NAME: ALINA SYED

BATCH: 401

28/40

very good

Question - 1

Question-b) Explain the role of heart in human body.

ROLE OF HEART IN HUMAN BODY

Human heart is a muscular organ that pumps the blood in the body.

The main role of heart is to circulate the blood in all body parts. For this purpose heart has four chambers:

1) Right Atrium
2) Right ventricle
3) Left Atrium
4) Left Ventricle

There is a presence of bicuspid and tricuspid valves between chambers of heart to prevent backflow of blood.

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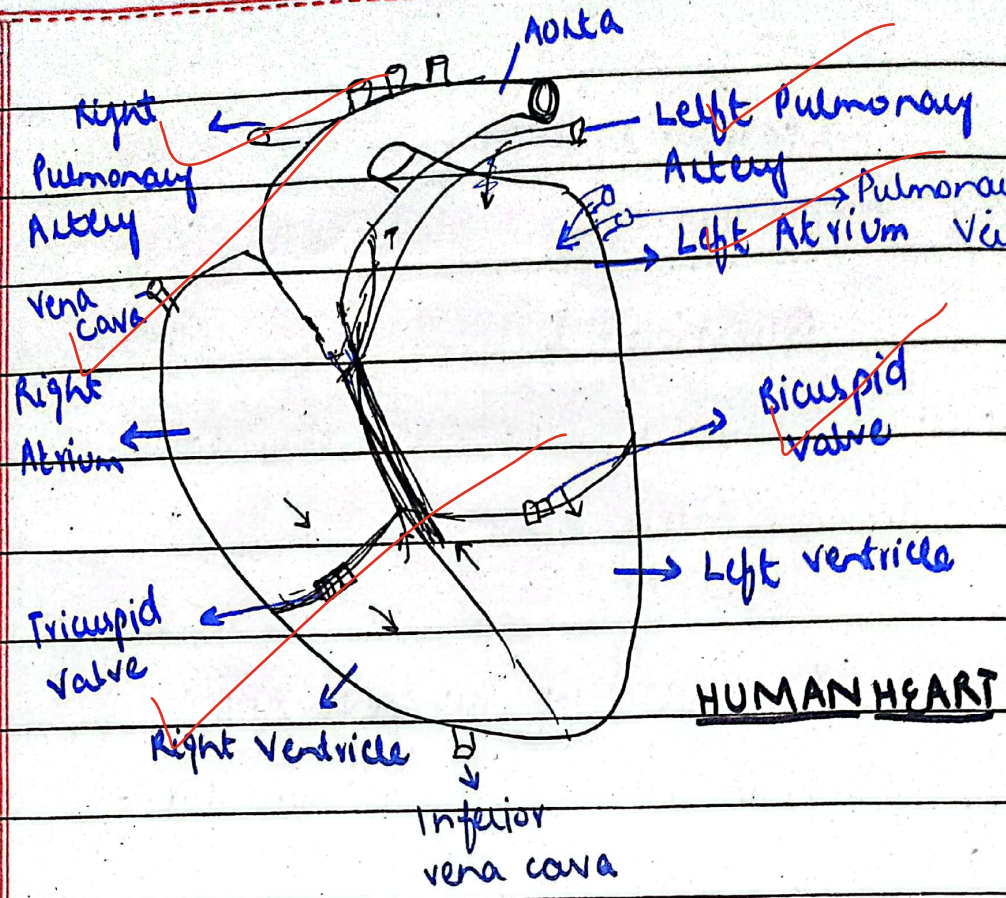


HUMAN HEART

Circulation of Blood in Human Body by Heart :-

1) Veins from all parts of body collect deoxygenated blood and pour into right atrium through superior and inferior vena cava.
2) Through the right atrium, blood is pumped into the ~~left~~ right ventricle through tricuspid valve.
3) Blood in the taken to lungs from right ventricle through

pulmonary artery for oxygenation.

4) Lungs oxygenate the blood and pour it into the left ventriatrium through pulmonary vein.

5) Through left atrium, blood is poured into left ventricle through bicuspid valve.

6) After that blood is poured into the aorta and through aorta to all parts of body via arteries and capillaries.

Each heart beat, leaves 70ml of blood from heart to body.

3.5

(d) Explain the structure and working of human eye?

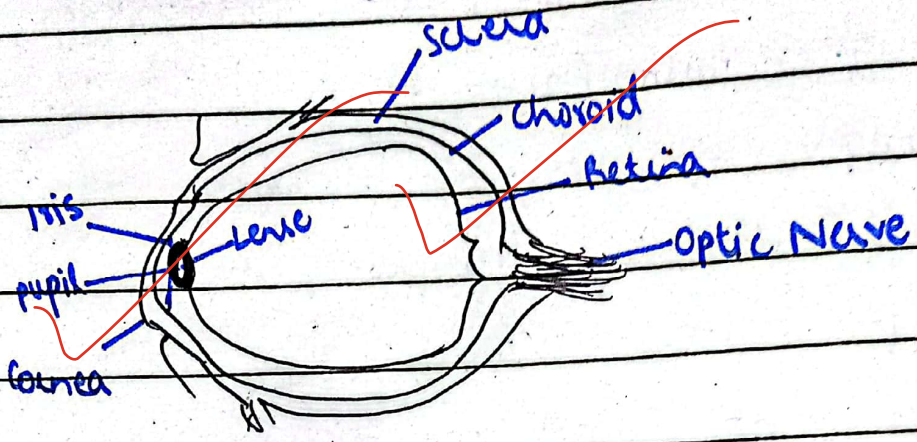
Structure and Function of Human Eyes

Human eye consists of following parts:

1) Cornea:-

It is an outermost transparent layer.

Cornea is responsible for bending of light or light waves.



2) Sclera :-

It is a white zone which provides protection to the internal content of eye.

3) Choroid :-

Reddish part of eye present beneath sclera.

4) Aqueous Humor :-

It is a fluid filled region present at anterior side of the eye between cornea and iris. It provides nourishment by providing nutrients and gases to eye.

تاریخ:

5) **Iris:-**

It is a pigmented muscle that controls the movement of eye.

6) **Pupil:-**

It is a small aperture from where light enters into the eye.

7) **Retina:-**

At retina, the conversion of light into an image takes place with the help of cells called rods and cones.

8) **Lens:-**

It is responsible focusing of light on retina.

9) **Optic Nerve:-**

It transmits the image towards brain.

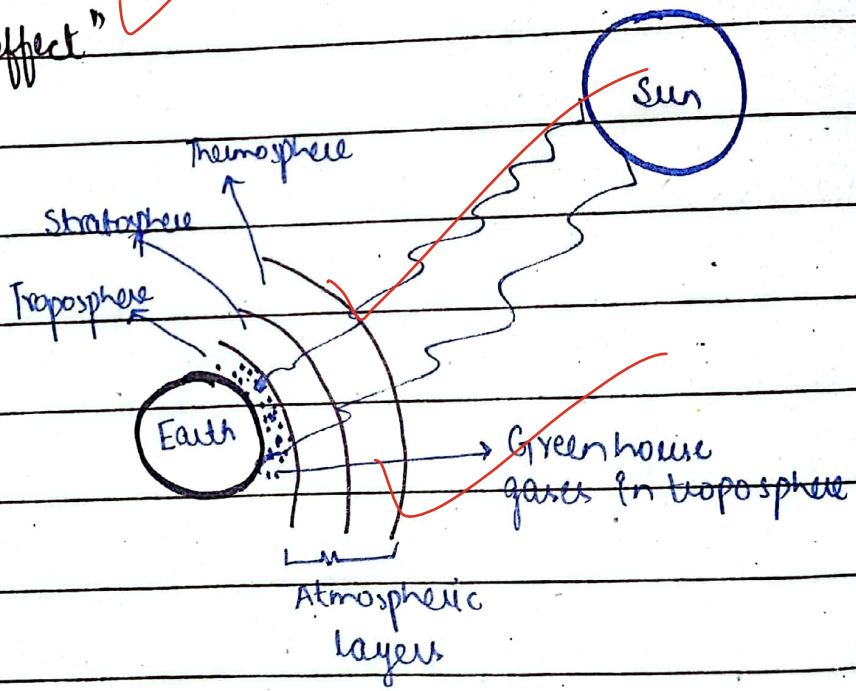
(4)

This is how light is recieved, focused, converted into image and is sent to brain with the help of eye.

c) Explain the enhanced GHE in the context of global warming?

ENHANCED GREEN HOUSE EFFECT

"The acceleration of natural green house effect due to increasing levels of green house gases is called enhaced green house effect"



Green house gases like water vapours, carbon dioxide, and methane are present in troposphere due to most gravity. These gases form a blanked and stops the heat the energy absorbed by

sun to escape the atmosphere of earth. This phenomenon give rise to increase in temperature leading to global warming.

Now, the addition of excess of these gases due to human activities accelerate this process causing enhanced green house effect. 2.5

(c) Explain the waste disposal techniques?

WASTE DISPOSAL TECHNIQUES

Following are some techniques of waste disposal:

1- Landfill
2- Incineration
3- Waste Compaction
4- Biogas generation
5- Vermicomposting

1- **Landfill:-**

In this process, the waste that

cannot be used or recycled is separated and spread as a thin layer in low-lying areas of city. A layer of soil is added after each layer of garbage.

2- Incineration:

Incineration is a process of controlled combustion of garbage to reduce it to incombustible matter such as ash and waste gas.

3- Waste Compaction:-

Waste material such as cans and plastics are compacted into blocks and sent for recycling.

4- Biogas Generation:-

Biodegradable waste such as food items, animal waste or organic industrial waste is degraded in

bio-degradation plants. Waste is converted into biogas with help of micobes and this biogas can be used as fuel.

3.5

5- **Vermicomposting:-**

Vermicomposting is the use of worms for the degradation of organic matter into nutrient-rich manure. Worms consume and digest the organic matter.

Question-2

a) What is water pollution? Explain its types and give measures.

WATER POLLUTION

"Any physical or chemical change in the quality of water which makes water unsuitable for desired use".

TYPES OF WATER POLLUTION

1) Physical Water Pollution:-

It refers to any physical change in the water quality due to industrial waste, municiple resources, oils spills and addition of solid waste.

2) Chemical Water Pollution:-

It refers to any change in the water quality by addition of any chemical in water body like carbon, nitrogen, phosphorous, acids, dyes etc.

3) Biological Water Pollution:-

It is addition or growth of any biological organism in the water, like bacteria, algae etc.

Measures to Tackle Water Pollution:

1) Agrochemicals should be used in reduced amounts.
2) Biofertilizers should be used.
3) Waste water treatment plants should be installed.
4) Solid waste management should be ensured.
5) Sustainable developmental goals should be implemented.
6) There should be environmental education awareness in society. (3)

(b) What is cell? Differentiate in between plant, animal and Microorgasmic cell?

CELL

"Cell is the basic structural and functional unit of life".

DIFFERENCESS BETWEEN ANIMAL, PLANT AND MICROORGANISMIC CELL:

These differences are on the basis of composition of cell membrane or cell wall and presence or absence of certain orgenelles.

Characteristic	Animal cell	Plant cell	Bacterial cell
1- Size	10-20um	10-100um	0.5-5 um
2- Type	Eukaryotic	Eukaryotic	Prokaryotic
3- Cell Wall	Lack cell wall	Rigid cell wall (Pectin, cellulose)	cell wall made of Peptido-glycan
4- Nucleus	Well defined nucleus	Well defined nucleus	Lack membrane-bounded nucleus
5- Vacoules	Small	Large	Large
6- Lysosome	Present	Present	Absent
7- Mitochondria	Present	Present	Absent

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	Characteristic	Animal cell	Plant cell	Bacterial cell
8-	Centrioles	Present	Not present	Not present
9-	Golgi Apparatus	Present	Present	Absent
10-	Plastids	Absent	Present	Absent
11-	Mode of Nutrition	Heterotrophs	Autotrophs	Both

(4)

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d) What is GIS? Give its environmental applications?

Geographic Information System

"GIS is a computer system which helps in storing and presenting the information in the form of maps (GIS mapping)".

تاریخ:

Environmental Applications of GIS:-

1) It helps in land use and resource management:

a) Monitoring land use change.

b) Conservation planning

c) Sustainable agriculture.

2) GIS also helps in disaster management and prediction:

a) Hazard identification

b) Emergency response

c) climate change modeling.

3) GIS helps in environmental monitoring and assessment:

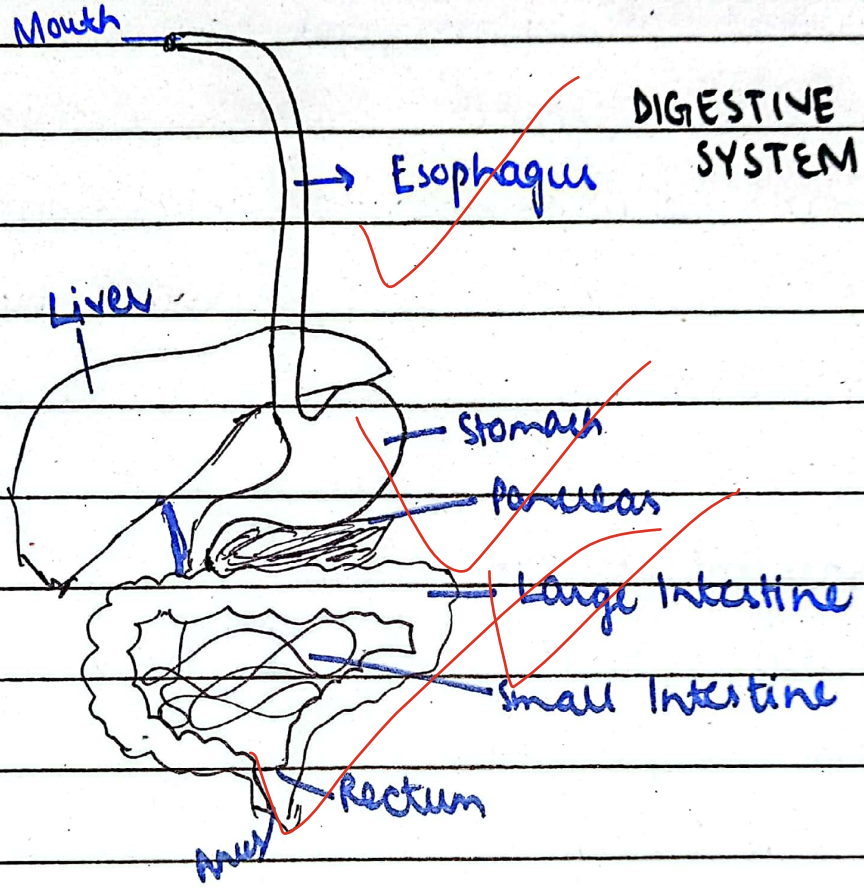
a) Pollution monitoring.

b) Environmental impact assessments. (EIAs).

c) Habital suitability modeling.

Q) How food digests in human body?

FOOD DIGESTION IN HUMAN BODY



The digestive system is comprised of many organs which digest food sequentially.

1) MOUTH (ORAL CAVITY):-

Teeth chew and break down food

in smaller pieces. Saliva contains amylase which digests carbohydrates partially.

2) Stomach:-

Crushed food from oral cavity is poured into stomach through esophagus. Stomach churns the food into chyme. Acid of stomach digests proteins by enzyme pepsin.

3) Small Intestine:-

Major digestion occurs here.

It has three parts:

1) Duodenum
2) Jejunum
3) Ileum

In duodenum, chemical digestion from enzymes occur.

Amylase → Carbohydrate → glucose

Lipase → fats → fatty acids + glycerol

Trypsin / chymotrypsin → proteins → amino acids

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~~Nucleic acids~~

Nucleases → Nucleic acids → Nucleotides.

Jejunum and Ileum absorb these nutrients in blood.

4- Large Intestine:-

Large intestine absorbs water, electrolytes, vitamins and convert undigested food into feces.

5- Rectum & Anus:-

Feces are stored in rectum and exteted through anus.

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