

Q3.

## Global warming

It is the slow increase in the average temperature of the earth's atmosphere because an increased amount of the energy (heat) striking the earth from the sun is being trapped in the atmosphere. The earth's atmosphere has always acted like a greenhouse to capture the sun's heat.

## Developing Countries dealing with the Global warming

Countries find it difficult to deal with global warming because they do not have advanced technology. Many countries depend on industries that releases harmful gases and which make it hard for them to switch to cleaner practices.

## Cop 28

It was the 28<sup>th</sup> annual United Nations (UN) climate meeting, where governments discuss how to limit and prepare for future climate change. For the first time countries agreed on the need to transition away from fossil fuels in energy system. This is seen that

richer countries are expected to move away from coal, oil and gas more quickly for the betterment of climate.

## (b) Balanced Diet

A balanced diet is a diet which includes right amount of all nutrients such as proteins, vitamins, minerals, fats, carbohydrates. For proper growth, development and normal functioning of the body.

### Importance of balanced diet

A balanced diet is required for the growth and development of a person especially the children. A balanced diet has direct relation with the health of a person. A young boy of 15 requires more calories or energy than an adult man who does not do heavy work.

### Components of balanced diet

Following are the components of balanced diet :

1. Carbohydrates This is our main source of energy. It provides 3.4 calories of energy per gram. When carbohydrates are broken down by the body, glucose is

produced. Carbohydrates are Organic Compounds, these comprises of only Carbon, hydrogen and Oxygen.

2. **proteins** & They are essential to growth and repair of muscles and other body tissues.
3. **Fats** & One source of energy and important in relation to fat soluble Vitamins.
4. **Vitamins** & Water and fat soluble vitamins play important roles in many chemical processes in the body.
5. **Minerals** Inorganic elements occurring in the body. These are critical to body's normal functioning.
6. **Water** It is essential for normal body functioning. as a vehicle for carrying other nutrients and because 65-75% of the human body is water.

## (C) MACHINE LEARNING HAS REVOLUTIONISED TODAY'S WORLD

It has revolutionized by enhancing various industries. Its powering personalized recommendations, improving health care diagnostics, optimizing supply chain management, enabling autonomous vehicles

and transforming customer service through chatbots. among many other applications. Its ability to analyze vast data sets and learn patterns has significantly impacted efficiency and decision making across diverse sectors.

(d) RAM (Random Access Memory) and ROM (Read only Memory) are both types of computer memory with distinct characteristics:

### 1. RAM (Random Access Memory)

It is a volatile memory that loses its data when the power is turned off.

It is used for temporary storage of data that the computer is actively using or processing.

It enables fast read and write access, facilitating quick data retrieval.

### 2. ROM (Read Only Memory)

It is a Non-volatile memory. It retains data even when the power is turned off.

It is typically used to store firmware and essential system instructions that don't change frequently.

Contents are pre-written during manufacturing and are read only during normal operations.

## Q4. SOLID WASTE MANAGEMENT

It involves various methods to handle and dispose of waste responsibly.

Common methods include:

1. **Landfilling**: disposing of waste in designated landfills with proper environmental safeguards.
2. **Incineration**: Burning waste at high temperatures to reduce volume and generate energy, still this method requires careful management of emissions.
3. **Recycling**: Sorting and processing materials for reuse to reduce the amount of waste sent to landfills.
4. **Composting**: Decomposing organic waste into nutrient-rich compost for use in agriculture.
5. **Waste-to-Energy**: Converting waste materials into energy through methods like anaerobic digestion or thermal treatments.
6. **Source Reduction**: Minimizing waste at its source through practices like reducing packaging or promoting reusable items.
7. **Collection and Transport**: Efficient collection and transportation systems to move waste from point of generation to

disposal or processing facilities.

## 8. Waste Separation

Encouraging or enforcing the separation of recyclables, organics, and hazardous waste at the source.

## 9. public awareness and Education

Educating the public on responsible waste disposal practices to promote recycling and reduce environmental impacts.

## (b) Human Heart and its function in Blood Circulation

Human heart is a muscular organ that pumps blood through the body. Everyday the heart pumps blood about 2,000 gallons (7,600 litres) of blood, beating about 100,000 times.

Human heart has four chambers:

The upper two chambers, the right and left atria, are receiving chambers for blood. The atria are sometimes known as auricles. They collect blood that pours in from the veins, blood vessels that return blood to the heart. The heart's lower two chambers, the right and left ventricles, are the

powerful pumping chambers. The ventricles propel blood into arteries, blood vessels that carry blood away from the heart. A wall of tissues (septum) separates the right and left sides of the heart. ~~pumps~~ Each side pumps blood through a different circuit of blood vessels: the right side of the heart pumps oxygen-poor blood to the lungs, while the left side of the heart pumps oxygen-rich blood to the body while the left side of the heart pumps oxygen-rich blood to the body.

### Blood Circulation in the body

The blood feeds into two large veins, the superior vena cava and inferior vena cava, which empty into the right atrium of the heart. The right atrium conducts blood to the right ventricle, and the right ventricle pumps blood into the pulmonary artery. The pulmonary artery carries the blood to the lungs, blood returns to the heart through pulmonary veins, which empty into the left atrium. Blood passes from the left atrium into the left ventricle, from where it is pumped

out of the heart into the aorta, the body's largest artery. Smaller arteries that branch off the aorta distribute blood to the whole body.

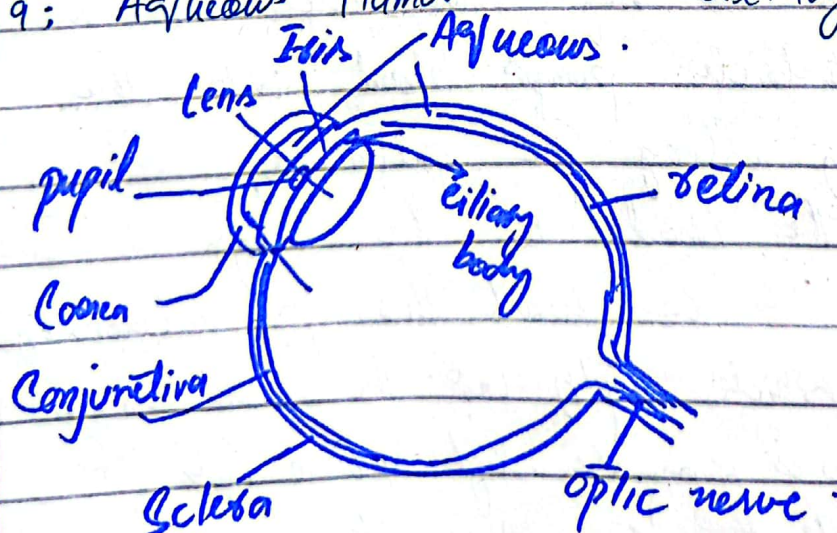
(c) What is Myopia and Hyperopia.

Myopia is commonly known as nearsightedness, is a vision condition where close objects are seen clearly, but distant objects appear blurry.

Hyperopia It is when distant objects are seen more clearly than close ones.

Following are the major parts of human eye:

- 1: Cornea
- 2: Iris
- 3: pupil
- 4: Lens
- 5: Retina
- 6: optic nerve
- 7: Sclera
- 8: Vitreous Humor.
- 9: Aqueous Humor
- 10: Ciliary body.





## Usage of Microwave

Microwave have various uses in both domestic and industrial settings:

1: Microwave are commonly used for rapid cooking and reheating of food. They heat food by producing electromagnetic waves.

2: Besides food, microwaves are used for heating other materials, such as in industrial processes or laboratories.

3: Microwaves are used in medical imaging are employed in some medical imaging techniques, like microwave imaging for breast cancer detection.

## Usage of Ultra violet

Ultraviolet (UV) light has several applications across different fields:

① UV light is employed in water treatment plants to disinfect water by neutralizing harmful microorganisms, providing an alternative to chemical disinfection.

## Usage of X-Rays.

X-rays have numerous applications in various fields, primarily due to their ability to penetrate matter and create detailed image of internal structures.

1. X-rays are used in medical diagnostics to visualize bones, detect fractures, assess the condition of internal organs, and identify abnormalities such as tumors.