PART II

QUESTION NO. 4:-

(A)

HEPATITIS:-

It is a blood born disease and it's usually known as inflamation of liver caused by virus. Hepatitis impairs the function of liver that is very vital organ of human body. If remains untreated, then this disease leads to liver damage, cirrhosis, or even liver cancer.

TYPES:-

There are different types of hepatitis, classified on the basis of their severity and how they are caused.

i) HEPATITIS A:- Caused by contaminated food or water and is less severe.

ii) HEPATITIS B:- A severe type of hepatitis that is caused by external factors of dirty, used needles, unprotected sex and blood transfusions.

iii) HEPATITIS C:- Severity and causation similar to hepatitis B.

iv) HEPATITIS D:- Occurs only in those infected with HBV.

v) HEPATITIS E:- Spread through poor sanitation.

Causes:-

1) Eating and drinking contaminated food or water

2) Through usage of dirty and used

Scanned with CamScanner

needles
3) Blood transfusion from an infected person.
4) Unprotected sex
5) Through mother to the child.
6) Caused by poor hygiene and unsafe sanitation.

PREVENTION:-

1) Hepatitis can be prevented if people avoid eating and drinking contaminated food and water
2) Avoid under cooked food.
3) Avoid having unprotected sex
4) Always used new needles that are sterilized.
5) Avoid drinking alcohol and drug use.
6) Blood transfusions should always follow a protocol of screening
7) Maintain proper hygiene, always wash hands after using toilet
8) Should work for proper sanitation.

SYMTOMS:-

1) Fatigue
2) Loss of appetite.
3) Nausea and vomitting
4) Abdominal pain.
5) Jaundice
6) Dark urine
7) Fever
8) Weight loss
11) Easy bruising or bleeding

Scanned with CamScanner

(B)

FOOD PRESERVATION:-

Food preservation is a technique that prevents food from spoilage and stop microbial and enzymatic growth on food. For this method different techniques are used.

METHODS:-

REFRIGERATION & FREEZING:-

1) Refrigeration slows down microbial growth on food because food is kept in between 0°c to 5°c.

2) Freezing stops any kind of microbial growth on food because food freezes below -18°c.

CANNING:-

Food is cooked and put in airtight container then heat treated to kill any harmful organisms.

DRYING & DEHYDRATION:-

Removes moisture from the food that inhibits the growth of harmful microorganism

FERMENTATION:-

Use useful microorganisms to convert natural sugars into acids or alcohol which acts as preservatives.

PASTEURISATION:-

Using heat especially for liquids such as milk to kill pathogens without altering taste. This prolongs shelf life.

VACUUM PACKING:-

Remove air from packaging which

Scanned with CamScanner

reduce oxygen exposure which slows down microbial growth.

CHEMICAL PRESERVATION:-

Adding preservatives like vinegar to inhibit spoilage.

These are some low methods of food preservation.

(C)

FERTILISERS:-

Fertilisers are substances added to soil or plants to provide essential nutrients and enhance growth and productivity. They increase soil nutrients that crops absorb then yield better plant health

MINERAL FERTILISERS:-

Mineral fertilisers are industrially made and contain concentrated nutrients

i) NITROGEN FERTILISER:-

Provide nitrogen for better plant health and green foliage.

ii) PHOSPHORUS FERTILISER:-

Provide phosphorus to crops essential for root development

iii) POTASSIUM FERTILISER:-

Provide potassium that is essential for disease resistance and water regulation

ORGANIC FERTILISERS:-

Organic fertilisers come from plant or animal sources

i) Animal BASED:-

Comes from animal waste

Scanned with CamScanner

2) PLANT BASED:-
Comes from plant source

(D)
ANATOMY OF HUMAN TOOTH:-
Human tooth is ~~essential~~ for mechanical digestion of food. It helps in grinding, chewing and tearing away food into to small particles.

LAYERS OF TOOTH:-
1) Enamel:- outermost layer and the hardest part of tooth that provides protect from physical and chemical damage.
2) Dentin:- Beneath the enamel and softer than enamel. Transmits sensations such as heat, cold and pain to pulp.
3) Pulp:- central part of tooth enclosed within dentin. Also contains blood vessels and nerves that provide nutrients and respond to sensory stimuli.
4) Cementum:- Covers root of the tooth. Thin and bonelike structure and anchors the tooth

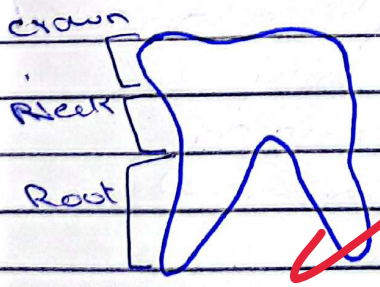

Diagram of Tooth outer structure

QUESTION NO. 5:-
(A)

Scanned with CamScanner

Feature	Eukaryotic	Prokaryotic
Definition	Cells with a nucleus enclosed in membrane	Cells without nucleus; genetic material free in cytoplasm
Size	Larger	Smaller
Nucleus	Present with nuclear membrane	Absent
Genetic material	Linear DNA	circular DNA
Membrane Bound organelles	Present	Absent
Ribosomes	larger	Smaller
Cell Division	mitosis or meiosis	Binary fission
cell wall	Present	Absent
cytoskeleton	Present, provide structural support	Absent or very simple
Reproduction	Sexual and asexual	Asexual
Example	Animals, Plants, fungi etc	Bacteria or archea

(B)

GLOBAL WARMING:-

Global warming refers to long term increase of Earth's temperature primarily due to human activities such as burning fossil fuel, deforestation and industrial process.

GREENHOUSE EFFECT:-

These processes release gases such as methane, carbondioxide and nitrous oxide, CFCs in the atmosphere, which trap heat and lead to rise global temperatures. This cause shifts in climate patterns leading to environmental disasters.

Scanned with CamScanner

Explain complex concepts in simple terms.
Use real-life examples
Include diagrams and flowcharts to illustrate processes.
Discuss practical applications of scientific concepts.

which commits countries to reduce their ... to levels below ... global ... recognizes that developing countries are major emitters and have a greater responsibility to take action.

(C)

GEOGRAPHIC INFORMATION SYSTEM:-

GIS is a tool that combines software, hardware, and data to capture, manage, analyze, and visualize spatial and geographic information. It is used for mapping and decision making across various fields such as urban planning, environmental management and logistics.

(D)

Antioxidant :-

It is a substance that helps protect cells from damage caused by free radicals which are unstable molecules that can lead to oxidative stress & contribute to aging, inflammation and disease like cancer and heart disease. Antioxidants fight against these harmful free radicals.

Scanned with CamScanner