

General Science And Ability

Part - II

Section - 1

Q. No #1

Q1: Define the term malnutrition, elaborate its major causes and consequences.

Ans: Malnutrition:-

It is a condition where a diet does not provide enough nutrients. This can lead to health problems, because the human body does not get the right amount of vitamins, minerals, carbohydrates, proteins etc.

Causes of malnutrition:-

There are different types of causes of malnutrition which are:

1. Poor diet: Eating too little or not enough of the right type of food exemplified by fruits, proteins and vegetables.
2. Lack of Education: People may not know what a balanced diet is or how to prepare healthy food.

3. Diseases:- Illnesses like diarrhea, infections or digestive problems can lead to malnutrition because of body poor nutrient absorption.

4. Poverty: Poverty is also the cause of malnutrition because poor people can't afford healthy and hygienic food.

Consequences of malnutrition:-

1. Reduced life expectancy: In severe cases malnutrition can shorten a person's life because human body needs sufficient calories.
2. Weak Immune System: Due to malnutrition the human body becomes compromised and becomes more likely to get different diseases or illnesses.
3. Fatigue and Weakness: People may feel tired and lack energy.
4. Increased risk of Disease: Malnutrition can lead to serious diseases like Anemia and Myocardial Infarction.
5. Poor growth in Children: Malnourished children suffer learning problems and compromised body growth.

Q2. Differentiate b/w food Contamination and adulteration.

Ans: Both of them refer to harmful substances in food, but they are different in the way they occur and how they affect the food safety.

Food Contamination

- The food contamination is usually accidental and caused by external factors.
- It happens when food gets mixed with harmful substances, or microorganisms, dirt during handling, storage or preparation.
- It can happen at any stage of food production or preparation.
- Example: Food being contaminated by bacteria *Salmonella typhi*, chemicals pesticides and viruses.

Food Adulteration

- The food adulteration is intentional and often done for profit.
- It is the deliberate addition of harmful or low-quality substances to food to increase quantity or profit.
- It is a dishonest practice done by some food producers or sellers.
- Example: Adding chalk into the milk, mixing artificial colors spices or using non-food substances to increase weight.

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Q3. What are Computer buses? Differentiate RAM and ROM?

Ans: Computer buses:-

A computer bus is a set of wires used to transfer data inside of the computer. It helps in communication within the computer system.

Example: Transferring data b/w CPU, memory and input output devices.

Difference b/w RAM and ROM:

RAM (Random Access Memory)

- It stores data temporarily that is ~~temp~~ actively used or processed.
- Used to store currently used programs
- RAM can do both the read and write operations
- Loses data when power is off.

ROM (Read only Memory)

- ROM is like the computer (BIOS) it stores data permanently.
- Used to store system software.
- ROM can do only reading.
- Retains data when power is off.

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Q4 What are geo-stationary Satellites?
Distinguish Natural and artificial Satellites,
how many artificial Satellites of Jupiter are there?

Ans: Geo-Stationary Satellites:

These are the Satellites which orbit orbits at fixed position. It also moves at the same speed as ~~the~~ Earth rotates.

Difference b/w Natural and Artificial Satellites

Natural Satellites:

These are naturally occurring objects that orbits a planet or star. One of the best example of natural satellites is the Moon (Luna), the moons of Mars Phobos and Deimos

Artificial Satellites:-

These are made by humans. These type of Satellites are launched into space to orbit Earth for communication, weather forecasting and other purposes. The Examples are ~~GPS~~ GPS Satellites, Hubble space Telescope, Sputnik 1 (First space artificial satellite by Soviet union).

Artificial Satellites of Jupiter:-

Jupiter has 79 natural Satellites but Jupiter doesn't have artificial Satellites.

~~Ans.~~

NASA has sent probes like Juno to study Jupiter. Most artificial satellites are around the Earth and Mars.

QNO #. 2.

Q1 Differentiate b/w Temperate and Tropical Cyclones.

Ans: Temperate Cyclones:

The Temperate Cyclones are the type of cyclone which formed when warm and cold air meet. ~~It~~ They usually form in cooler areas. They are weaker than tropical cyclones because they bring ~~them~~ with themselves rain, cloud and snow. They mostly found in temperate regions. The temperate cyclones comes in irregular shape. They occur on land ~~and~~ or sea.

The tropical Cyclones formed over warm oceans. They need warm and moist air to start. They bring heavy rain, ~~to~~ floods and storms with themselves. They comes in circular shape. Examples: Hurricane, Cyclones, typhoon.

Q2 Differentiate b/w Star and Planet. How does a star become a black hole?

Difference b/w Star and Planet:

Star	Planet
- Star is made of hot gases like hydrogen and helium - Star produce light and heat through burning - Star does not orbit - Example of star is the sun	- Planet is made of solid, liquid or gas. - Planet do not produce any light. (They only reflect sun light). - Planet's orbit around a star. - Example of planets are Earth, Mars, Jupiter etc.

How a star becomes a black hole:

When a very big star uses all its fuel the explosion occurs called the supernova. After the explosion its gravity becomes so strong nothing can escape even light can't escape. This forms a black holes which becomes invisible because light can not escape.

Q3 Why do atoms form chemical bonds? Explain structure of water.

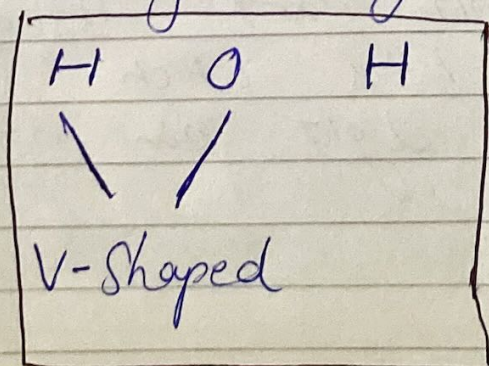
Ans: Why atoms form chemical bonds:-

Atoms form chemical bond because of stability. The outer shell of atom is full of electron, due to the fullness the atom start sharing electrons to become stable. There are two types of chemical bond.

1. Ionic bonds: Transfer of Electrons
2. Covalent bonds: Sharing of Electrons. (water)

Structure of Water:-

Water is formed when one oxygen and two hydrogen atom form covalent bond. Oxygen shares one electron with both hydrogen. ~~Water~~ Water is polar. The shape of water is V-shaped. Because of the V-shape water becomes good at dissolving things.



Q4. What are Conductors, Semiconductors, Metals, Plastics, and Ceramics? Give examples of Each.

Ans: Conductors:

Conductors let heat and electricity to pass easily. Conductors are used in wires and circuits. Example: Copper.

Semiconductors:

The semiconductors allow some electricity to pass. They are used in electronics. The semiconductors used both as a conductor or insulator (does not allow electricity to pass.).

Example of semiconductors: Silicon.

Metals:

Metals are strong and shiny substances. Metals are conductors. Metals can be shaped easily. Example: Iron, Copper, Gold, Silver etc.

Plastics:

Plastics are flexible and light-weight substances. They do not conduct electricity. Plastics are used in covering bottles, bags, wires etc.

Example: Polyvinyl Chloride

Ceramics :-

Ceramics are hard, brittle and heat resistant substances. Ceramics found everywhere on earth. Ceramics used in pots, tiles, dishes, medical equipments, used in electronics, spaces, space shuttles, cars etc.