

Question #2,

(a)

Malnutrition:

A diet which does not contain an adequate proportion of food from five basic groups which are required for proper nourishment of the body is called as an unbalanced diet. Such a diet may lead to a condition called malnutrition. The term malnutrition can be defined as:

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Definition:

The deficiency of proper nutrition in the body is called as malnutrition.

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Causes of malnutrition:

Food deficiency may be a result of various factors. Some of these are elaborated below:

1)

Ignorance:

Ignorance is often considered as a root cause of all diseases. If a person is not aware of the proper nutrients and their required quantities in the body, he

may consume food belonging to five basic groups indiscriminately. As a result of ~~what~~ this, the quantity of one may increase whereas that of the other decrease in the body, leading to unbalanced diet, which further leads to malnutrition.

2) Poverty:

Poverty often leads to malnutrition. For the proper growth, body requires food from the five basic groups. However, due to poverty, a person may be able to consume food from any one group, or the two, leading to an unbalanced diet, which further leads to malnutrition.

3) War:

Long term wars are the main causes of malnutrition. In the case of war, the infrastructure, buildings, agricultural crops, houses, bridges, etc. completely destroyed. As a result of this, people are often forced to live on streets. These people do not have access to pure drinkable water, and food. As a result, the citizens are left exposed to serious diseases and conditions like malnutrition.

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Consequences:

Malnutrition may lead to several medical conditions due to deficiency of proper nutrients in the body. Some of these are, as follows:

1) Marasmus:

The deficiency of protein and calories in the human body leads to a medical condition called marasmus. A person suffering from marasmus may face severe weight loss and thinning of limbs.

2) Kwashiorkor:

The deficiency of protein in the human body may lead to a condition called kwashiorkor. A person suffering from kwashiorkor experiences some degree of weight loss, thinning of limbs and muscles.

3) Deficiency of Vitamins, leading to several diseases:

Malnutrition may also lead to the deficiency of essential vitamins in the body which may further lead to several diseases, including rickets, keratosis, etc.

(d) Geostationary Satellite:

Satellites are the objects or bodies that revolve around the ~~an~~ Earth, or any other planet. Satellites that revolve around the Earth are called as geo-satellites. These satellites are further classified on the basis of their orbital ~~big~~ heights as LEO, MEO, HEO, and Geostationary satellites. The geostationary satellites can be defined as:

*→ Defination.

"These are the satellites that remain fix, or stationary, with respect to a specific point on the surface of the Earth."

*→ Altitude of orbits:

These satellites orbit the Earth at an altitude of about 12,756 km above the surface of the Earth.

*→ Purpose of Geostationary Satellites.

These satellites are used for several purposes, including communication, weather, etc.

"Differentiate b/w Natural and Artificial Satellites."

Natural Satellites

Satellites can be classified into two categories, natural and artificial. The difference b/w both types of satellites is given below:

(i) ⇒ Natural Satellites:

A naturally occurring celestial body that revolves around any planet is called a natural satellite.

Example: The Moon (Luna) is a natural satellite of the Earth.

(ii) ⇒ Artificial Satellite:

A human-made object placed in an orbit of any planet is called an artificial satellite.

Example: The International Space Station.

d. → Conductors:

These are the elements that allow electricity to pass through them. They may be solid, liquid, or gases.

For example:

Solid: Copper is a metal which is a good conductor of electricity.

Liquid: Water allows electric current through to pass through it.

Gases: Air surrounding a high-voltage line ionizes. The ionization of air results in conduction which results in the formation of corona.

→ Semi-conductors:

These are the elements which ~~has~~ possess intermediate properties between conductors and insulators.

for example:

Silicon The silicon (Si) is a widely used semi-conductor.

⇒ Metals:

Metals are highly conductive and lustrous materials. They have high ductility and are good conductors of both the heat and the electricity.

Examples:

Gold, Silver, Aluminium, etc.

⇒ Plastics:

Plastic is a polymer. When monomers combine together through a process of polymerization, they form a polymer, which is basically a plastic.

for example:

Polyvinyl Chloride ~~or~~ is a plastic. This plastic is formed as a result of polymerization of vinyl chloride.

→ Ceramics:

Ceramic is an inorganic & non-metallic material made up of clay which has been moulded into a particular shape by heating at higher temperature.

Example:

Glass is an example of ceramics.

b. Differentiate between Star and a Planet

Star

A star is capable of producing its own light and heat energy.

Planets revolve around a star.

Stars are usually hot balls of gas and do not possess any hard surface.

Planet

A planet is not capable of producing its own light and heat energy.

Satellites revolve around a planet.

Planets may be a ball of gas, or a ball of rocky surface.

Examples of star is
the Sun.

Example of planet is the
Earth.

*→ Formation of Black hole:

A black hole is formed when a massive star exhausts its nuclear fuel and collapses under the influence of its own gravitational force. This collapse causes the star to compress to an infinitely small and highly dense point called singularity, surrounded by an invisible boundary ~~through~~ called event horizon.

→ Characteristics of Black Hole:

(i) Strong Gravitational Pull:

The gravitational pull around a black hole is so immense that it is sufficient to wrap both the space and time.

(ii) Appearance:

A black hole usually appears black as it absorbs all the light, instead of reflecting it.

(iii)

Accretion Disk:

Gases and the matter spiralling into the black hole emits X-rays.

→ Presence of a black hole:

The presence of a black hole can be determined by a sign, "when something enters into a black hole, or crosses near the event horizon, it never returns, not even light."