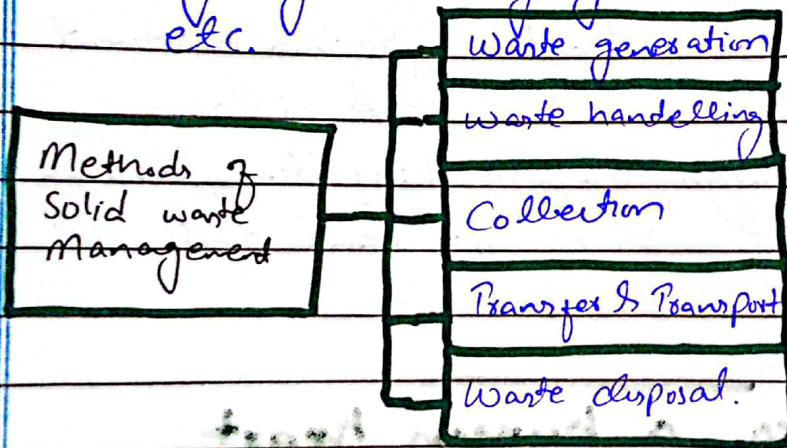


General Science.

QNO4#

① What are the methods employed in Solid waste management?

Solid waste management refers to the systematic management of solid wastes through processes like recycling, recovery, generation, collection etc.



i) Waste generation: It includes the process in which waste is thrown.

ii) Waste handling: This includes the movement of waste by sorting and storing it in bags and containers to the point of collection.

iii) Transfer and Transport
Collection

Collection is of two types:
* Primary collection: Solid waste collected from

Source transported to disposal sites.
 Secondary collection: Collection from disposal stations and transport it to recycling centre, disposal site or treatment facility.

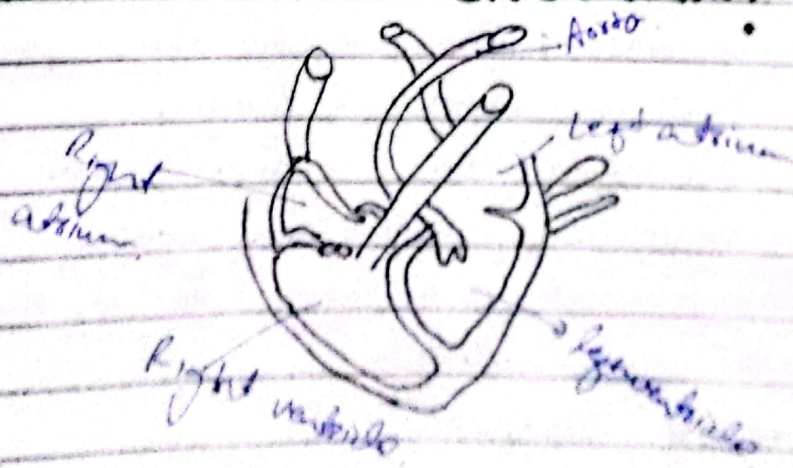
iv) Trainers and transport:

Trainers of waste from secondary collection site to large trainers site equipments. This trainers is usually for large distances.

v) Waste disposal:

Process of final placement of solid waste with or without previous treatment process or recycling in landfills. It is discharge, disposal, injection, leaching, dumping etc in or on land and water.

⑩ How does a human heart work in blood circulation?

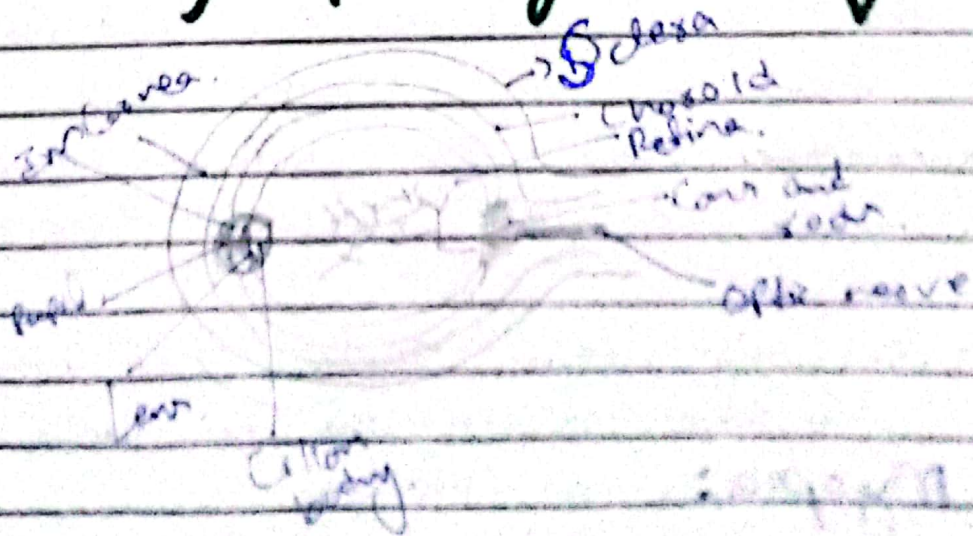


Heart: It is a fist size muscular organ that pump blood throughout the body.

Circulation of Blood

Blood Deoxygenated blood from body empty into right atrium by superior vena cava and inferior vena cava. From right atrium, it moves into right ventricle. Right ventricle pump blood into pulmonary artery. The heart pumps this blood into lungs. Here blood again absorb oxygen. Then pulmonary vein pick this blood and pump it into left atrium. So blood again reach to heart. Left atrium then send blood to left ventricle. Aorta, largest artery of body, pick this blood & then flows in small arteries which distribute it to the whole body.

Q What is Myopia and Hyperopia? (List major parts of Human eye?)



Major parts of human eye

Cornea The transparent outer layer that refracts and focuses light.

Iris A coloured, muscular structure controlling the size of the pupil.

Pupil The adjustable black aperture that regulates the amount of light entering the eyes.

Lens Located behind the cornea, it further refracts light, adjusting focus through changes in shape.

Retina Positioned at the back, it contains photoreceptor cells (rods and cones) that convert light into electrical signals.

Optic nerve Transmits these signals from retina to the brain for visual processing.

Sclera The tough, white outer covering of the eye providing structural support.

Vitreous humor Gel-like substance filling the space between lens and retina maintaining eye's shape.

Aqueous humor Clear fluid between the cornea and lens, nourishing these structures.

Ciliary body Contains muscles that control the shape of the lens for focusing.

Myopia: (Nearsightedness)
In this distant object appears blurry. This occurs when light

DATE: / /

entering the eye focus in front of retina
rather than on it, often due to
eyeball being too long.

1-4 Hyperopia (farsightedness)

It is characterised by difficulty in
seeing nearby objects clearly. ✓
This happens when light rays behind
retina, typically due to eyeball being
too short.

② Write uses of each:

i) Microwave

→ Use for cooking food → weather prediction.
→ useful for communication as penetrate
through clouds and smoke

ii) Ultraviolet

→ Used in powerful telescopes
→ Synthesize Vitamin D in skin
→ Used in personal air purifiers.

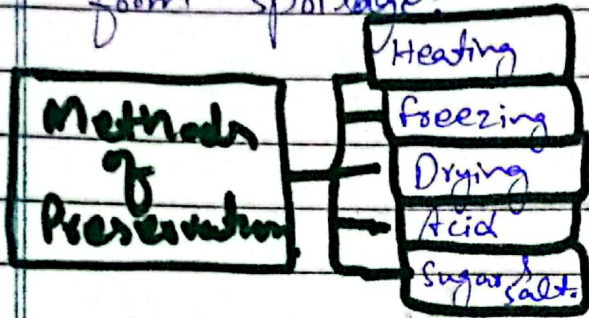
iii) X-rays

→ Use to take X-ray picture
→ Used in MRI, CT scan etc.

Q. NO 5#

Q. What are the different methods of food preservation?

A method by which food is kept from spoilage.



Heating: Many bacteria killed at $82 - 93^{\circ}\text{C}$. So heating to a certain extent can preserve food.

Freezing: At temperature below 10°C , where growth is slow, can preserve the food. So freezing can be beneficial.

Drying: Microorganism grow in 80% access of water. So if there is no access of water and food is dry then it can be preserved for long time.

Acid: In sufficient strength, adding acid can preserve the food. It modifies bacterial proteins as it denatures food proteins.

Sugar and salt: food preserved with the help of sugar and salt. ^{can be} fruits

usually preserved in sugar Symplicite seal
 Preserved in salt.

① What is Milky Way? How dark matter is related to Galaxy? Give different parts of Galaxies?

Galaxy is a gravitational bound system of millions & billions of stars, together with gas and dust is called galaxy.

Galaxy word is originated from Greek word "galaxias" means a "milky".

* Relation of dark matter with galaxy.

Gravitational effect: Dark matter's gravitational pull provides the additional mass needed to explain the observed rotation curve of galaxies.

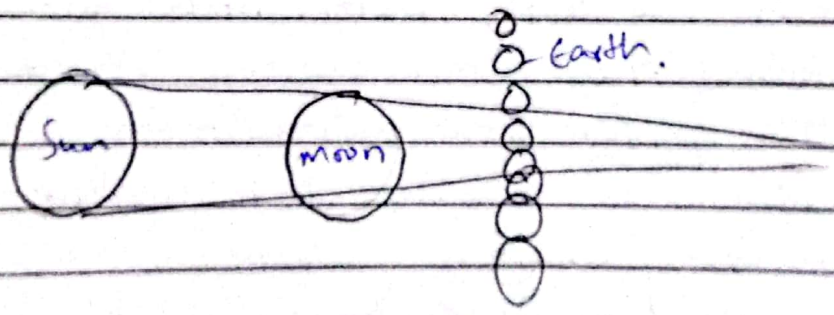
Galactic structure: Dark matter is thought to form a halo around galaxies. This halo contribute to overall mass of galaxy.

Galactic formation: Presence of dark matter is crucial in formation and evolution of galaxies, by providing gravitational support and gravitational framework for formation of galaxy.

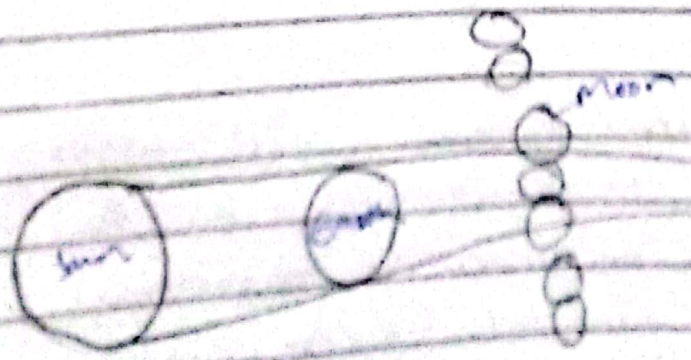
② Distinguish between Solar and Lunar eclipsis.

Solar eclipsis

As moon is rotating around Earth in an orbit. During this movement sometimes moon comes between Earth and Sun. Due to this Sun doesn't visible from Earth. This is called solar eclipsis. As the orbit around Earth is tilted so it doesn't happen oftenly.



Lunar Eclipsis



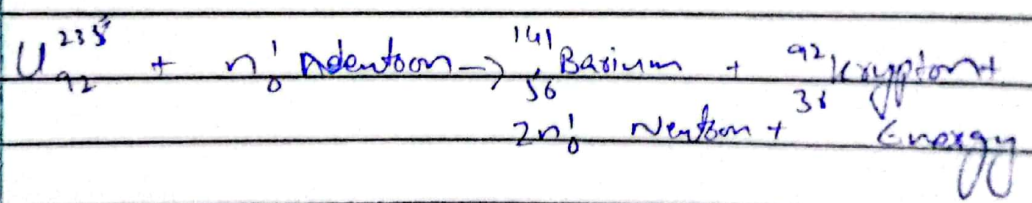
Sometimes Earth comes between Sun and Moon and light of

Sun unable to reach moon so moon is visible in earth. This is called lunar eclipse.

What are nuclear fusion and fission? Explain ionic bond in table salt?

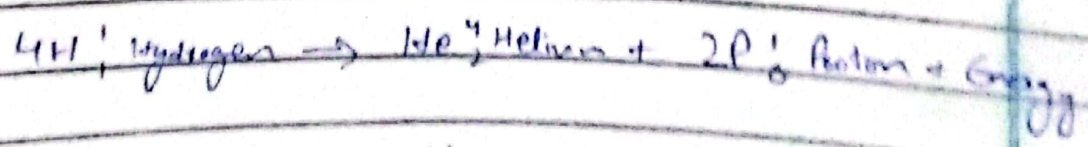
Nuclear fission

A process where nucleus of atom split into two or more smaller nuclei, along with the release of energy.



Nuclear fusion:

It is the process in which two light atomic nuclei combine to form a heavier nucleus accompanied by release of energy.



Ionic bond in salt

Bond which is formed by complete transfer of electron is called ionic bond.

In table salt, sodium donate one electron to chlorine forming Na^+ and Cl^- . Here two atoms have other

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which form covalent bond.

$Na^+ + Cl^- \rightarrow NaCl.$