



Date : 10th Dec 2023

General Knowledge - Nutrients

English

Q:1 Which of the following nutrients are essential to the growth and repair of muscle and other body tissues?

1. Proteins
2. Carbohydrates
3. Vitamins
4. Roughage(Fiber)

Q:2 Which micronutrient is supplied by the soil to the plant?

1. Calcium
2. Nitrogen
3. Zinc
4. Phosphorous

Q:3 The process of synthesizing simple macromolecules and absorption of nutrients and other chemicals from food into the body is known as?

1. Transportation
2. Assimilation
3. Anabolism
4. Catabolism

Q:4 Which of the following pair type of nutrient – nutrient is correct?

- I. Macronutrient – Iron
 - II. Micronutrient – Calcium
1. Only I
 2. Both I and II
 3. Neither I nor II
 4. Only II

Q:5 Which of the following take in food by engrossing the nutrients through the cell membranes?

1. Protozoa
2. Bryozoans
3. Vertebrates
4. All of these

Q:6 Which nutrient is chlorella rich in?

1. Roughage
2. Carbohydrates
3. Fats
4. Protein

Q:7 The deficiency of which nutrient causes night blindness?

1. Vitamin A
2. Vitamin C
3. Proteins
4. Vitamin K

Q:8 Which of the following ecologist's research provided revolutionary new insights into how energy and nutrients move through the ecosystems?

1. Arthur Tansley
2. Ernst Haeckel
3. Charles Elton
4. Raymond Lindeman

Q:9 What is the name of a fluid which is secreted by new mothers during the initial days of lactation, contains nutrients that boost a baby's immune system and helps fight infection?

1. Sebum
2. Synovia
3. Colostrum
4. Cerumen

Q:10 The treatment designed to remove non-biodegradable organic pollutants and mineral nutrients from waste water is

1. Lagoons
2. Imhoff tank
3. Secondary treatment
4. Tertiary Treatment



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Answer Key

1. (1)	2. (3)	3. (2)	4. (4)	5. (1)
6. (4)	7. (1)	8. (4)	9. (3)	10. (3)

Answers and Solutions

Q:1 The correct answer is **option 1** i.e. **Proteins**.

There are seven major classes of nutrients: carbohydrates, fats, fiber, minerals, protein, vitamins, and water.

Carbohydrates - are the main source of energy.

Fats - one source of energy and important in relation to fat-soluble vitamins.

Roughage (Fiber) - the fibrous indigestible portion of our diet essential to the health of the digestive system.

Minerals - those inorganic elements occurring in the body and which are critical to its normal functions.

Proteins - essential to the growth and repair of muscle and other body tissues.

Vitamins - water and fat-soluble vitamins play important roles in many chemical processes in the body.

Water - essential to normal body function - as a vehicle for carrying other nutrients and because 60% of the human body is water.

Q:2 The correct answer is **option 3** i.e. **Zinc**.

Zinc is one of the essential micro-nutrient present in the soil. It is required for the synthesis of chlorophyll in the plants.

It aids in plant growth.

It regulates the root growth, flowering and fruit production.

Q:3 The correct answer is **Option 2** i.e. **Assimilation**

Assimilation is the process by which living organisms integrate nutrients from food or absorb vitamins, minerals, and other chemicals into the body to satisfy the energy demands required to stay alive.

Assimilating also involves breaking complex molecules derived from food sources into simpler

particles.

Additional Information-

Transportation The transfer of any substance from one place to another is referred to as transportation. Plants and animals should transfer the water and nutrients needed for all metabolic processes. Moving the waste or excretory products to the area of excretion is also necessary.

Anabolism The process by which relatively complex chemicals are created in living cells from nutrients with relatively simple structures is known as anabolism, sometimes known as biosynthesis.

Catabolism The process by which relatively big molecules in living cells are broken down or degraded is known as catabolism. Energy-rich substances, including adenosine triphosphate [ATP], are conserved as a portion of the chemical energy generated during catabolic processes.

Q:4 The correct answer is **option 4** i.e. **Only II**.

Calcium is the most abundant mineral in the body and has four primary functions: making bones strong and healthy, facilitating nerve-to-nerve communication, stimulating muscle contraction, and activating blood-clotting factors.

Micronutrients are compounds that are only required in minimal amounts which aid in the growth, development, and maintenance of the body.

Q:5 The correct answer is **Option 1** i.e. **Protozoa**

Protozoa take in food by the process of osmotrophy that is by engrossing the nutrients through the cell membranes or also they feed on phagocytosis, either by the process of engulfing the particles of the food with the help of pseudopodia.

Q:6 The correct answer is **option 4** i.e. **Protein**.

Chlorella contains a range of nutrients, including proteins, omega-3 fatty acids, vitamins, and minerals, including antioxidants.

It is naturally rich in proteins, vitamins, minerals, and dietary fiber. Its reported benefits include boosting antibody count, promoting weight loss, and fighting cancer and other diseases.

Q:7 The correct answer is **option 1** i.e. **Vitamin A**.

Night blindness (in which it is difficult or impossible



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to see in relatively low light) is one of the clinical signs of vitamin A deficiency and is common during pregnancy in developing countries. Retinol is the main circulating form of vitamin A in blood and plasma.

Q:8 The correct answer is **Option 4** i.e. **Raymond Lindeman**

Raymond L. Lindemann's research provided revolutionary new insights into the flow of energy and nutrients through ecosystems.

Raymond Lindeman was a University of Minnesota graduate student whose research defined ecosystem science.

Q:9 The correct answer is **Option 3** i.e. **Colostrum**
Other Information-

Colostrum, the fluid secreted by new mothers during the early days of breastfeeding, contains nutrients that boost the baby's immune system and help fight infection.

After delivery, there are many changes in the mother's milk i.e. breast milk and there are many types of it, one of which is colostrum. Colostrum is considered very beneficial for the baby.

Colostrum is yellow or orange and thick in colour but sometimes it can be clear and thin.

Colostrum has a deep yellow or orange colour due to the high amount of beta-carotene in it.

Colostrum arrives at least 5 days after delivery.

Colostrum contains high amounts of cholesterol which helps in the development of the baby's nervous system.

It provides zinc, calcium, vitamins A, B6 and K and helps in the all-round development of the baby.

Q:10 The correct answer is **Option 3** i.e. **Secondary treatment**

The initial and primary water treatment process removes large matter from wastewater.

Secondary wastewater treatment processes use microorganisms to biologically remove contaminants from wastewater.

Secondary biological processes can be aerobic or anaerobic, each process utilizing a different type of bacterial community.