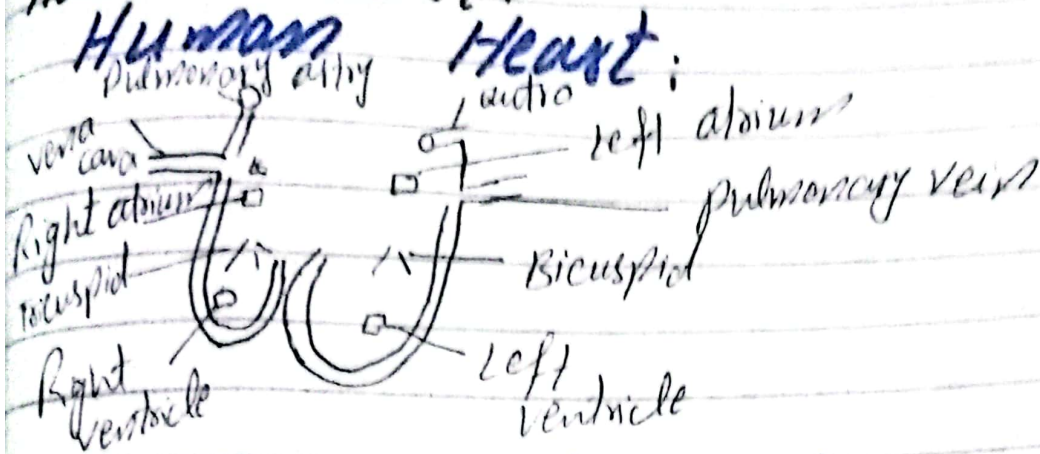


NAME: WAJHA SADAF

Test: GSA (2)

Q No 1: (a) Explain the working of human heart.



Function of Heart:

When deoxygenated blood enters through vena cava it passes through right atrium, tricuspid and then right ventricle. After right ventricle blood moves to pulmonary artery and then to lungs for oxygenation of blood. After oxygenation of blood, oxygenated blood passes through pulmonary vein and then after passing left atrium and left ventricle, the oxygenated blood through aorta moves to the whole body for the supply of oxygenated blood. The aortic arch is divided into three:

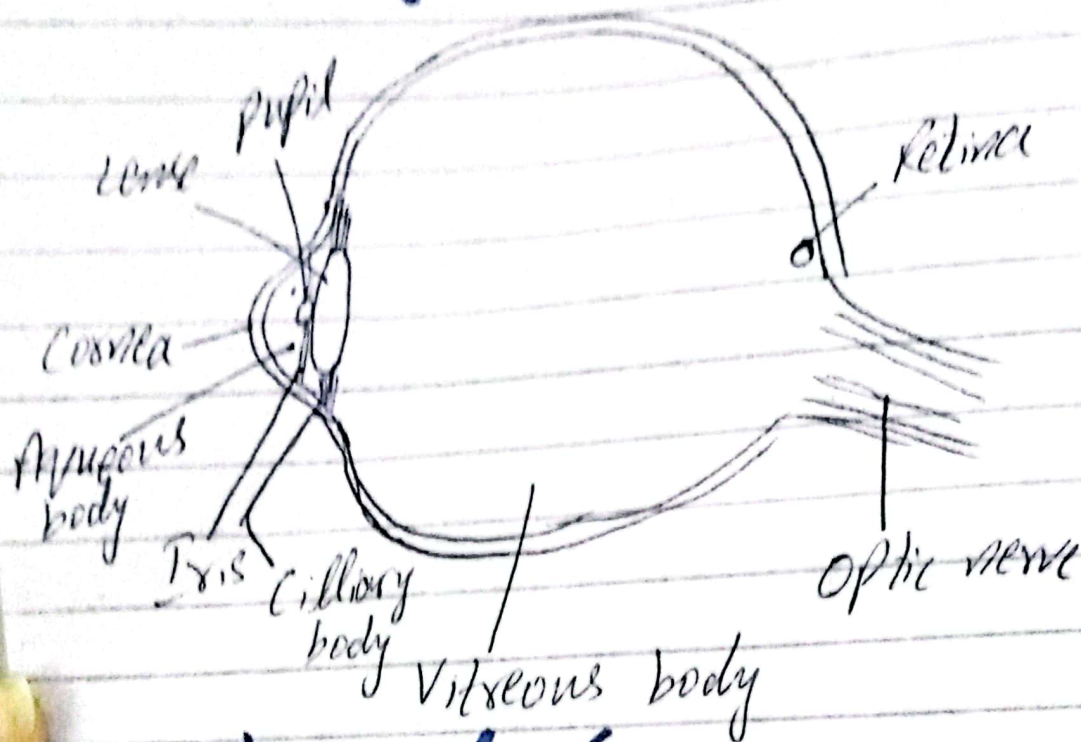
1. Head / Neck

2. Arms and shoulders

3. Lower body

(b) How do we see? Explain

Human Eye:



Function of Eye:

When light enters through cornea it forms direct image on retina. When light is placed on retina, two types of cells rods and cones become active. Rods help to form image in dim light while cones are responsible for the three primary colors red, green and blue. After that image passes through optic nerve to reach brain. Rods and cones change image to electric signals then these signals reach to brain through optic nerve. Brain translates nerve impulses and forms image. In this way we would be able to see.

c) Why biofuels are important? How they can be produced.

Biofuels:

Biofuels are alternative forms of petrol, diesel and gas. They are formed by fats animal fats, seeds, oily plants, sugar rich resources, animal dung and plants waste. There are three types of biofuels:

(i) Bio diesel

(ii) Bio gas

(iii) Bio ethanol

Importance of Biofuels:

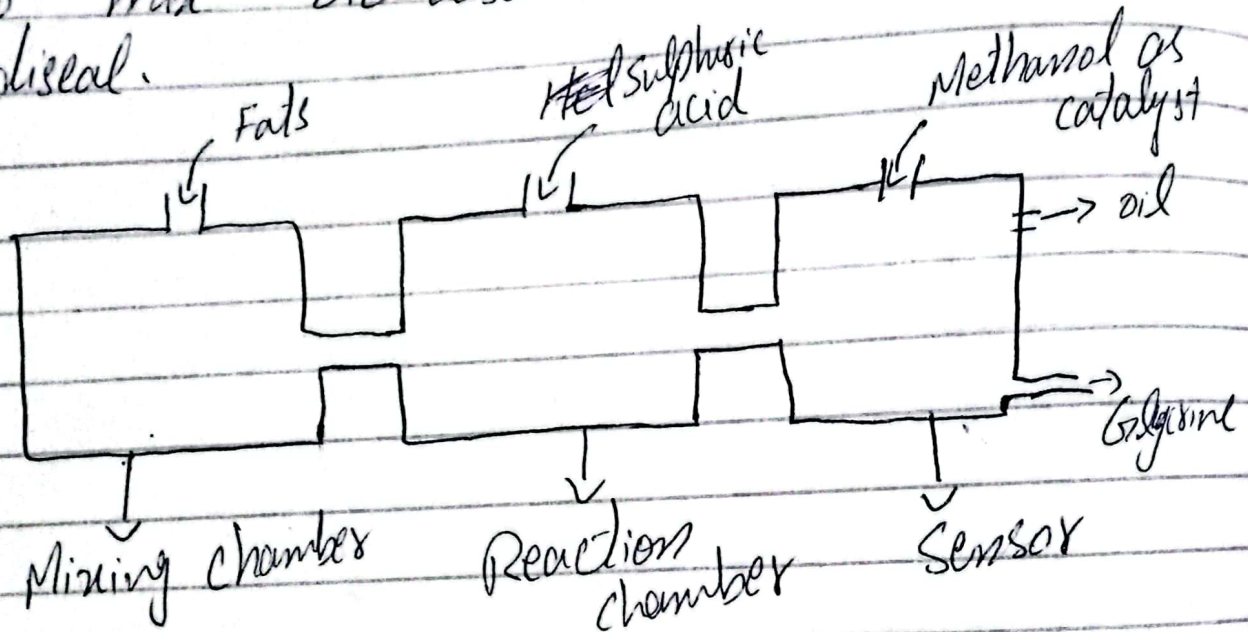
Biofuels are important because they are environmental friendly. They emit less carbon resultant environment would be free from carbon and green house gases. Similarly, by the usage of biofuels, there is less environmental pollution and would be helpful in countering global warming and climate change.

Moreover biofuels are less costly.

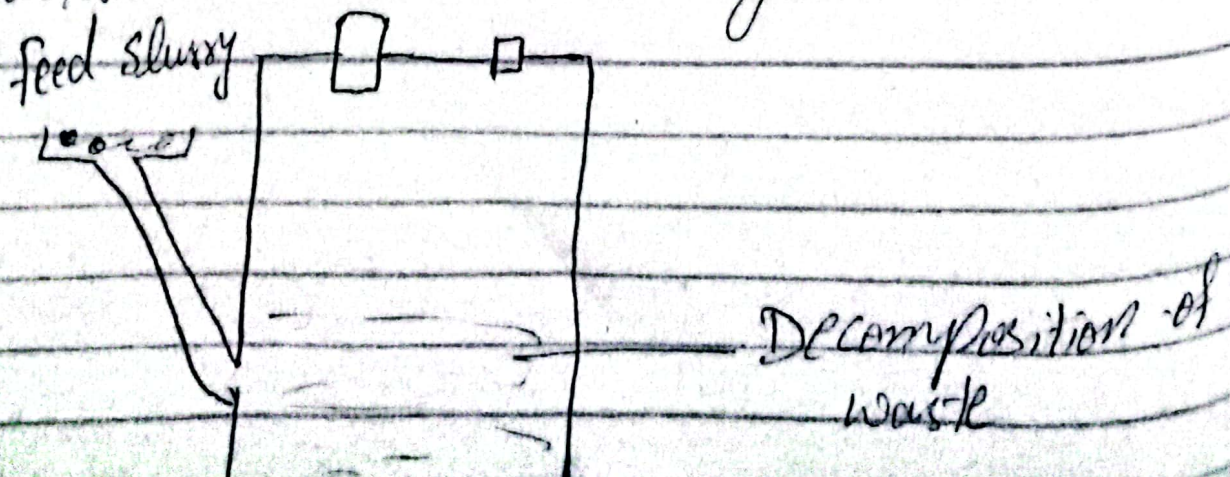
Production of Biofuels:

The production of bio-diesel contain huge chambers. The waste materials, animal fats and fatty seeds or plants pour in the mixing chamber. The mixing chamber is attached with reaction chamber through pipe. In the

reaction chamber sulphuric acid is added for extraction of fat oil from fat. The reaction chamber attached with another chamber ~~known~~ as "separator" in which sensors are placed and methanol as catalyst added in order to mix bio-diesel with standard diesel.



The biogas is prepared in digester (a huge chamber) in which waste and animal dung is placed, for some time. After that decomposition occurs and gas is produced which can be used as an alternative of methane gas.



(d) Differentiate between animal, plant and microorganism cell.

Animal cell

1:- Centriol is part of animal cell

2:- In animal cell, cell membrane is present

3:- Animal cells has no plastides

4:- Animal cell has small vacuole and scattered in cytoplasm

5:- In animal cell nucleus is in the centre

Plant cell

1:- In plant cell, centriol is not present

2:- In plant cell both cell membrane and cell wall existed

3:- plant cells has plastides: chloroplast, chromoplast and leucoplast

4:- plant cell has large vacuole and remain in the centre.

5:- In plant cell nucleus is not in the centre of cell.

Q No 2 (A): Why increasing level of SO_2 and NO is threat? Explain.

Sulphur Dioxide:

SO_2 is dangerous for environment. It create acid rain which is harmful for crops and soil. SO_2 is produced from industrial combustion and transportation. According to an estimate 69.2% SO_2 is produced from industrial combustion while 3.9% SO_2 is produced from transportation. It is also emitted by occurrence of natural disasters.

Oxides of Nitrogen:

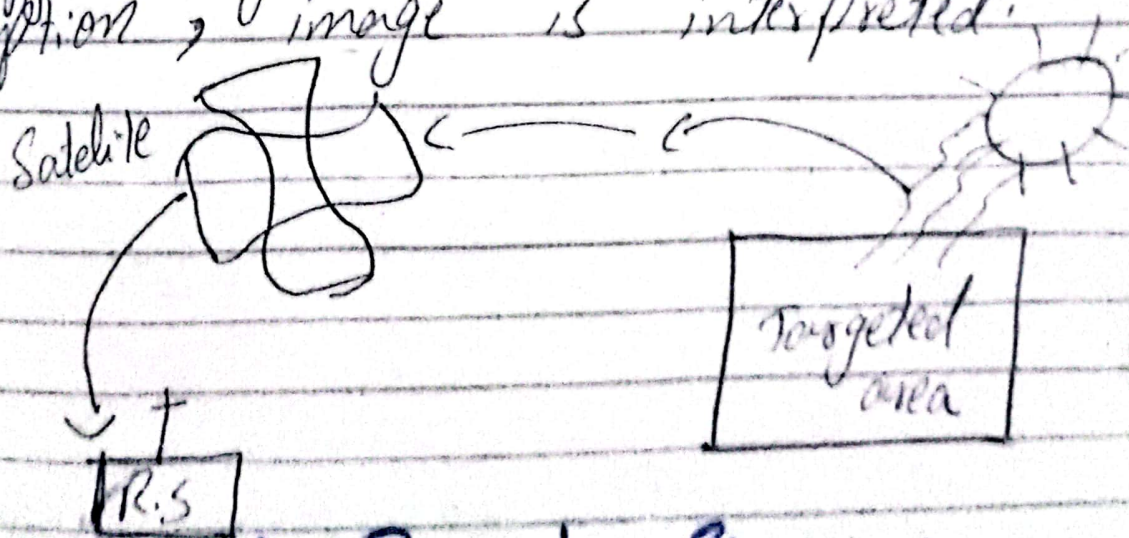
The oxides of nitrogen are threatening for atmosphere as creating atmospheric pollution. The oxides of nitrogen destroy fertility of land. Similarly the oxides of nitrogen, when combined with sulphur dioxide create acid rain which has negative impacts for crops, land and animals. The 35% nitrogen oxides produced from industrial combustion and 43% from transportation. Moreover oxides of nitrogen are produced from burning of fossil fuels.

b- Explain the significance of GIS and explain the enhanced GIS.

c- What is remote sensing? why it is important in environmental science?

Remote Sensing:

Remote sensing is a process to gather information from any targeted area by the usage of sensors. For the conduction of remote sensing process, source of energy (Sun) is necessary. The interaction of radiation with atmosphere and interaction of radiation with target area occurred. After that recording start by sensors from reflected energy. Through the transmission and reception, image is interpreted.



Usage of Remote Sensing:

1. It is used for monitoring.
2. It helps in identifying industrial location and environmental policy.
3. It is useful in disaster.

management

4:- It is also helpful in water management

5:- It is useful to find location of mountain glaciers.

d- Liver is the chief chemist of the body. Explain.

Liver:

Liver is a human organ. It is a metabolic organ. It contains many functions like synthesis of proteins and biochemicals necessary for digestion and growth. It contains bile pigment which do not have enzyme. The bile pigment has green color. The absence of bile pigment create jaundice. It's weight is 1.5 kg, having reddish brown color. Liver act as both the organ and gland in human body.