

IB # 078

LMS ID # 38975

PART-II

Section # 01

Question No # 02)

a)

Artificial intelligence (AI):-

"Artificial intelligence is the term of information technology (IT) which deals with the electronic appliances to work more efficiently in minimum time."

It is effectively used in hospitals, colleges, business, and architecture.

Potential benefits of AI in healthcare:

The various potential benefits of Artificial intelligence (AI) in health care are following:

- Diagnosis of diseases
- Detection of chronic diseases
- Prevention of carcinogenic problems
- prescription and pre-emptive solutions

Challenges of AI in healthcare:

There are various challenges in implementing AI in healthcare are:

- Reduce the need of faculty members of hospitals.
- Diagnosis through AI desires a professional doctors.
- Unaffordable for poor.

Impact of AI on patient care and medical diagnosis:-

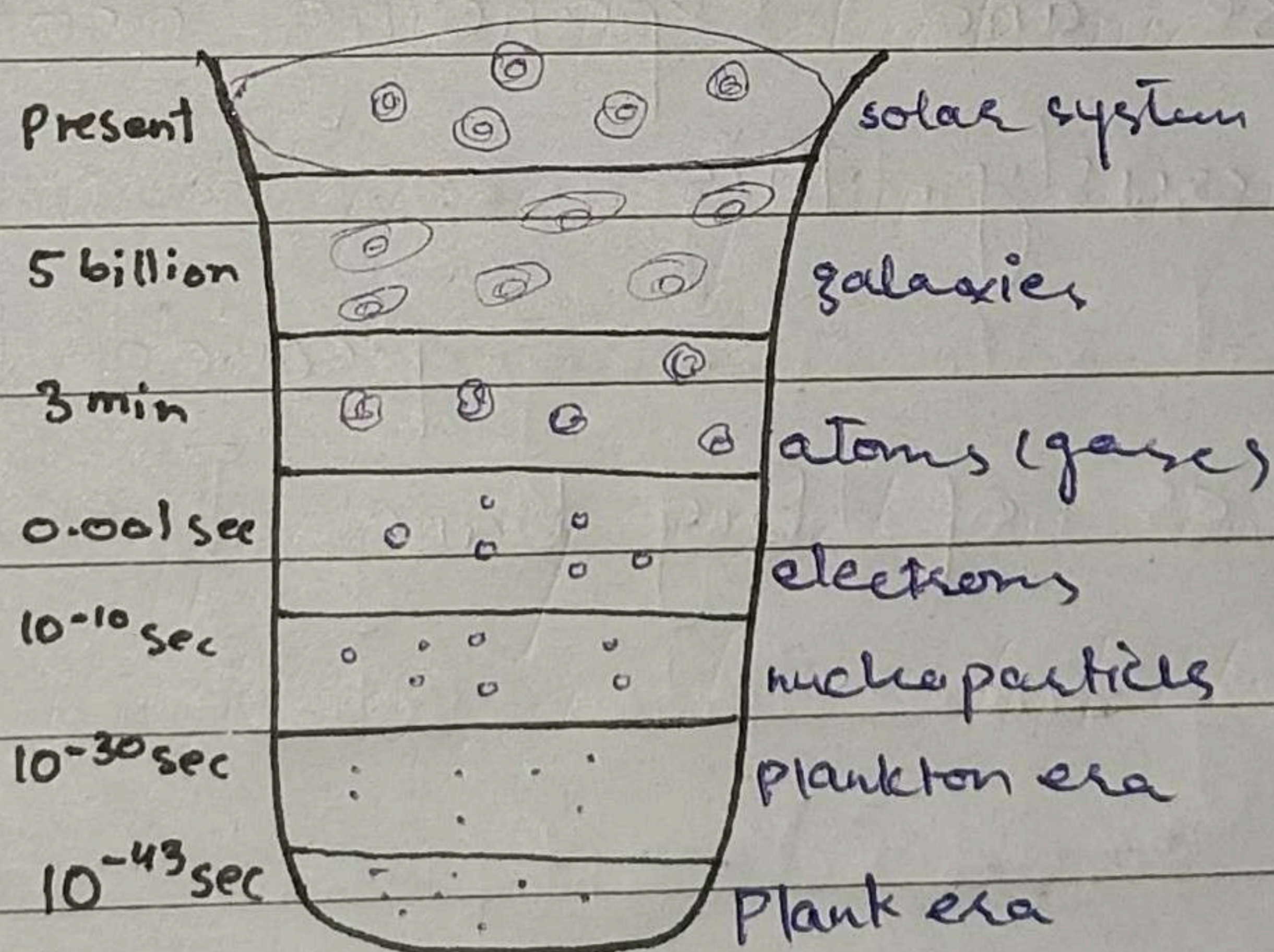
Artificial intelligence (AI) plays a great role in good patient care and medical diagnosis by providing immediate solution of lethal diseases. Artificial intelligence save time and protect the important data of patients.

- a b -

Big Bang Theory:

Big Bang Theory describes the origin and evolution of universe. The origin of Earth starts **13.8 billion years ago**. The origin of atoms, particles and other galaxies occur with the respect of time.

Chronological Time of Big Bang Theory:-



Key evidences supporting Theory:

The evidences supporting Big Bang Theory are

- Red Gaint
- Electromagnetic Radiations.

→ First, According to this theory Universe is expanding and moving apart away from the center. This is supporting by the expanding galaxies in our solar system and **Red Giant** shows galaxies are moving away from the center.

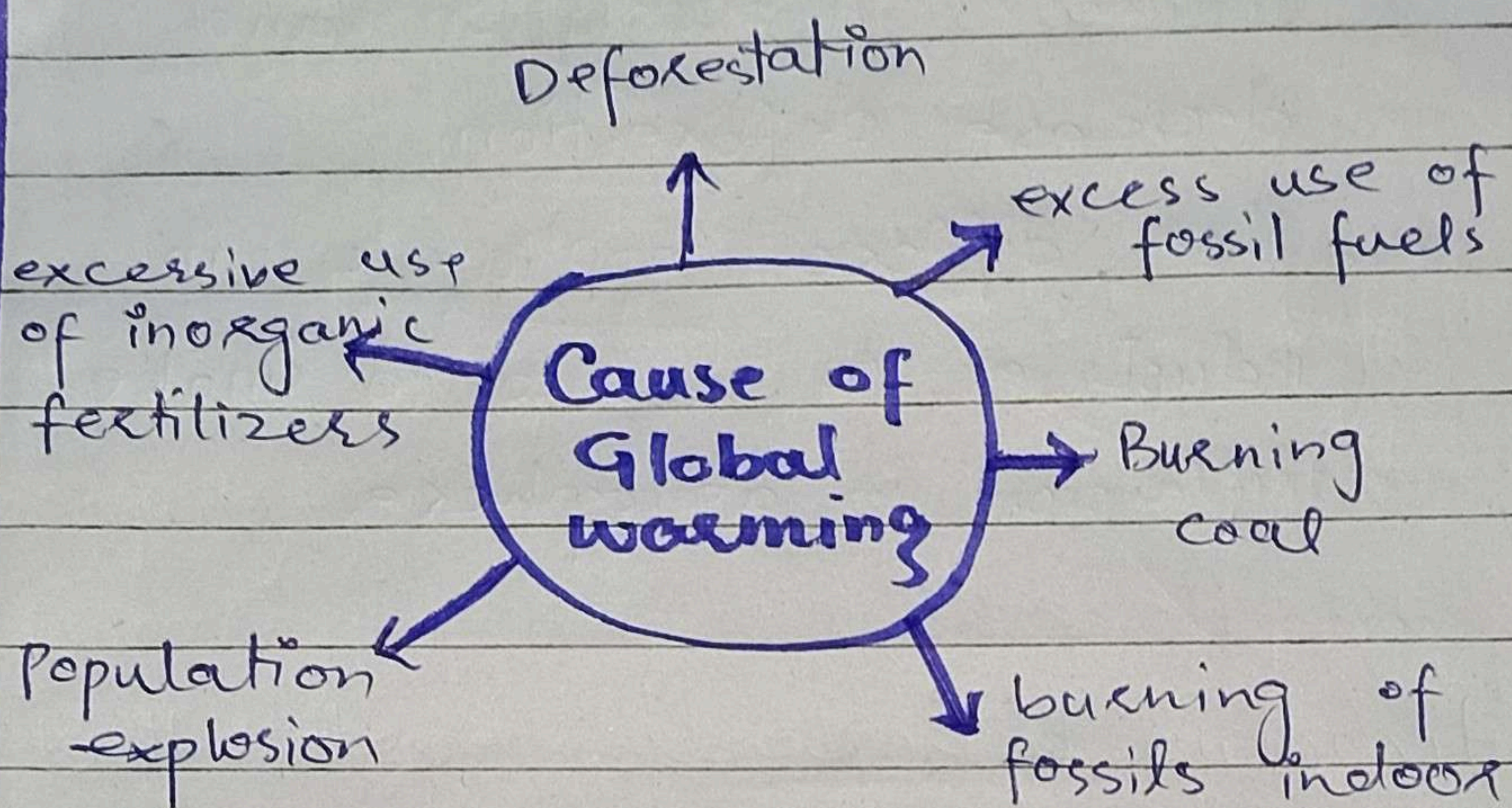
→ Secondly, during the study of radioactive waves, William Seldon and his colleagues find out the radiation are released from the objects present in Universe and expanding around continuously. This **expansion of electromagnetic radiations** provide the evidences of Big Bang Theory.

~~• of C) B~~

Global Warming:-

Global Warming is the phenomenon which occur in atmosphere to warm and rise the temperature due to increasing Green House Gases. Global warming is due to the attraction

of radiations with the gases present in atmosphere.



Effects of Global Warming:-

- Increase in extreme weather events
- Rise in sea level
- Increase in Health Crisis
- Air pollution
- loss of infrastructure and tends to increase in casualties.

Remedies to reduce global Warming :-

Reduce the excessive use of fossil fuels.

- Transformation from non-renewable energy to renewable energy
- Increase Afforestation and decrease deforestation.
- Use different appliance in industries to reduce smoke infusion in atmosphere.

— d d —

Disaster Management Plan

Disaster Management Plan are the initiative and strategies take by the government to reduce or prevent from the disastrous and harmful situations.

Importance of Preparedness, response and recovery for implementing in natural disasters

The disaster Management Plan includes the various preparedness for the prevention from the natural disasters follow as :

Declare risk zones

Declare emergency situation

... etc.

Disaster prevention Sirens
Provide safe infrastructure
to affected peoples.

Examples :

NDMA (National disaster management
authority)

IRSA (Indus river strategic
authority)

Both these management authorities
work well in recent flood situations
in various parts of country.

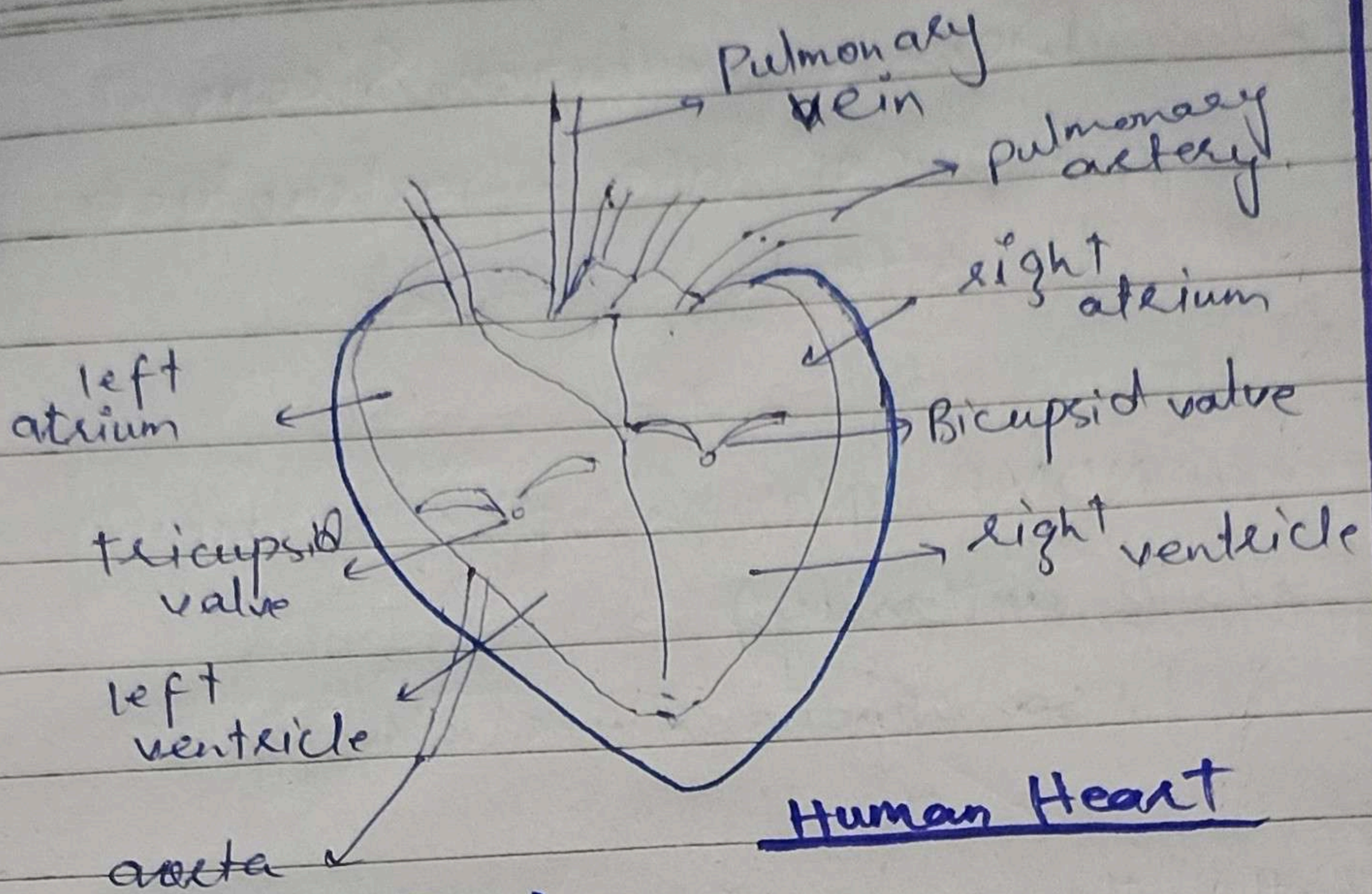
Question No # 03

~~Q. 3~~

Human Heart :

Human Heart is a muscular
organ in human body. Its size is
about to close fist. Human Heart
pumps blood and regulate it through
out the whole body.

It is a closed and double circu-
latory system.



Human Heart

Cardiac Cycle:-

Cardiac cycle is the cycle of blood circulation from the body to left atrium with no oxygen then this blood move towards lungs where it is oxygenated and comes into right atrium and ventricle. The oxygenated blood moves toward body through arteries. This is also called Double Circulation blood system.

This whole process is one cardiac cycle.

Heart regulate Blood pressure:-

The blood with higher oxygen move away from heart towards body passed through bicuspid valve sounds

"dub" called diastole pressure about 120. when this blood move through the capillaries body receive oxygen and this returned back toward heart and enter into left atrium. when move through tricuspid valve sound "lub" called systole pressure. The continuous circulating blood maintain its pressure.

Normal bp = 120/80.

~~• dbp •~~

Biofuels:-

Biofuels are the alternative of fossil fuels which are generated from the plants and other micro-organisms. Biofuels are environment friendly.

Examples:-

Ethanol, ether,

How they are produced?

Biofuels are produced from the biomass, which is small growing plants, waste materials, agricultural wastes etc.

The biomass is going under the process of fermentation with the help of various enzymes. These are refined and additions of further organisms make the various types of biofuels.

Advantages of Biofuels

The advantages of biofuels are given below:

- Cost-effective fuels.
- Eco-friendly
- Renewable fuel
- Less emission of gases
- used in vehicles as well as household needs.

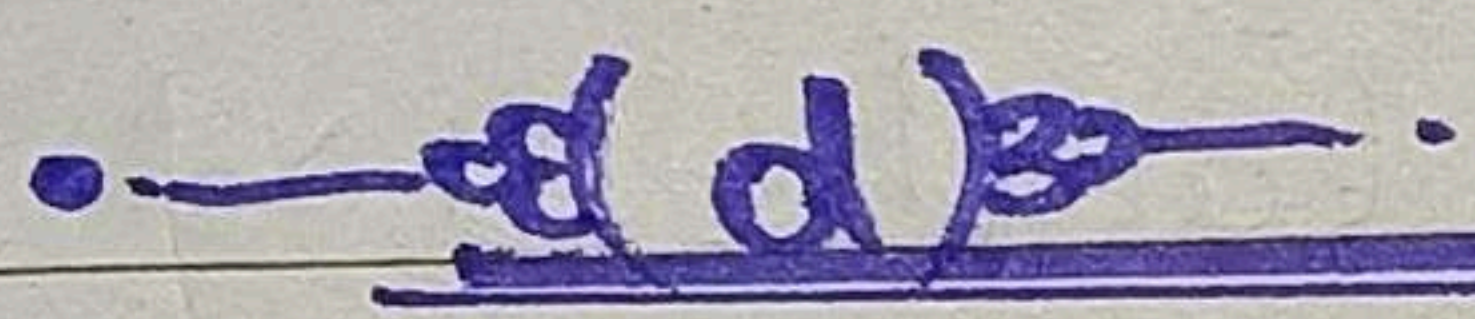
Disadvantages of Biofuels

The disadvantages of biofuels are:

- Consume higher area of land for the production of mass
- Highly expensive infrastructure.
less effectiveness
- Unaffordable for developing or underdeveloped countries.

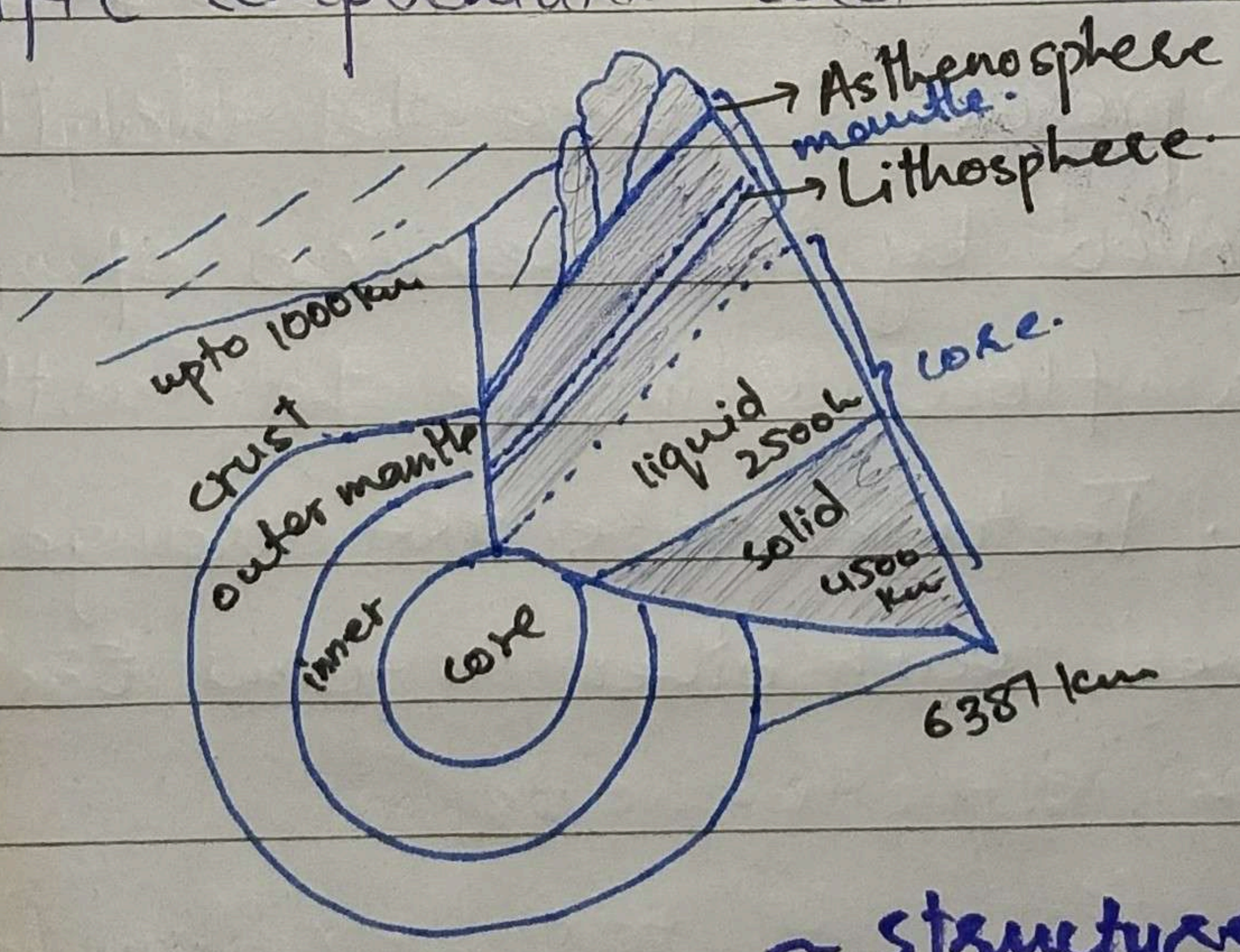
biofuels contribute less greenhouse gases emission

The production of biofuels take place in a closed system and with the biomass which are eco-friendly. It works to reduce the greenhouse gases emission into environment.



Structure of Earth's interior

The Earth's interior is composed of three layers namely Crust, Mantle and Core which are going inward toward center with specific temperature and distance.



~ structure of Earth

Oceanic Crust:-

The upper surface of Earth under the sea level is called ocean crust. It is lower than continental crust upto **100km**.

Continental Crust:-

The upper surface of Earth's crust present at the continental surface or dry land called continental crust. It is higher or harder than ocean crust.

Tectonic plates shape the Earth Crust:-

The Earth Crust is made up of almost **17** tectonic plates which are mostly present above the mantle and moved by the presence of magma floating inside the Earth crust. Tectonic plates are arranged and joined each other to form Earth Crust.

- ACB -

key factors that determine the food quality:-

Food quality is maintained by using different food additives and food preservatives. It includes the various factors that determines the food quality:

- Coloring agents
- Stabilizers
- smell agents
- Time span of food
- Quality of Packaging

Importance of food quality and role of food quality measures in foodborne illness prevention:

The use of different food additives and preservatives make the food fresh and adonuable for long time.

These quality measures are taken to prevent food from the attack of unwanted bacteria and microbes.

The quality measures make the pure food and prevent from illnesses.

Qualities of safe and healthy food :-

The consumer can check the food quality by :-

- Packaging of food
- Date mentioned on the food Package.
- Food additive used in food
- Quality of food with respect to demand/supply rate

Section # 02

Question No # 5

~~Q(a)~~

Data :-

student of age 8 year = 48

student of age above 8 = $\frac{2}{3} \times 48$ ¹⁶
= 32

student of below age 8 year = 20%

20% of 1 (∵ $x = 100$)

$$= \frac{20}{100} \times 100$$

$$= 20$$

Find :

Total students in school = ?

$$\text{Age 8 year} = 48$$

$$\text{Age below 8} = 20$$

$$\text{Age Above 8} = 32$$

$$\text{Adding All} = 48 + 20 + 32$$

$$= 100$$

$$\boxed{\text{Students} = 100}$$

~~Q. 6)~~

Data :-

$$\text{Rashid} = x$$

$$\text{father} = 3(x)$$

→ After 8 years :

$$\text{Rashid will be} = x + 2.5$$

$$\text{father will be} = 3(x + 2.5)$$

Sol: $x + 2.5 = 3(x + 2.5)$

$$x + 2.5 = 3x + 7.5$$

$$x - 3x = 7.5 - 2.5$$

$$-2x = 5$$

$$x = \frac{5}{2}$$

$$x = 2.5$$

After 8 years :

$$\text{Rashid} = x + 8$$

$$= 2.5 + 8$$

$$= 10.5 \text{ year}$$

$$\text{Father} = 3(x + 2.5)$$

$$= 3(2.5 + 2.5)$$

$$= 3(5) = 15$$

$$= 15 + 8$$

$$= 23 \text{ year}$$

So, After 8 years Father's age is two and half of the Rashid age.

$$\text{Rashid} = 10.5 \text{ year}$$

$$\text{Father} = 23 \text{ year}$$

~~— d —~~

Data :-

Team of 11 members

Captain = 26 years old

wicket keeper = $26 + 3$

= 29 years

Average of these two =

$$= \frac{26 + 29}{2} = \frac{55}{2}$$

$$= 27.5$$

These two are excluded

$$\text{remaining team members} = 11 - 2$$

$$= 9$$

average age of Team less 1 years
than the whole

$$= 27.5 - 1$$

$$= 26.5 \text{ years}$$

Average age of team is 26.5 years

Question No # 7

~~Q (a)~~

Data:

$$5\% \text{ of } A + 4\% \text{ of } B = \frac{2}{3} (6\% \text{ of } A + 8\% \text{ of } B)$$

$$\frac{5}{100} A + \frac{4}{100} B = \frac{2}{3} \left(\frac{6}{100} A + \frac{8}{100} B \right)$$

$$\frac{5A + 4B}{100} = \frac{2}{3} \left(\frac{6A + 8B}{100} \right)$$

$$\frac{5A + 4B}{100} = \frac{12A + 16B}{300}$$

$$300(5A + 4B) = 100(12A + 16B)$$

$$1500A + 1200B = 1200A + 1600B$$

$$1500A - 1200A = 1600B - 1200B$$

$$300A = 400B$$

$$3A = 4B$$

A	:	B
3	:	4

