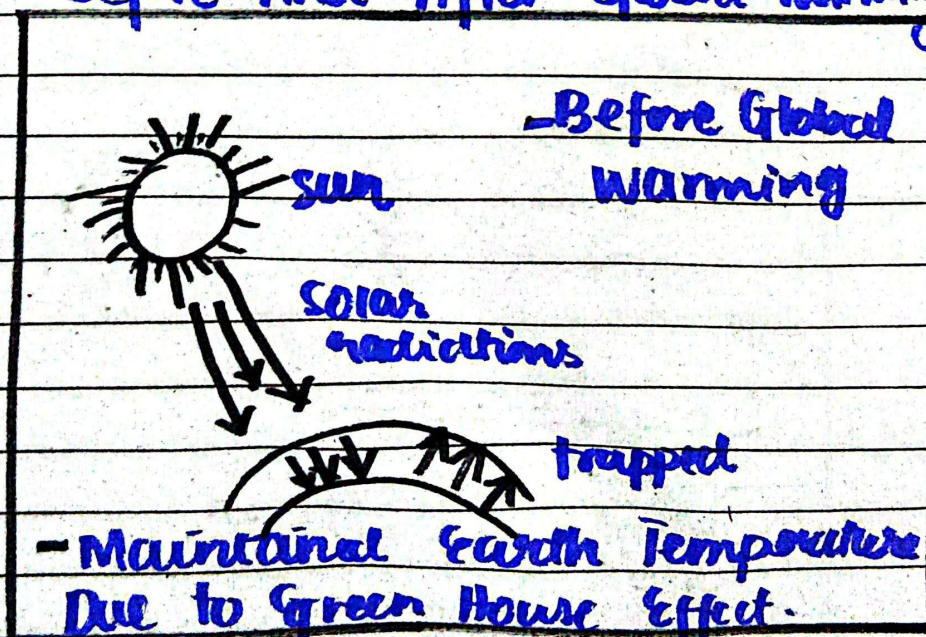
Green House Effect:

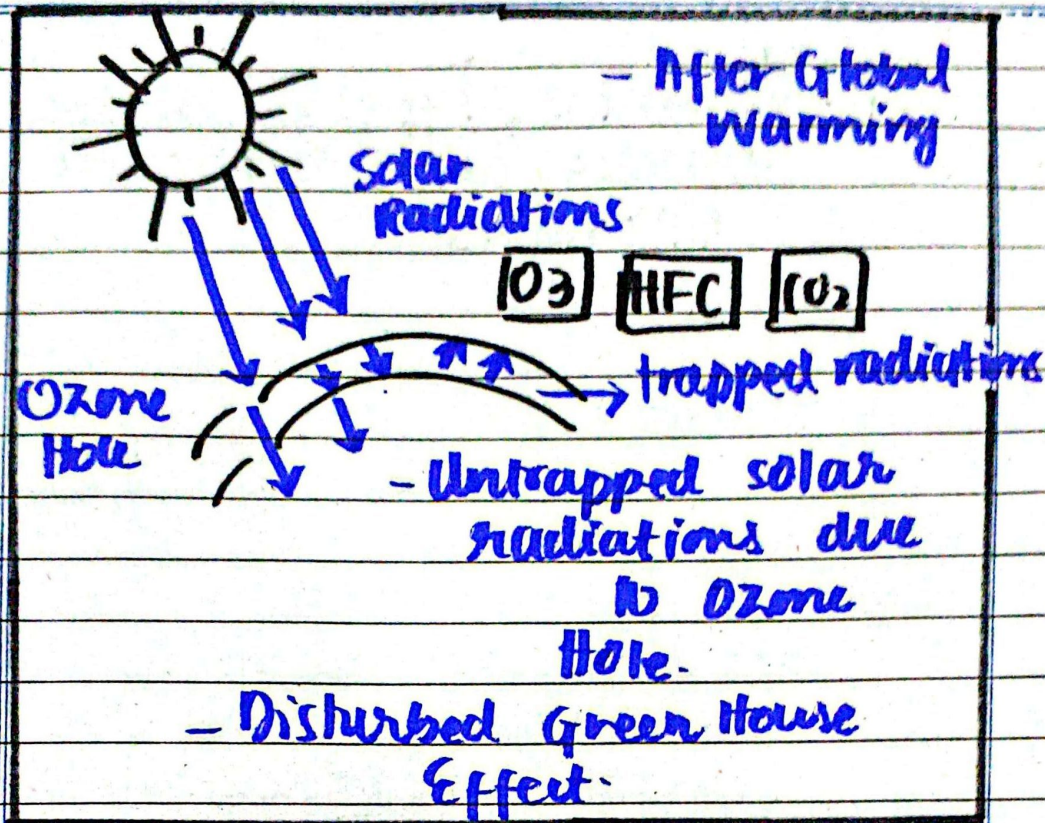
The most common effect of global warming is:

— The trapping of solar radiations into atmosphere is called Green House Effect —

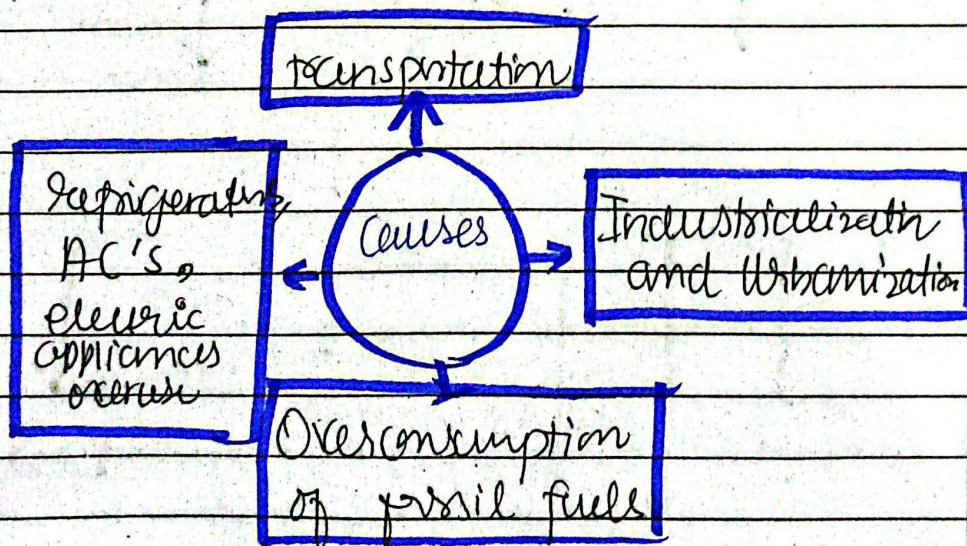
IPCC

— Visual Representation of GHE Before And After Global Warming





- Causes of Disturbed Green House Effect:



- United Nations Report 2023.

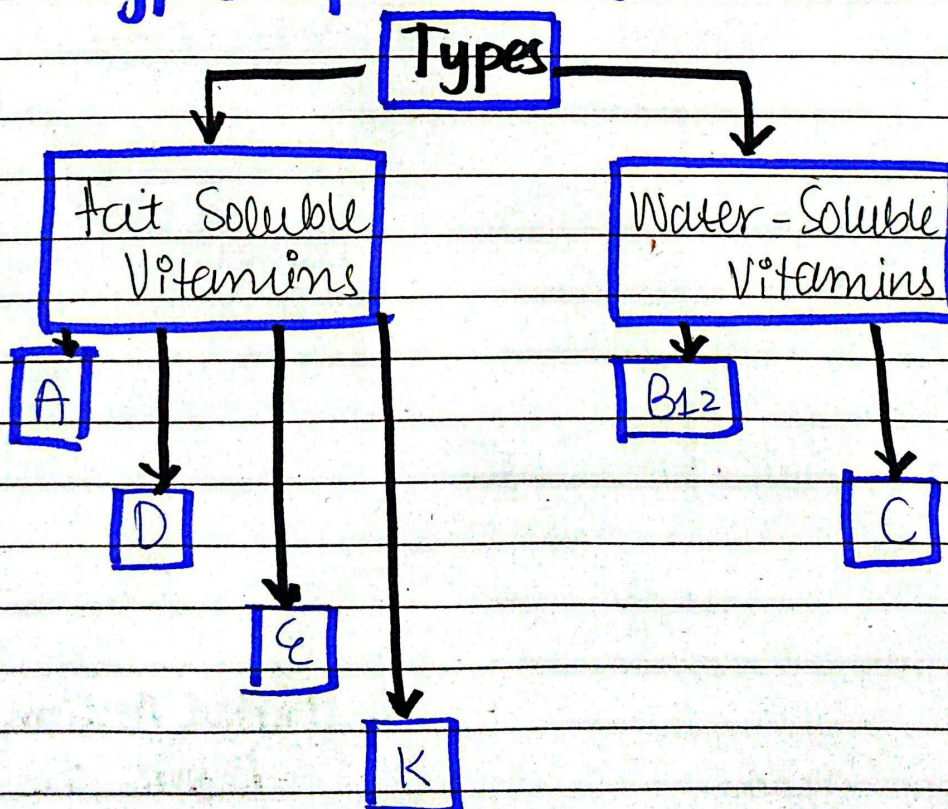
B. Vitamins, Types, Functions, Sources and Deficiency Disorders:

Vitamins:

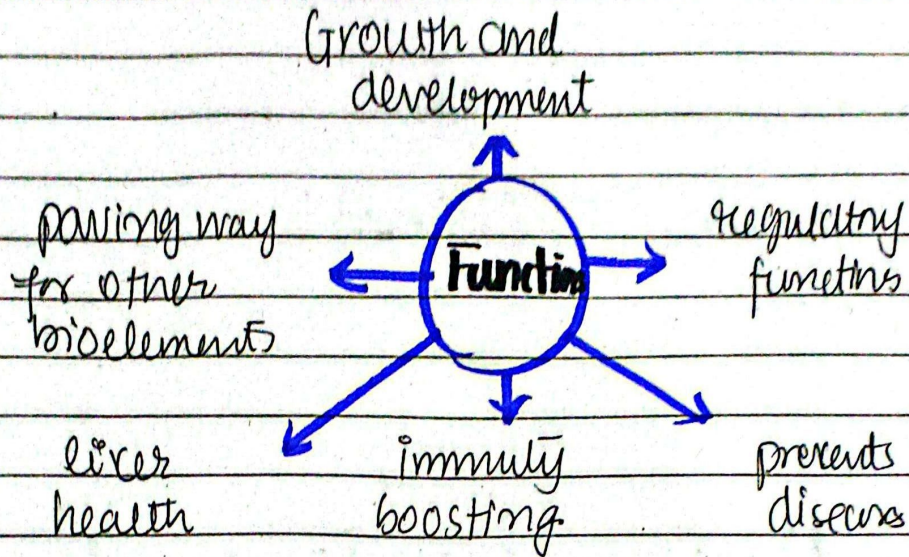
092 A type of bioelement

— A type of micro nutrient required for regulation of body function and processes —
— FAO

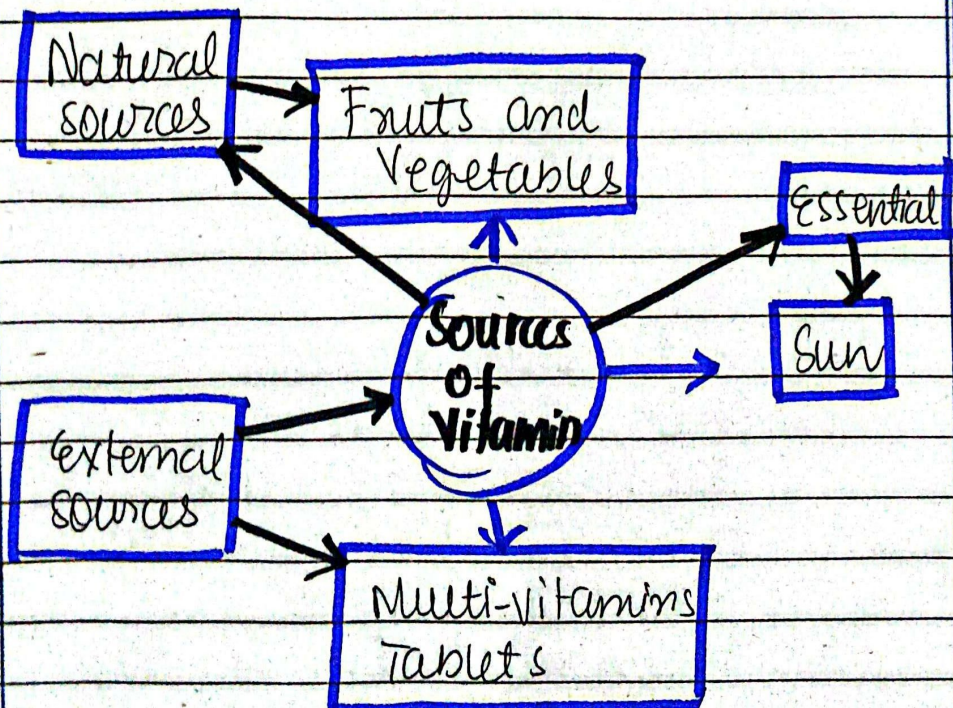
Types Of Vitamins:



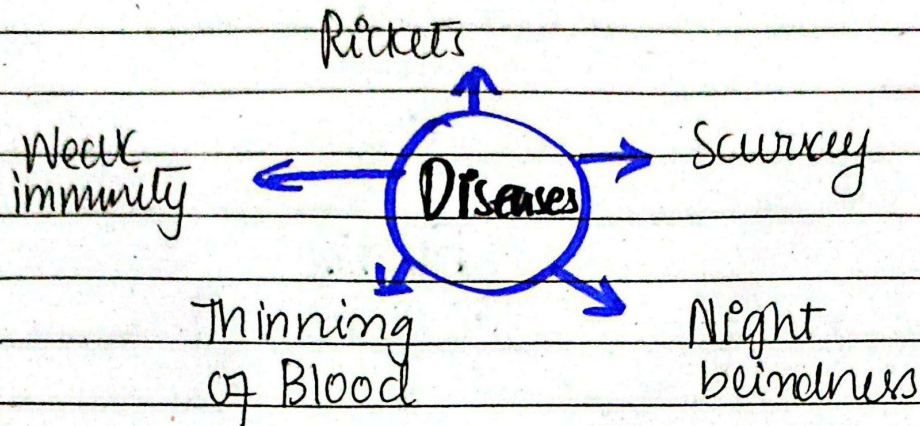
Functions of Vitamins:-



Sources of Vitamins:



Deficiency Disorders Of Vitamins:



C. Defining Optic Fibres and Its Importance:

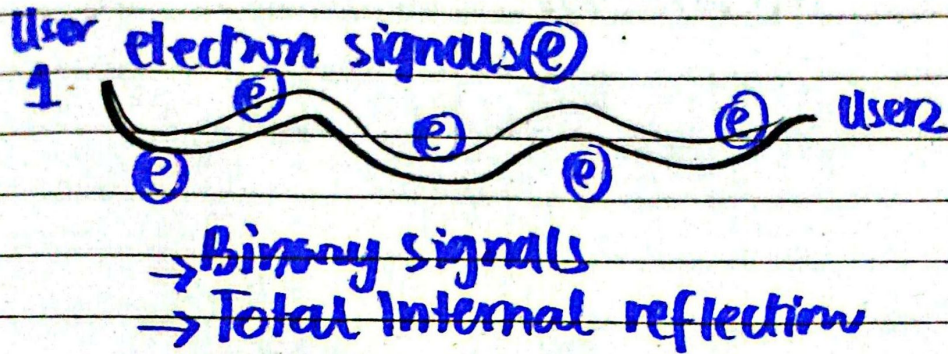
Optical Fibres:

A technology used to communicate through transmission of light or

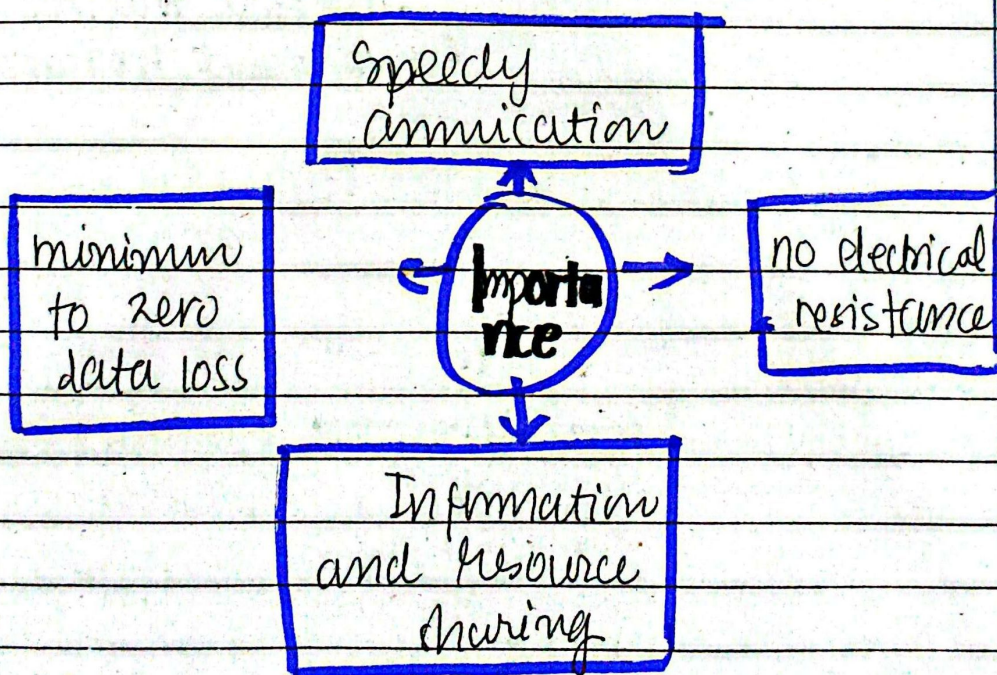
— A transparent thin fibre made by drawing glass and plastic slightly thicker than human hair, capable of transmitting light is called an Optic Fibre.

— Britannica

Visual Representation of Working of Optic Fibres-



Importance of Optical Fibres :-



D. Water Pollution, Types, Sources and Controlling Measures:

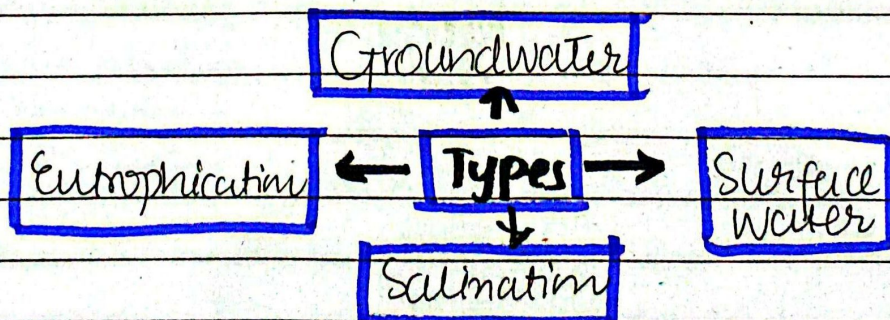
Water Pollution:

The unwanted addition into water or

— The contamination of water due to harmful substances' presence is called water pollution—

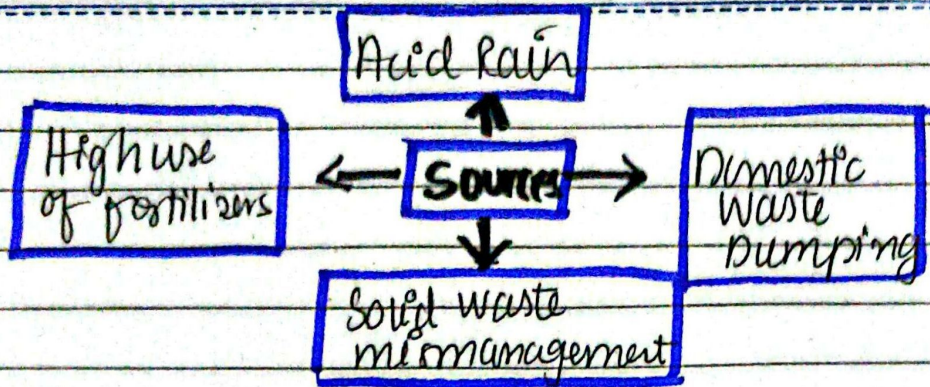
— United Nations Environment Programme

Types of Water Pollution:



Sources of Water Pollution:-

There are numerous sources of water pollution including:



Controlling Measures Of Water Pollution:

