

A general set of instructions/suggestions to improve your score

Hi there, you're done well. Know that acquiring knowledge is one thing and reproducing it in paper according to what's asked is another. There are a few things I would like to highlight.

1. A 5 marks part requires at least 2 and at max 3 sides of a paper. Know that there can be two or three parts of a question and their marks are divided accordingly. So, address all of them in a just manner.

2. Focus on time management. You get 35 minutes to solve one question and about 8 minutes per 5 mark part. Manage your time accordingly.

3. You need to understand that your paper is supposed to look more scientific than theoretical. So, add flowcharts and diagrams where required.

4. Your handwriting and neatness can be really impactful. Avoid cutting and overwriting.

5. Focus on your spellings and your grammar. Here, in GSA there's no deduction in marks but your expression will definitely create an impact.

6. In ability portion, give explanation for analytical ability question in words. You need to understand that a 5 mark part requires all steps written and explained.

Good luck for CSS 2025. You're gonna rock in sha Allah. :)

unidirectional blood flow, preventing the backflow and maintaining efficient circulation-

c- Muscular Walls

The left ventricle has thicker muscular walls to pump oxygenated blood throughout the body, while the right ventricle has thinner walls as it only pumps blood to the lungs-

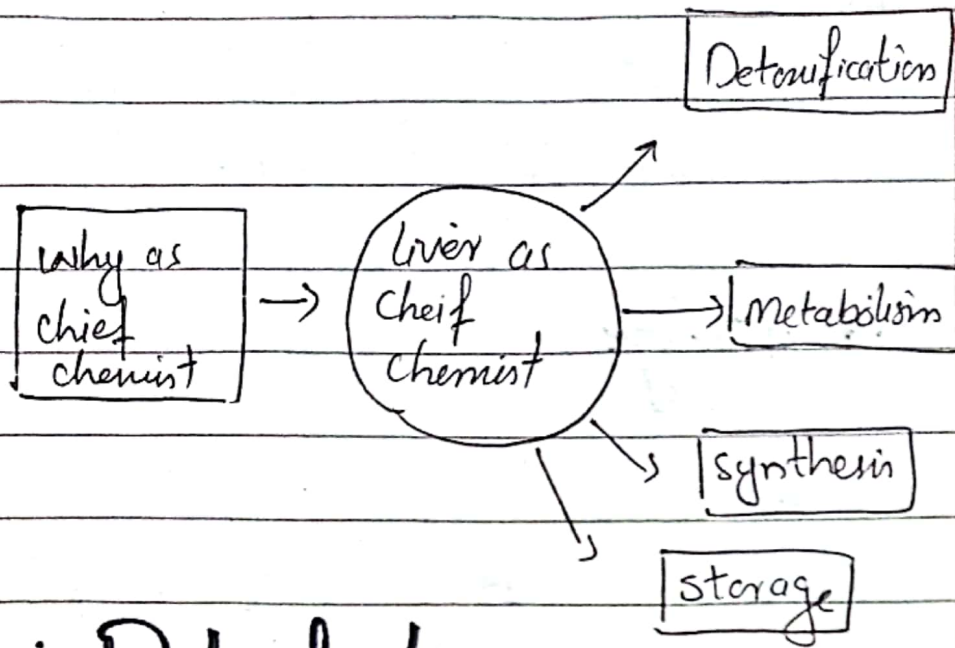
Add diagram

b-

Liver is a Chief Chemist

The liver is often referred as "chief chemist" of body due to its vital role in numerous biochemical processes essential for maintaining the homeostasis

Some key functions include



i- Detoxification

The liver neutralizes and filters toxins and harmful substances from the blood, converting them into harmless products that can be excreted.

ii- Metabolism

The liver plays a crucial role in the metabolism of carbohydrates, fats and proteins. It converts excess glucose into glycogen for storage. It also releases glucose when needed.

iii- Synthesis

The liver produces the essential proteins like albumin.

and clotting factors. It also synthesizes bile, which aids in digestion and absorption of fats.

iv- Storage

The liver stores vitamins (A, B, E, K, B₁₂) and minerals (iron and copper) and releases them as needed by the body.

Add diagram

Because of vital role played by liver such as storage, synthesis, metabolism and detoxification, it is regarded as chief chemist.

c-

Green House Effect is a blessing. Also discuss the enhanced greenhouse effect and its relation with global warming.

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Green House Effect is a blessing. Also discuss the enhanced greenhouse effect and its relation with global warming.

Date: _____ Day: _____

i. Green House Effect is a Blessing

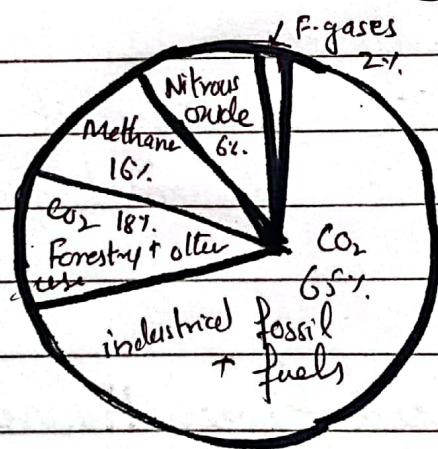
The green house effect is a blessing because it is a process in which gases such as CO_2 , CH_4 , H_2O trap heat into atmosphere and keep the temperature of earth warm enough to support life on earth. Without green house effect, the earth's average temperature would be about -18°C making it too cold to live for most forms of life to survive.

ii. Enhanced Green House Effect and Global Warming

This green house effect is a blessing but it becomes a curse when the green house effect increases because

of excess of green house gases. The greater the green house gases are in the atmosphere, the greater will be the heat trapped and as a result, the temperature of earth also increase and this increased temperature is a cause of climate change and global warming.

GreenHouse \propto Global Warming
gases and climate change



75% anthropogenic gases

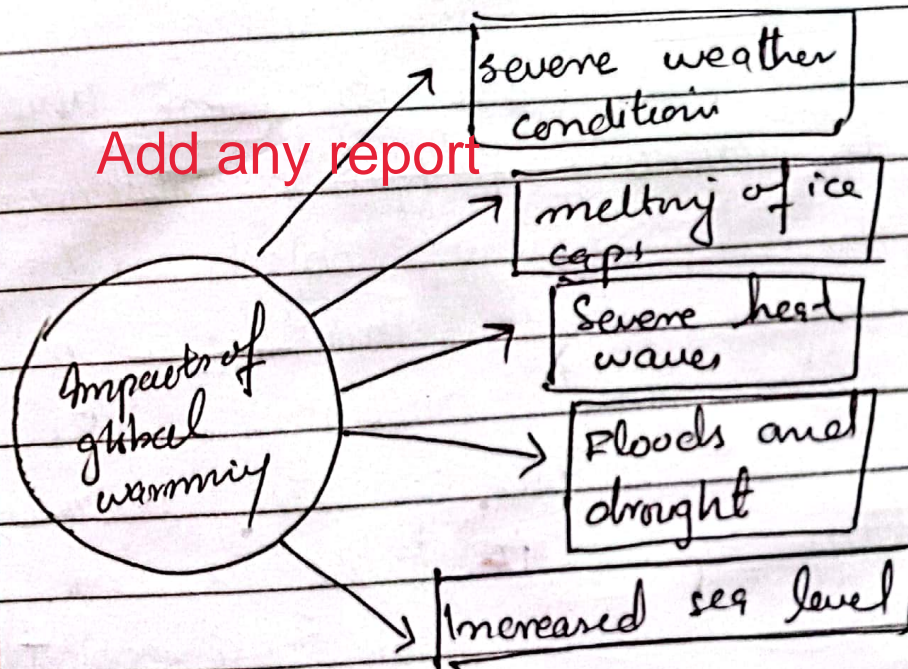
Source?

iii Increased Global Warming?

When green house gases are large in quantity which are increasing at an exponential rate, the global warming also gets

increases. This global warming is a phenomenon in which the temperature of earth gets increased than average

This process of global warming becomes detrimental for human health and infrastructure



While natural green house is crucial for living beings however, when the green house gases increase, the average temperature of earth also increase.

(d)
**Working of GPS
 and Mobile Phone**

i- **GPS - Global Positioning
 System**

Global Positioning System is a 24 well spaced system in the atmosphere, which is generally helpful in determining the position of objects and human beings. This helps in locating and pinpointing the exact position of the required thing. This is because of the receiver by the object to be pinpointing -

This is generally controlled by United States, however, it is cheap and available to every human being -

ii- **Working of GPS**

Global Positioning System is spaced in the atmosphere

Date: _____

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in such a way that always four are spaced above horizon of earth. Following is working

1- 21 GPS, and 3 spare satellite are spaced at a distance of 10,600 miles above earth and four satellites will be above horizon spaced equally

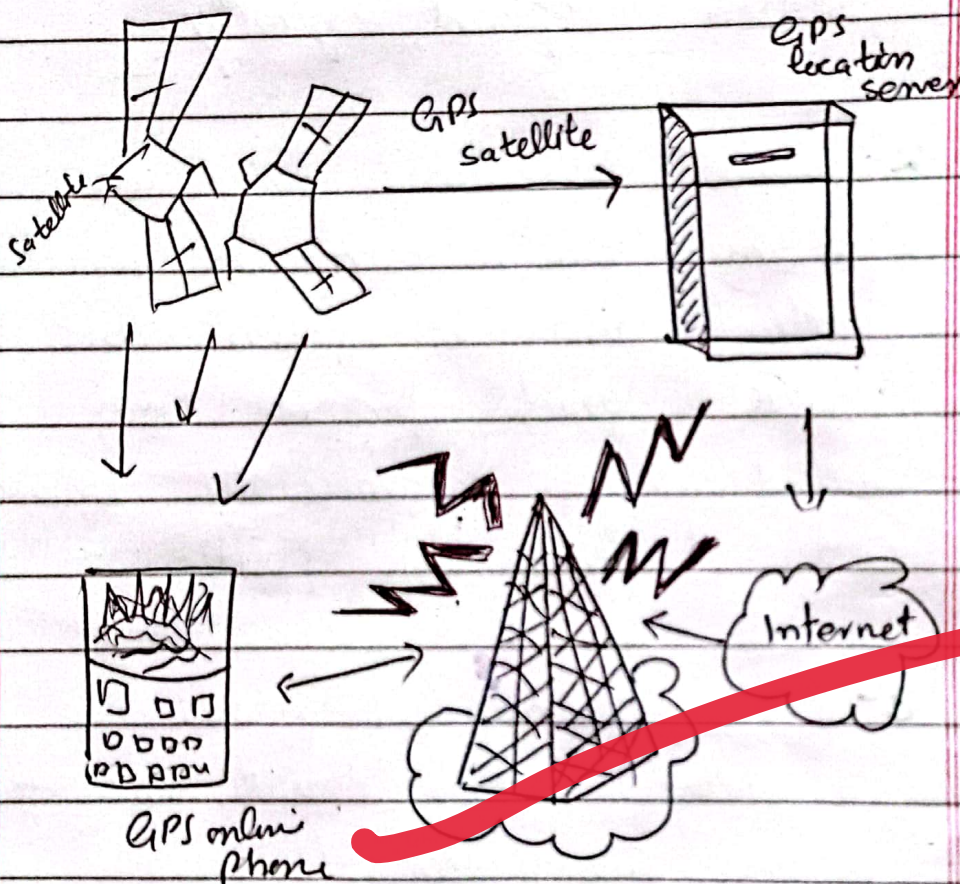
2- Each satellite have an atomic clock, computer and radio and its own orbit clock which for its own understanding continuously broadcast its changing position

3- On ground, GPS receiver is available, attached with computer which triangulates its own position, beams 3-4 satellites to determine its geostatic position

4) There is a display screen on the receiver, which determine positions through map

5. Fourth satellite on the receiver is determined to find the altitude and geo location.

6. If any person have a receiver, its speed and movement can be detected through GPS.

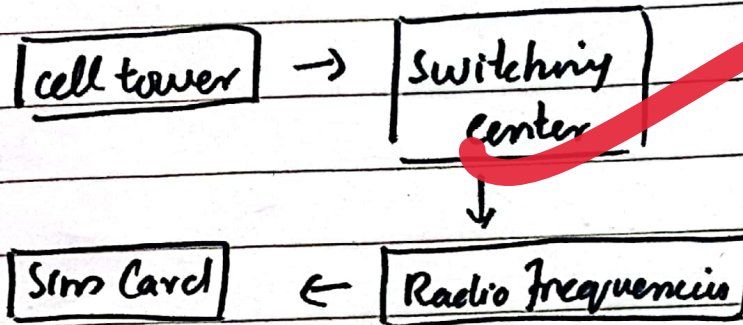


b- Working of Mobile Phone

A mobile phone is a portable device that allows the users to make and

receive the calls, send text messages and access the internet among other functions.

Its Working



a- Cell Tower

Mobile phones communicate through a network of cell towers. When a call or message is sent, the mobile phone transmits a radio signal to the nearest cell tower.

b- Switching Center

The signal is then routed through a network of switching centers that connects the cell to the recipient's phone, either through another cell tower or a different type of

network (wifi internet)

c- Radio Frequencies

Mobile phones use radio frequencies to transmit and receive the data. Different frequencies are used for different functions (3G, 4G, 5G and GSM for calls)

d- SIM Card

The Subscriber Identity Module (SIM) card inside the phone stores information like the user's phone number and network details, allowing the network to identify the user and bill them for services.

add diagram for both

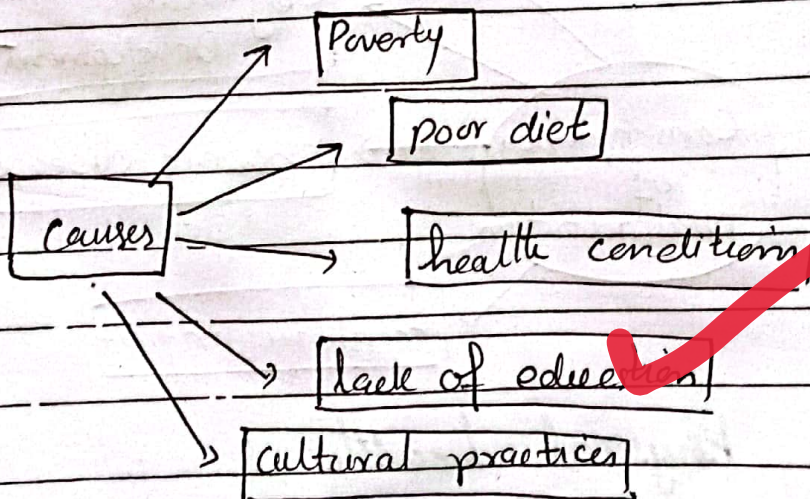
Q. NO. 2

a. Malnutrition, elaborate its major causes and consequences

i- Defining Malnutrition

Malnutrition is a condition that occurs when a person consumes less nutrients than required leading health problem. It includes both undernutrition (lack of adequate calories, protein, or micronutrients) and over-nutrition (excessive intake of certain nutrients leading to obesity and related diseases).

ii- Major Causes behind Malnutrition



a- Poverty

limited access to sufficient nutrition

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food due to economic constraints
b-Poor Diet - Consuming diet lacking in variety, insufficient fruits, vegetables, proteins

c- Health Conditions

chronic illness, infections or disease

d- lack of education

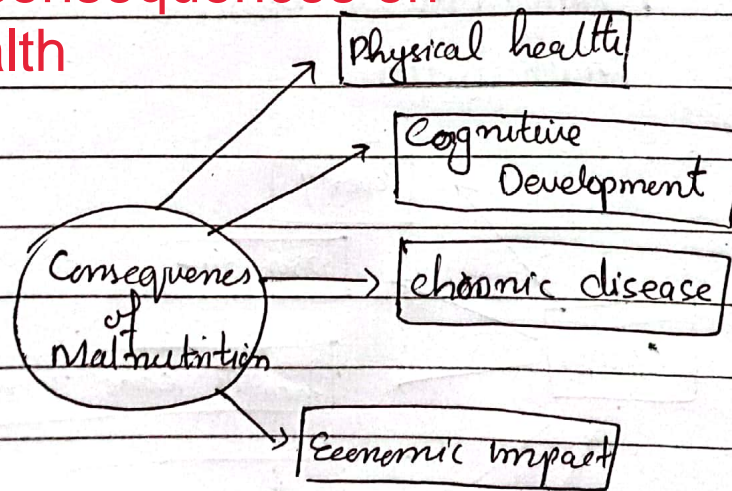
Inadequate knowledge about nutrition.

e- Cultural Practices

Certain cultural practices that limit food consumption

iii- Consequences of Malnutrition

Elaborate consequences on human health



a- Physical health: Malnutrition can lead to stunted growth, weakened immune system, susceptibility to disease

b- Cognitive Development

In malnourished children development delays, reduced cognitive abilities.

c- Chronic Disease

Overnutrition can lead to chronic diseases such as obesity or diabetes.

d- Economic Impact

It reduces productivity, increases health care cost, affecting economic growth and development.

(b)

i- Differentiate Between Food contamination and adulteration

Food Contamination Adulteration

1. Definition

| | |
|--|---|
| Food contamination means presence of harmful substances in the food that causes illness or adverse effects | Food adulteration is intentional addition of inferior or harmful substances to food |
|--|---|

These substances can be biological (bacteria and viruses) chemical (pesticides, heavy metals) or physical (glass, metal fragments). It is done to increase the quantity, reduce cost of production often at expense of quality and safety.

2- Cause

Contamination often occur unintentionally due to improper handling, storage or processing of food. Examples include bacterial contamination due to poor hygiene or chemical contamination from pesticides. It is done deliberately by producers or sellers - to increase profit margin.

Contamination due to poor hygiene or chemical contamination from pesticides

Examples??

-C-

Computer Buses . Difference between RAM and ROM

i- Computer Buses

A communication system that transfers data between different component of computers such as between the CPU, memory and peripherals. It consists of a set of parallel wires or traces on a mother-board that transmit data, addresses and control signals-

Example and diagram??

ii- Difference between RAM and ROM

Random Access Memory

Read Only Memory

a- Volatility

RAM is volatile memory, means it loses its ~~data~~ data when power offed turned off

It is non-volatile memory. means it retains data when turned off

Function

temporarily stores data and instructions that CPU needs while performing the task. It allows for quick ^{read} and write access which is essential for functionality of computers.

It stores the permanent data and instructions that are essential for booting the computer such as BIOS (Basic Input and Output system).

Usage

It is used for running the applications, loading operating systems, processing data in real-time.

to store firmware a software closely tied to hardware and essential for the initial start-up process.

Ability portion??