

12-25

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CSS' 26

GSA-I

Test #1

30/10

Question No-3

Part(a)

HEPATITIS

Definition;

Hepatitis is the inflammation of liver, a disease that is either genetically transmitted or sometimes auto-immuned. If left unchecked it can lead to severe consequences like death.

There are various types of hepatitis. It may be hepatitis a, b, c, d, e depending upon the nature of viruses.

Symptoms

Inflammation of liver

Abdominal pain

Nausea

Vomiting

Pale eyes and pale skin

Fatigue

Diarrhea

Loss of appetite

Causes;

- Intake of drugs
- Excessive use of alcohol
- Genetical transmission
- Easily transmitted viral disease

Preventive Measures

- Restricting excessive use of drugs
- Avoiding intake of alcohol
- Maintaining healthy habits for healthy liver
- Frequent health check-ups
- Avoiding sharing food or utensils with hepatitis patient.
- Required treatment at early stages.

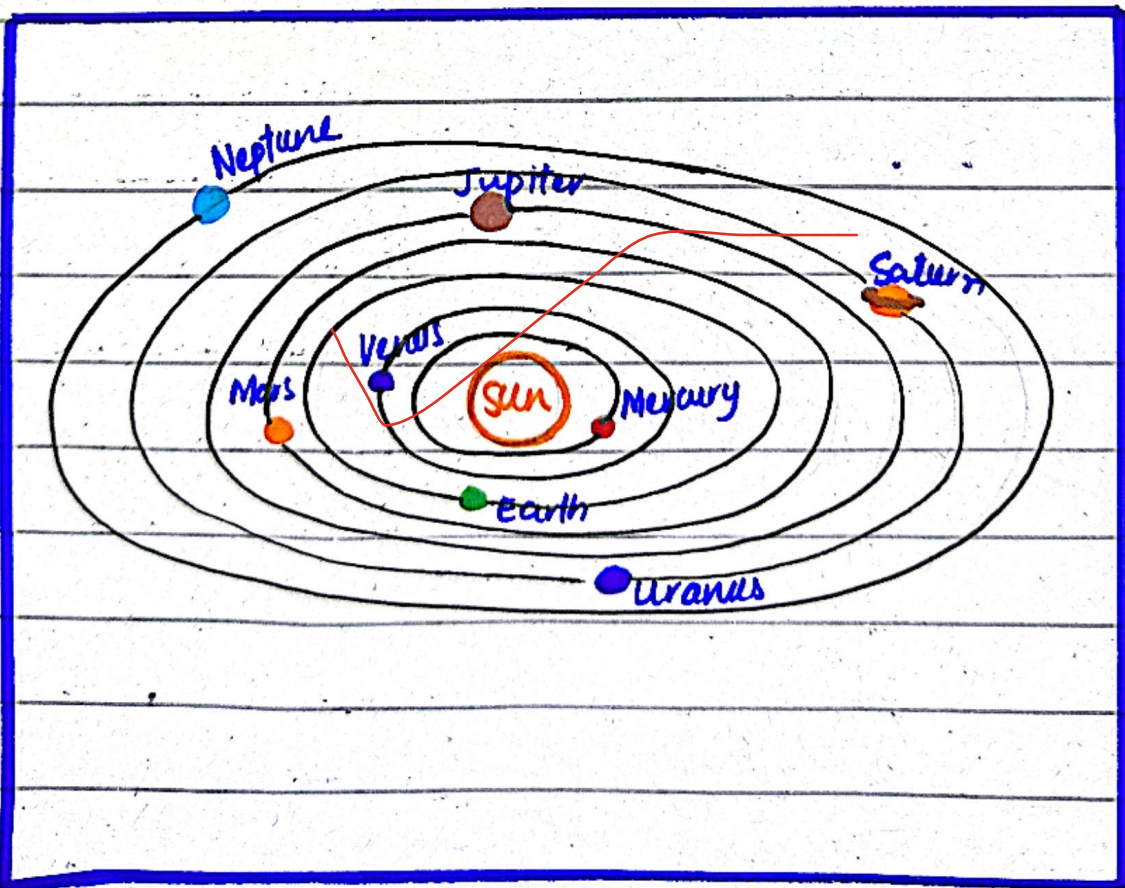
Part (b)

SOLAR SYSTEM

Introduction;

The arrangement of planets around sun that revolve in their specific elliptical orbits around sun forms a solar system.

Pictorial Representation;



Our solar system;

The solar system of our earth is millions of year old that is believed to be developed after big bang.

Evolution of solar system;

There are thousands and millions of solar systems in the entire universe. Scientist believe that solar systems are developed as a result of huge solar or astronomical bang or either after destruction of a some giant star. The big bang theory explains the evolution of our solar system.

Secification of solar system;

The specifications of the solar system in which our earth revolves are as follows;

↳ Sun being the largest star is the center of gravity of our solar system.

↳ There are 8 planets in our solar system in order as;

- (i) Mercury
- (ii) Venus
- (iii) Earth
- (iv) Mars
- (v) Jupiter
- (vi) Saturn
- (vi) Uranus
- (vii) Neptune

↳ Out of these eight planets; mercury is hottest one while neptune is the coldest one.

↳ Every planet in the solar system has its own natural satellites i.e moon.

↳ The total mass of the Sun is 2×10^{30} tons.

↳ The temperature of inner part of sun is 2 million $^{\circ}\text{C}$ while the temperature at the surface of sun is 6000°C .

↳ All the planets in the solar system are at a distance of millions of light years.

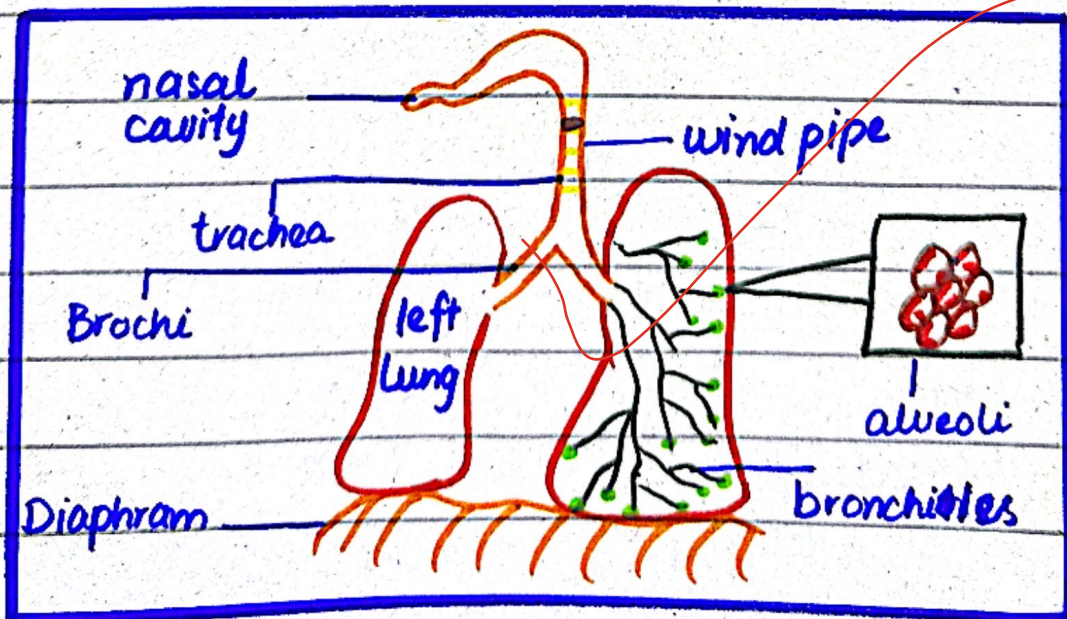
Part (c)

Gaseous Exchange in Human Body

1. Respiration;

The gaseous exchange in human body is known as respiration. It is a process in which lungs absorb oxygen from air and exhale carbondioxide into the atmosphere

2. Diagram;



3. Gaseous exchange;

The gaseous exchange in human body is carried out by two processes;

- (i) Inhalation
- (ii) Exhalation

4. Inhalation:

The process of breathing in air is known as inhalation.

- The air is inhaled through nasal cavity.
- The inhaled air is carried out to the pair of lungs through wind pipe or trachea.
- The size of right lung is slightly greater than left lung.
- Inside lungs there is division of bronchitis into many bronchioles.
- The bronchioles have tiny structures known as alveoli that filters the oxygen from the inhaled air.
- Below lungs there is diaphragm that expands during inhalation.

5. Exhalation;

The process of breathing out unwanted elements of air is known as exhalation.

- After inhalation lungs filter the oxygen from air.
- While the rest of unwanted elements mainly carbon dioxide is filtered from blood via lungs and heart.
- And the efficient pair of lungs in human body releases this carbon dioxide through lungs via mouth.
- This is how gaseous exchange is carried out in human body.

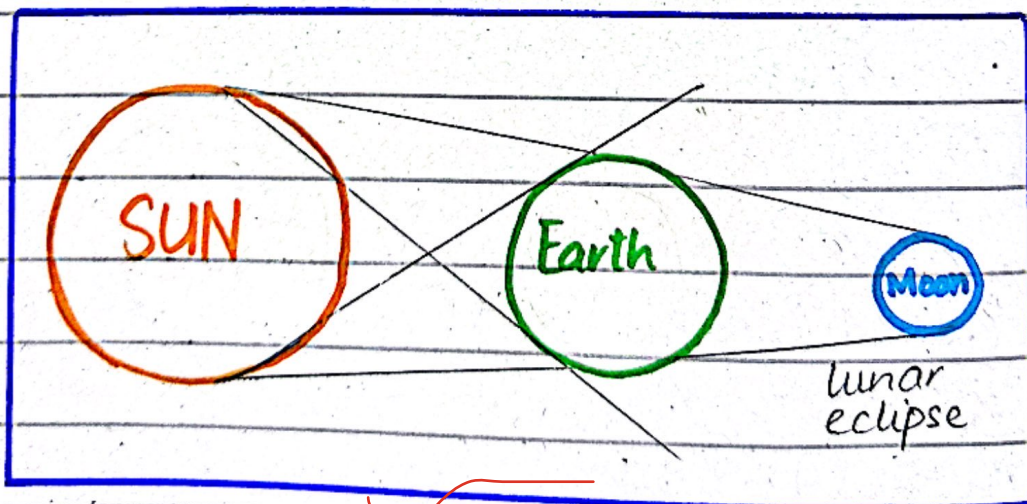
Part(d)

Lunar Eclipse.

Definition;

A rare astronomical arrangement in which sun, earth and moon aligns in such a way that earth sandwiches between sun and moon and the shadow of earth on moon makes it appear to be dark.

Figure;



Types of lunar eclipse;

There are two types of lunar eclipse;

(a) Partial lunar eclipse;

The lunar eclipse in which shadow of earth partially covers moon is called partial lunar eclipse.

(b) Complete lunar eclipse;

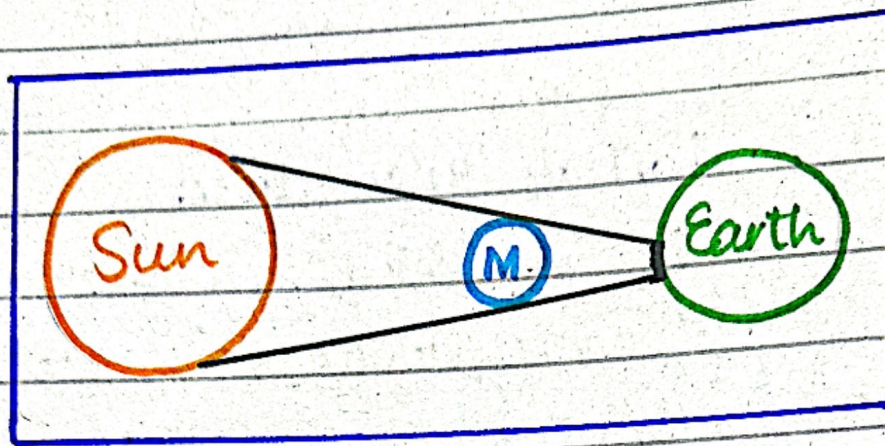
The eclipse in which the shadow of earth completely covers the moon appearing it to be dark is known as complete lunar eclipse.

Solar Eclipse

Definition;

A rare astronomical event in which earth, sun and moon aligns in such a way that moon sandwiches between earth and sun and the shadow of moon on earth makes the sun appear to be dark from earth.

Figure;



Types of solar eclipse;

There are two types

of solar eclipse;

(i) Partial solar eclipse;

The solar eclipse in which shadow of moon partially shows sun dark is called partial solar eclipse.

(ii) Complete solar eclipse;

The solar eclipse in which shadow of moon completely covers the sun, disappearing sunlight from earth blocking its way is called complete solar eclipse.

QNo: 01

Part (a)

Circulatory System

1. Definition;

The network of arteries, veins and capillaries extending from heart to all parts of body that filters blood and carry it to all parts of body is known as circulatory system.

2. Components of circulatory system;

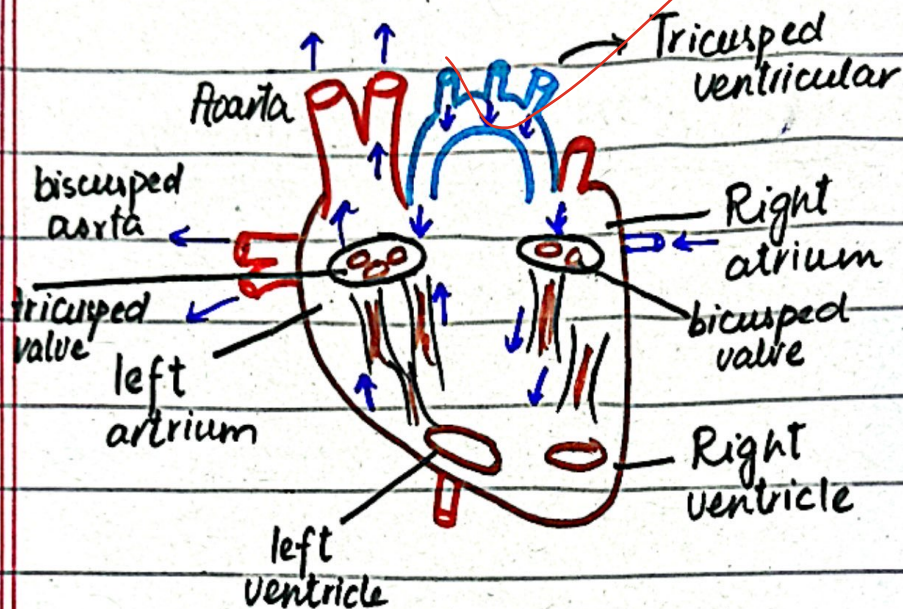
The components of circulatory system are;

- heart
- arteries
- veins
- capillaries

3. Circulatory process;

- In a nutshell, veins carry deoxygenated blood to heart.
- Heart filters the blood.
- Arteries carry the filtered oxygenated blood from heart to all parts of body.

Human Heart



Human heart;

Human heart is the main component of circulatory system that manages the circulation and filtration of blood.

Deconstruction of human heart;

The anatomy of human heart. it reveals that it has four major sections;

- left atrium
- Right atrium
- left ventricle
- Right ventricle

Tricuspid ventricular;

A U-shaped vein that carries all the deoxygenated blood from the body and drops it into the human heart.

Heart filters the blood turning it from deoxygenated blood to oxygenated blood.

Bicuspid aorta:

Aorta is the main artery that carry oxygenated and filtered blood from the heart and distributes the filtered blood to all parts of body via capillaries.

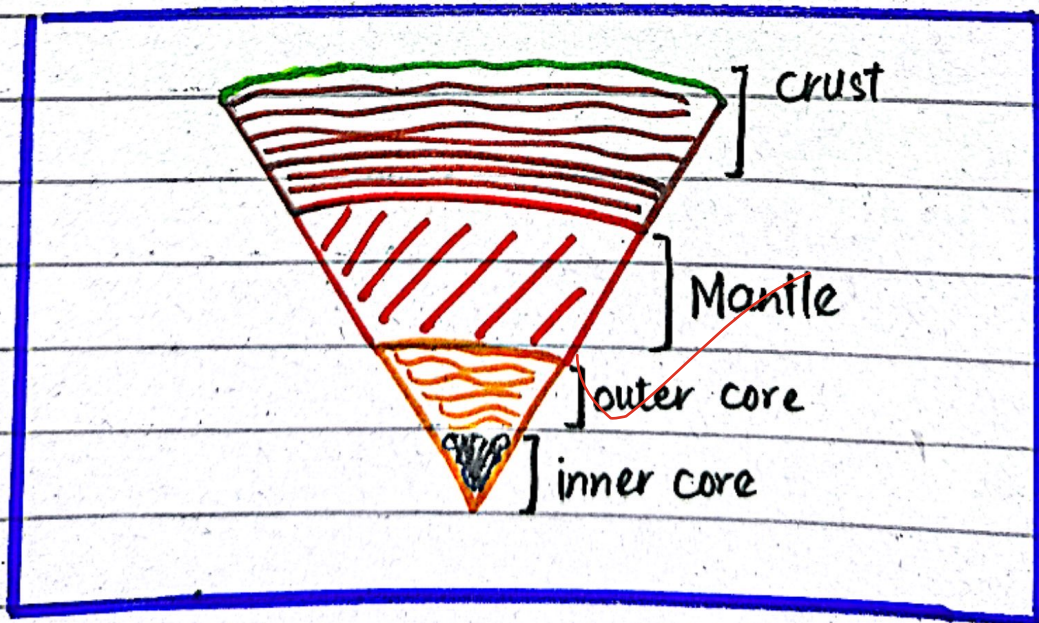
Part (b)

Internal Structure of Earth

1. Introduction;

Earth is a complex but well-organized combination of rocks, sediments, magma, crust, oceans and land.

2. Figure;



2. Distribution of earth;

The internal structure of earth is divided into four main part;

- (i) Crust
- (ii) Mantle
- (iii) Outer core
- (iv) Inner core

3. Crust;

The crust is the top most layer of earth that is mainly used for habitation and agriculture.

4. Mantle;

Mantle is the second layer after crust. It consist of all the critical minerals, sedimentary rocks and fossil fuels.

5. Outer core;

Outer core is the third layer after mantle. It contains minerals but in melted form known as magma due to extreme temperature.

6. Inner core;

Inner core has solidified and rocky minerals due to extreme pressure.

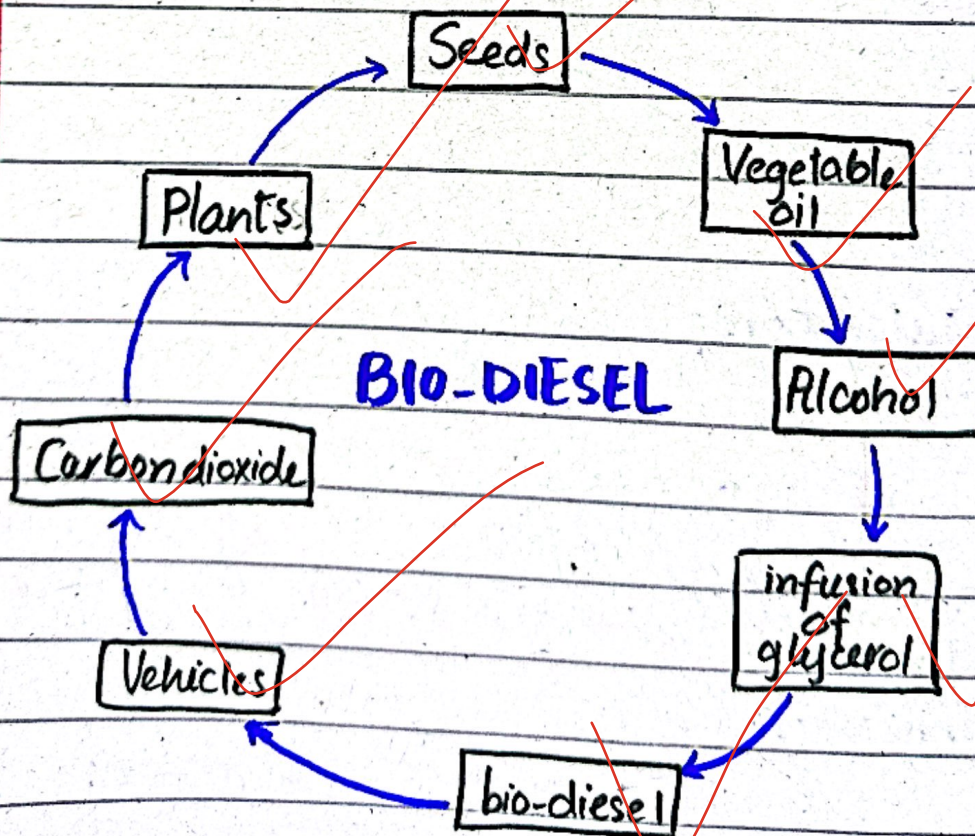
Part (c)

Production of bio-diesel

Definition,

The organic process of producing diesel from organic matters like grese, animal fat, vegetable oil to be used for commercial purposes.

Cyclic production of bio-diesel;



(a) Plants;

Plants are the primary contributors in the production of bio-diesel. Plants provide seeds.

(b) Seeds;

Multiple types of seeds are extracted from plants.

(c) Animal fat and vegetable oil;

Oil is excreted from animal fat and seeds.

(d) Infusion of alcohol;

The oil is heated at minimum temperature and alcohol is added to it.

(e) Addition of glycerol;

After alcohol, multiple glycerols are added to the mixture of oil and alcohol.

(f) bio-diesel:

The chemical process and addition to oil turns it into bio-diesel that is used for commercial purposes.

Bio-Gas

The gaseous production through organic matter that is used for domestic and commercial purposes is known as bio-gas.

production of bio-gas;

Bio-gas is obtained from organic matter like dead and decayed plants and animals, animal dung, etc.

→ The organic waste is compressed under extreme pressure and temperature in result to that gas is produced.

→ The gas collected in chambers than collected and used for commercial purposes.

Part (d)

Phenomenon of Earthquake

1. What is earthquake;

An earthquake is a natural disaster that disrupts the life activity on earth destroying the infrastructure.

2. Causes of earthquake;

There are multiple causes that can lead to earthquake;

- (i) Volcanic eruption
- (ii) Movement of tectonic plates
- (iii) Pressure of magma

3. Phenomenon of earthquake;

The earthquake is a natural disaster and can be occurred as;

(a) Volcanic eruption:

During any volcanic eruption, the land nearby the volcano can tremble leading to earthquakes in nearby areas.

(b) Shifting of tectonic plates;

During the natural shifting of tectonic plates the outer surface of earth trembles leading to extreme or minimal earthquakes that can be life threatening.

(c) Pressure of magma:

The inner crust of earth contains liquid hot magma. The magma exerts pressure and strikes the inner surface of earth. Due to this pressure, an earthquake is felt above the surface of earth.

