

GSA

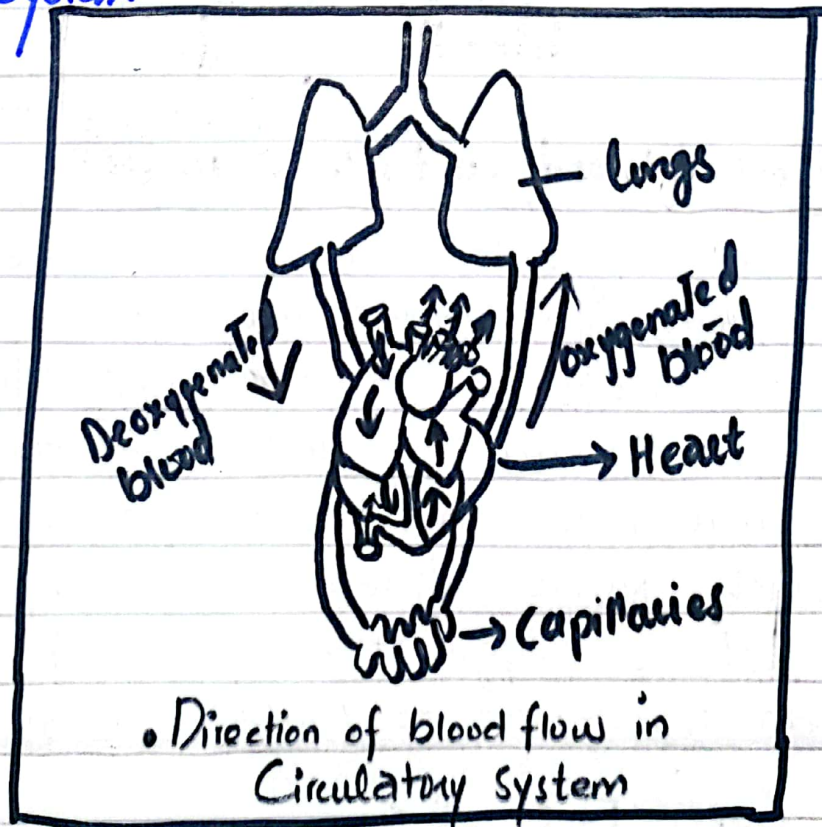
MOCK EXAM

PART-II (SECTION-A)

QNO2:

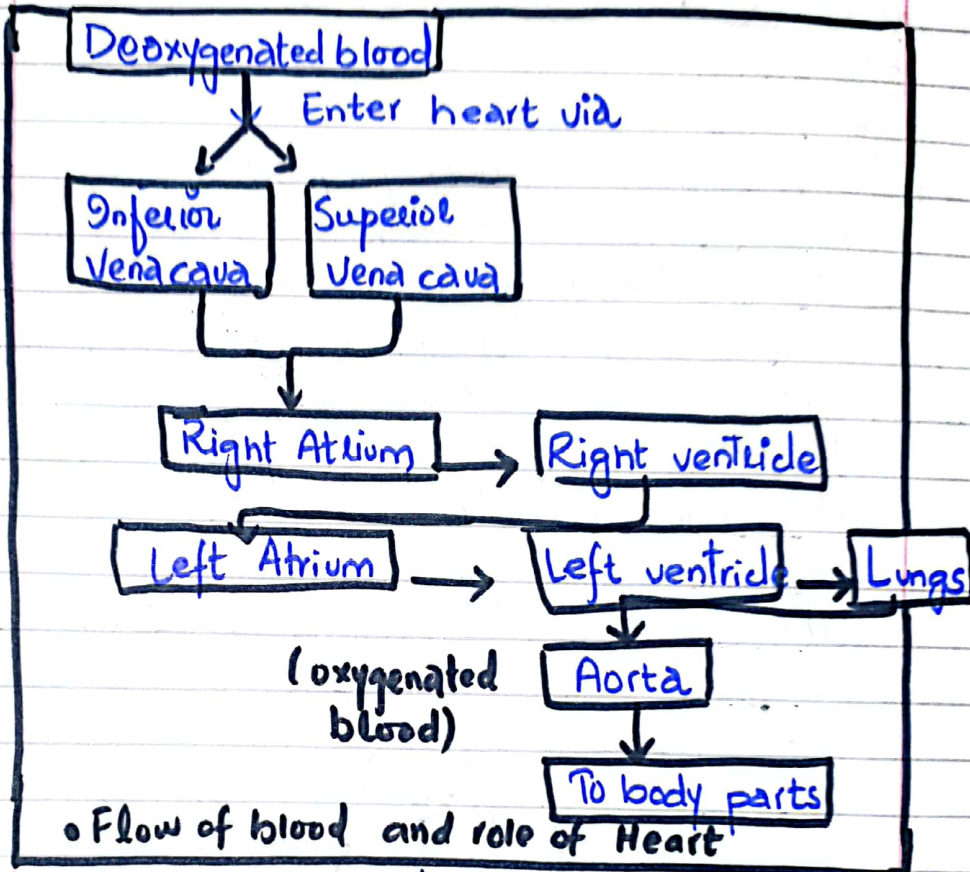
CIRCULATORY SYSTEM:

Circulatory system is the vital system of human body. which involve 2 major organs of human body for performing its functions; heart and lungs. In which deoxygenated blood is carried from body through Superior and inferior vena cava and sent to lungs. and then to whole parts of body through Aorta. The conversion of deoxygenated blood to oxygenated blood take place through a system termed as Circulatory System

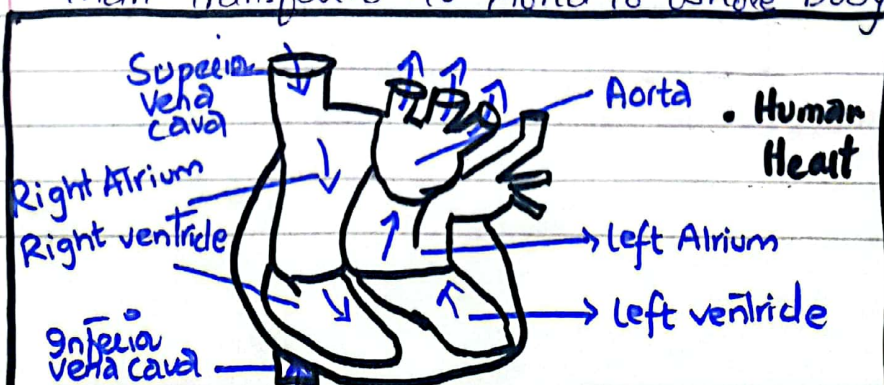


Role of human heart in Circulation of blood:

Human heart is responsible for filtration of blood. It makes the "blood oxygen rich" and transfer it into whole body.



• The deoxygenated blood enters the heart through inferior and superior vena cava, which is transferred to right atrium and then ventricle to left atrium and ventricle, here the blood goes to lungs, which further filterate the blood which is oxygenated by heart and than transferred to Aorta to whole body.



2(b):

CARBOHYDRATES:

Carbohydrates are biomolecules. They are made of sugar. The major elements which are present in carbohydrates are: Water, Carbon and Hydrogen.

• Sources of Carbohydrates:

i: Bread

ii: Wheat

iii: Sugar

iv: fruits

• Functions of Carbohydrates:

i: Energy production

ii: Glucose metabolism

iii: Muscle and body
strengthening

CLASSIFICATION OF CARBOHYDRATES:

i): Monosaccharides

ii): Disaccharides

iii): Polysaccharides

• Monosaccharides:

Are the carbohydrates made up of 1 sugar molecule.

• Glucose

• Disaccharides:

Are made up of more than 2 sugar molecules

• Sucrose • Lactose

• Polysaccharides:

Are made up of multiple sugar molecules

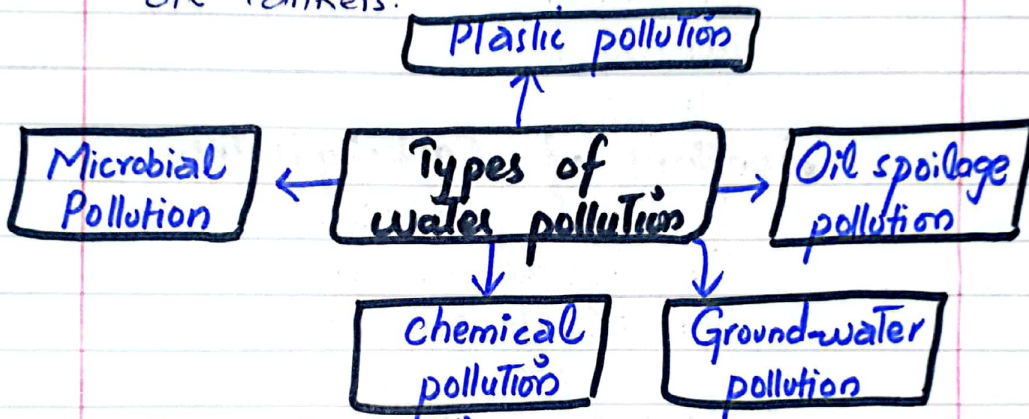
• fructose • Galactose



2(c)

Water Pollution:

Water pollution is Contamination of water. which is caused due to multiple pollutants: Sulphuric acid, carbon dioxide, phosphoric acid, oil spillage, alcohol etc. The sources of contamination are industrial-chemical wastes, acid rain, oil spillage from ships and leak oil tankers.



• Chemical pollution:-

- Chemical release from industries
- Open and unfiltered wastage of households and industries.
- Responsible for river and ocean pollutions
- Responsible for killing and effecting aquatic animals.

• Oil spillage pollutants:

- Major oil tankers responsible for leakage of oil in liver.

• Chemical pollution

- The chemical waste from industries are responsible for water pollution
- Major pollutants are sulphuric and phosphoric acids.



2(d): LIVER CHIEF CHEMIST OF BODY:

LIVER:-

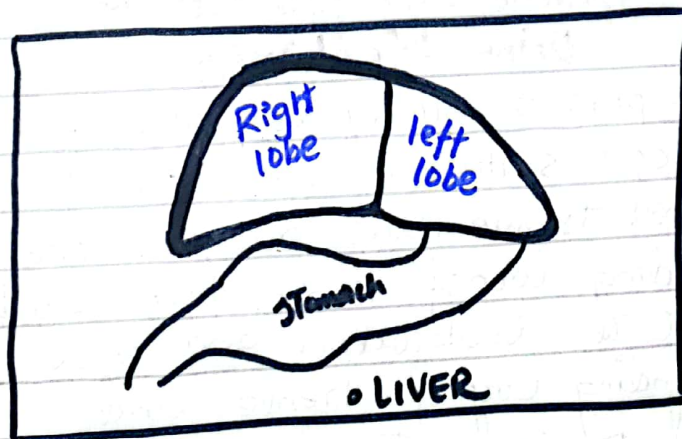
Liver is the largest solid organ of human body. It is responsible for the secretion of bile, which is a digestive juice, aids in fat digestion. It decompose red blood cells and filter toxins. which is why it is considered as a chief chemist.

Location:

It is located in upper abdomen and above stomach and below ribcage.

Functions which make it a chief chemist of body.

- 1: It is responsible for the filtration of toxins.
- 2: Release chemicals like 'Bile' which aids in fat digestion process.
- 3: It releases hormones responsible for growth.



Q No 3.

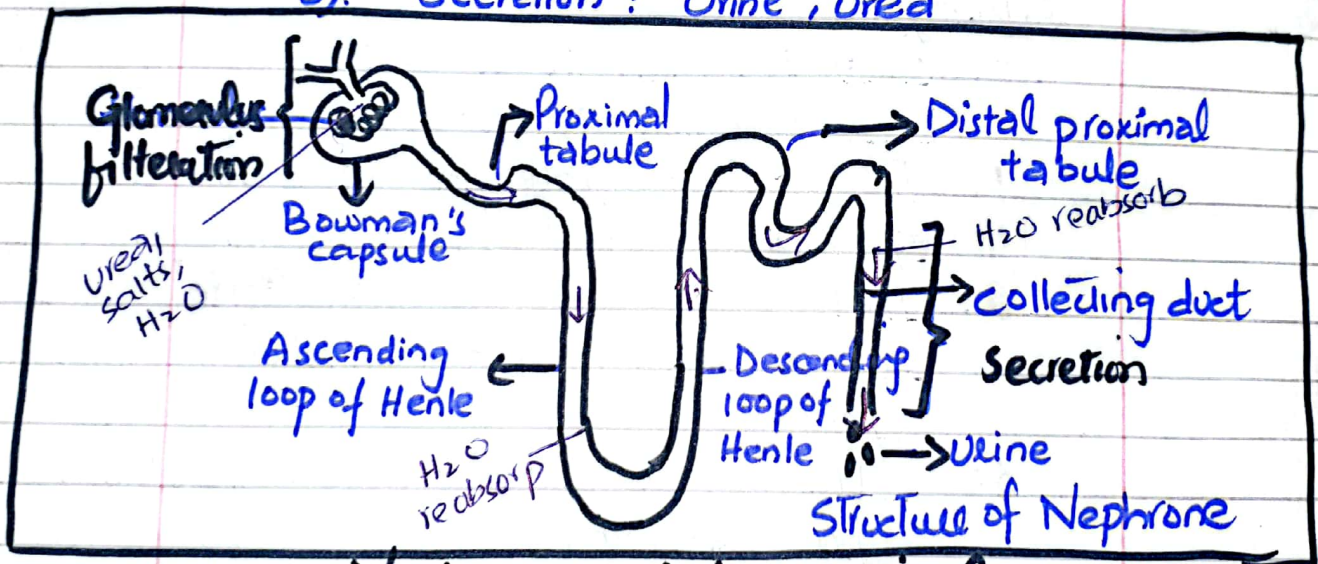
3(A):

ROLE OF KIDNEY IN URINE FORMATION:

Kidney is made of units are Nephrons which are responsible for filtration of blood and formation of urine.

Steps of Urine formation:

- 1): Glomerulus Filtration
- 2): Reabsorption: Tubular reabsorption, Loop of Henle
- 3): Secretion: Urine, urea



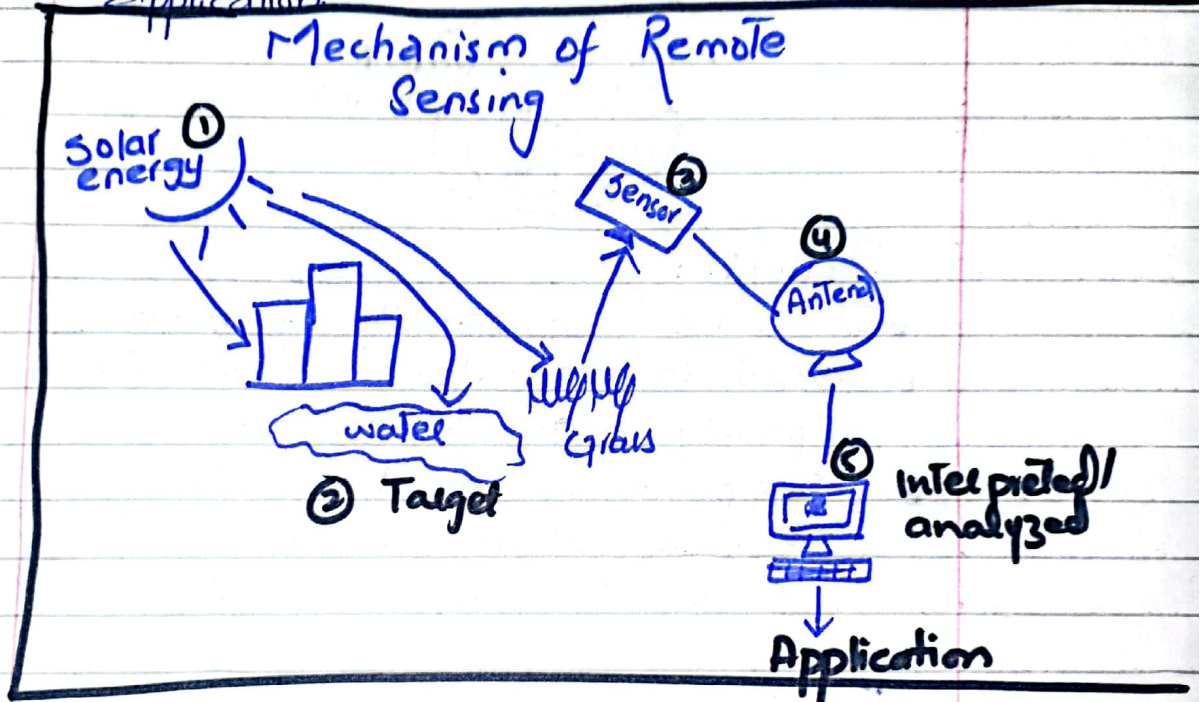
Nephron and formation of Urine Mechanism

The nephron's glomerulus portion filterate the excess salts and urea and via proximal tubule water reaches the assending loop of henle from which water is reabsorbed and via Descending loop of henle and Distal proximal tubule H₂O is again reabsorbed and reach collecting duct. Through which the process of secretion of urine occur.

3(b):

Remote Sensing:

Remote sensing is a widely used process in Global Information Sensing. Through which information of any target is collected is analyzed and used in application.



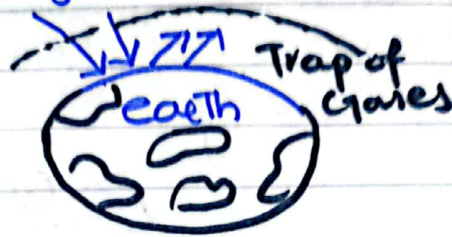
Role in Environmental Science:

- ①: It can help in Geographic mapping.
- ②: Analyzing weather patterns.
- ③: Gain information of target materials on earth.
- ④: It helps in 2D and 3D remote sensing of objects.

3(c):

Green House Effect:

Green house effect is the trap of gases in the earth surface which are responsible for the warming of earth surface.



Benefits:

- It is used in growth of plants.
- Used in agricultural farms for speedy growth of crops.
- Trap of heat helps in greater yield production of crops to fulfill food demands.

Global warming: Result of Green house effect.

- As due to green house effect the gases are trapped in earth's surface and responsible for global warming.

Global warming:

is the increase of earth's temperature. which results in:

- Melting of Glaciers.
- Floods
- Cyclones.

3(d):

Food Preservation:

Food preservation is the process through which food items are protected, their nutritional value is protected and prevented from contamination and spoilage of food, expand the longevity of food items.

Methods:

Old Method:

- Drying

Chemical Method:

- Sugaring
- Pickling
- Salting
- Alcohol

Physical Method:

- Pasteurization/Pasturization
- Fermentation
- Sterilization
- Packing
- Deoxidation

PART II SECTION-B

Q7(c):

IQ

- Intelligence Quotient
- It involves the reasoning, judgement analytical and mathematical abilities
- It is not emotional oriented

EQ

- Emotional Quotient
- Regulates emotions, control emotions
- It is only related to emotions.

Factors affecting IQ:

- Environmental factors
- Biochemical factors
 - Neurotransmitters
- Physical factors
 - Exercises.
- Biological factors
 - Mental disorders
- Psychological factors.