

**Subject: Science**

**Components of food**

**Date: 06.01.23**

**A. Choose the appropriate answer**

1. Which of these provides energy?

- a) vitamins.      (b) minerals.      (c) **carbohydrates.**      d) water

2. Which of these is the quickest source of energy?

- (a) **sugars.**      (b) starch.      (c) proteins.      (d) fats

3. In which vitamin would your body be most deficient if you did not eat fresh fruits and green vegetables?

- (a) vitamin A      (b) vitamin B      (c) **vitamin C**      d) vitamin D

4. Which mineral is necessary for the formation of strong bones and muscles?

- (a) iron      (b) **calcium**      (c) phosphorus      d) potassium

5. Which of these forms most of our body weight?

- (a) proteins.      (b) fats.      (c) carbohydrates.      d) **water**

6. Iron is a

- (a) **mineral**      (b) fat      (c) vitamin      d) protein

7. Obesity occurs due to

- (a) **overeating of carbohydrates and fats.**  
(b) not eating enough carbohydrates and fats.  
(c) overeating of vitamins and minerals.  
(d) not eating enough vitamins and minerals.

8. In which of the following diseases will you advise the intake of iodized salt?

- (a) beri-beri      (b) **goitre**      (c) scurvy      (d) rickets

9. For developing strong bones and teeth, which two minerals will you take more in your diet?

- (a) iron and sodium.      (b) iron and calcium  
(c) iodine and fluorine.      (d) **calcium and phosphorus**

10. Marasmus is caused due to diet insufficient in

- (a) **proteins.**      (b) carbohydrates.      (c) fats.      (d) all of these

**B. Very short answer Questions**

1. Lack of nutrients leads to **deficiency** diseases.

2. Sugars provide energy faster than starch. **True**

3.The place where fats are mainly stored in the body is under the **skin**.

4.Deficiency of which vitamin is likely to cause rickets in children?

**ANS:** Deficiency of vitamin-D is likely to cause rickets in children.

5.Which mineral is vital for bones and teeth?

**ANS:**The mineral calcium is vital for bones and teeth. In addition, phosphorus is also an important mineral for bones and teeth.

6.Which substance plays an important role as a solvent in the transport of materials, digestion of food and excretion of waste products?

**ANS:**Water plays an important role as a solvent in the transport of materials, digestion of food and excretion of waste products.

7.A diet that contains the proper amounts of each nutrient is called a **balanced** diet.

8.Meat does not contain roughage. **True**

9.Fibre cannot be digested by the body, so it is better to eliminate it from food. **false**

10.Which vitamin is easily destroyed during cooking?

**ANS:**Vitamin C is easily destroyed during cooking.

### **C.Short answer Questions**

1.Into which classes are nutrients divided? Which of these provide energy to the body?

**ANS:**Nutrients are divided into following classes depending upon the function they perform.

1)Energy giving nutrients

2)Body building nutrients

3)Protective nutrients

4) Energy giving nutrients, namely carbohydrates and fats provide energy to the body

2.What are protective foods?

**ANS:**Protective foods are foods that contain minerals and vitamins. The minerals and vitamins in the protective food protect the body against various diseases.

3.How are the proteins important for the body?

**ANS:**Protein is a body building nutrient. Proteins are important to generate new cells and to replace old and worn out cells. Hence, they play a role in growth of the body.

4.Mention two cooking methods that destroy nutrients in food.

**ANS:**The two cooking methods that destroy nutrients in food are:

1)Cooking food in excess water dissolves many nutrients, particularly water soluble vitamins, in the water. When the extra water is thrown away, the nutrients dissolved in the water are also lost.

2)Cooking food at high heat can destroy vitamin C.

5.Name the two kinds of carbohydrates. Which of these provides us quick energy?

**ANS:**Sugars and starch are two kinds of carbohydrates. Sugars are easier to break down and they provide us with quick energy.

6.Which nutrients are needed by our body in small quantities only?

**ANS:** Minerals are needed by our body in small quantities only. Example iron is a mineral needed for formation of red blood cells in the body. However, an excess of iron can lead to iron poisoning, which may be fatal.

7.Write the symptoms of rickets.

**ANS:** The person affected with rickets will have soft and out of shape bones which will tend to break very easily.

8.What are the symptoms of marasmus?

**ANS:** A child suffering from marasmus is underweight, often weighing 60% less than normal. The child suffers from muscle wastage and becomes so thin that loose folds of skin are seen all over the body.

9.The incidence of goitre among the people living in the Himalayan region was quite high. Why?

**ANS:**The iodine content in the soil and water in the Himalayan region is very low. As a result, the incidence of goitre is quite high in people living in the Himalayan region.

#### **D.Long answer questions**

1.Explain the importance of the following vitamins for the body.

(a) vitamin A    b) vitamin C    c) vitamin D    d) vitamin K

**ANS:**(a) Vitamin A: It is necessary for normal growth and it keeps the eyes and skin healthy.

(b) Vitamin C: It is vital for normal growth and also for the development of strong blood vessels.

(c) Vitamin D: The body uses vitamin-D to utilise calcium for the formation of strong bones and teeth.

(d) Vitamin K: It is important for the clotting of blood.

2.Explain the importance of the following minerals for the body.

(a) calcium    b) sodium    c) potassium    d) iron

**ANS:**(a) Calcium: Calcium is essential for the formation of healthy bones and strong teeth.

(b) Sodium: Sodium is essential for the proper functioning of the nervous system.

(c) Potassium: Potassium is essential for normal growth and also to keep cells and blood healthy.

(d) Iron: Iron is an important part of haemoglobin, which is the substance in red blood cells that carries oxygen to all the cells of the body.

3. Why should you drink 6–8 glasses of water every day even when water does not provide any energy?

**ANS:** Water serves the following vital functions in our body:

1) Water helps in the absorption of nutrients in the body.

2) The nutrients obtained from food are transported throughout the body by water.

3) The wastes generated in cells are collected and transported by water.

4) Every day, we lose water by excretion, by sweating, etc. To replenish this water, we must drink at least 6-8 glasses of water each day.

4. What do you mean by a balanced diet? Is it the same for everybody? Why

**ANS:** A balanced diet is a diet which supplies all the required nutrients for the healthy functioning of the body in the proper amounts.

A balanced diet is individual specific. It cannot be the same for everybody and varies depending upon the age, gender and type of work of an individual.

Example:

1) A growing child needs proteins to grow rapidly.

2) Nursing mothers and pregnant women need more proteins to feed a growing baby.

3) Labourers must consume more carbohydrates and fats as they need more energy.

5. What are deficiency diseases? Name four deficiency diseases and the associated nutrients.

**ANS:** Individuals who are unable to consume a balanced diet and therefore do not get the required amount of nutrients from their diet suffer from deficiency diseases. Four deficiency diseases are:

1) Scurvy: It is caused by a deficiency of vitamin C.

2) Rickets: It is caused by the deficiency of vitamin D.

3) Anaemia: It is caused by the deficiency of iron.

4) Goitre: It is caused by the deficiency of iodine.

6. Discuss the importance of roughage in our diet.

**ANS:** Roughage is consist of undigestible carbohydrates found in fruits and vegetables and remains undigested in the entire digestive tract from mouth to anus. The roughage serves certain important functions:

1)It helps the muscles of the digestive tract in the formation of stools.

2)It prevents constipation and ensures proper bowel movement.

3)A diet that supplies adequate roughage is thought to reduce the incidence of heart diseases, bowel cancers and irritation of the bowels.

\*Complete the hots questions in your own words

\*Project: A) Make a video on identifying the components of food in your morning breakfast and their deficiency symptoms.

B) Make a collage on deficiency symptoms