

परमाणु ऊर्जा शिक्षण संस्था, मुंबई
Atomic Energy Education Society
Session-2023-24

Class: VI

Subject: Science

WORKSHEET NO-1 (Answer Key)

Name of the Chapter: Components of food

Name of the Topic : Components of food

I.Choose the correct option from the following . 1x10=10

1. (c) Water.
2. (a) rice
3. (d) carbon, hydrogen and oxygen
4. (a) iodine solution
5. (c) Both (a) & (b)
6. (b) animal fat
7. (a) body building
8. (a) Nuts
9. (a) protective food
10. (c) Cheese

II. Fill in the blanks with suitable word/s. 1x10=10

1. nutrients
2. growth and development
3. starch
4. fats and proteins
5. Sorting/Classification
6. proteins
7. balanced diet
8. starch.
9. Anaemia
10. Vitamin C

III. Answer the following question in one sentence.

2x10=20

1. Lentils , Beans
2. Eggs ,Meat
3. Protein-rich foods are often referred to as body-building foods because proteins are essential for the growth and repair of tissues.stone, key, screw, iron nail, coin
4. Butter, Nuts
5. Vitamin A ,Vitamin B,Vitamin C,Vitamin D,Vitamin E
6. Vitamin B represents a group of vitamins collectively known as B-complex vitamins.
7. Carrots ,Spinach
8. Whole grains (e.g., brown rice, whole wheat)
Dairy products (e.g., milk, yogurt)
9. Citrus fruits (e.g., oranges, lemons)
10. Sunlight (our skin can produce Vitamin D when exposed to sunlight)
Fatty fish (e.g., salmon, mackerel)Plastic or Metal

IV. Answer the following questions in brief.

3x5=15

1. The possible reason for the difference in color change between the saree and the socks is that the saree fabric might contain starch, which reacts with iodine to form a blue-black color. On the other hand, socks are less likely to contain starch, resulting in no color change .
2. Vitamins and minerals are known as micronutrients because they are required by the body in smaller quantities compared to macronutrients like carbohydrates, proteins, and fats. However, despite their small quantities, vitamins and minerals play crucial roles in various physiological processes.
3. Proteins are the building blocks of body tissues, including muscles, skin, and organs. They are necessary for tissue growth, repair, and maintenance.
4. While water itself doesn't provide nutrients like carbohydrates, proteins, or vitamins, it is essential for life and serves several important functions in the body. Water is involved in digestion, absorption, and transportation of nutrients. It helps regulate body temperature, supports metabolic reactions, and aids in waste removal through urine .
5. Nutritional value depends on the composition of the food, including macronutrients, vitamins, minerals, and fiber. Some affordable foods, like whole grains, fruits,

vegetables, and legumes. On the other hand, some expensive foods, may lack nutritional value and be high in added sugars, unhealthy fats, and empty calories.

V. Answer the following questions

5x5=25

1. Steaming or microwaving potatoes with the skin on is a cooking method that will help preserve their nutrients. Boiling potatoes in water and discarding the excess water can lead to nutrient loss as some nutrients can leach into the water. By steaming or microwaving with the skin on, the nutrients are retained within the potato. Additionally, cooking with minimal water and avoiding high temperatures can help preserve the nutritional content.
2. (a) Boojho is suffering from night blindness, which is a deficiency disease of Vitamin A.

(b) He is lacking Vitamin A in his diet.

(c) Food items rich in Vitamin A that Boojho should include in his diet: Carrots, Spinach, Sweet potatoes, Mangoes .
3. (a) Carbohydrates are the primary source of energy for the body. They are broken down into glucose, which is used by cells for energy production.

(b)Fats are essential for energy storage, insulation, and cushioning of organs. They play a role in absorbing fat-soluble vitamins
(c) Proteins are essential for growth, tissue repair, and maintenance. They are the building blocks of body tissues, including muscles, skin, hair, and enzymes
(d) Vitamins are organic compounds that regulate various biochemical reactions in the body. They are essential for growth, metabolism, immune function, and overall health.
(e) Minerals are inorganic elements necessary for bodily functions. They support bone health (calcium, phosphorus), nerve function (sodium, potassium), oxygen transport (iron), and enzyme activity (zinc, magnesium).
4. To detect the presence of proteins in a food item, you can perform the Biuret test. The Biuret reagent turns violet or pink in the presence of proteins due to the formation of a complex between the reagent and peptide bonds in the protein molecules.
5. Vitamin A Deficiency (Night Blindness): Symptoms include difficulty seeing in dim light, dry eyes, and increased susceptibility to infections.

Vitamin D Deficiency (Rickets in Children, Osteomalacia in Adults): Symptoms include weak or deformed bones, muscle weakness, and increased fracture risk.

Vitamin C Deficiency (Scurvy): Symptoms include bleeding gums, joint pain, fatigue, and delayed wound healing.

Iron Deficiency (Anemia): Symptoms include fatigue, weakness, pale skin, shortness of breath, and decreased immunity.

Calcium Deficiency: Symptoms include weak bones, dental problems, muscle cramps, and increased fracture risk.

Iodine Deficiency (Goiter): Symptoms include enlargement of the thyroid gland (goiter) and thyroid dysfunction.

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