

# Chapter – 1

## Components of Food

### **2marks:**

**1. Name the major nutrients in our food.**

**Answer:**

The major nutrients in our food are Carbohydrates, Proteins, Lipids, Vitamins, Minerals and dietary fibres.

**2. Name the following:**

**(a) The nutrients which mainly give energy to our body.**

**(b) The nutrients that are needed for the growth and maintenance of our body.**

**(c) A vitamin required for maintaining good eyesight.**

**(d) A mineral that is required for keeping our bones healthy.**

**Answer:**

a) Carbohydrates

b) Proteins and minerals

c) Vitamin A

d) Calcium

**3. Name two foods, each rich in:**

**(a) Fats**

**(b) Starch**

**(c) Dietary fibre**

**(d) Protein**

**Answer:**

a) Cream, butter

b) Rice, wheat

c) Whole grains, raw vegetables

d) Milk, soya bean

**4.What are the major nutrients in our food?**

**Answer:**

The major nutrients in our food are carbohydrates, proteins, fats, vitamins, and minerals.

**5.Why are carbohydrates and fats considered "energy-giving foods"**

**Answer:**

Carbohydrates and fats are considered "energy-giving foods" because they provide the body with the energy it needs for various activities and functions.

**6.Explain the role of proteins in our body.**

**Answer:**

Proteins are essential for the growth and repair of our body. They play a crucial role in building and maintaining tissues, muscles, and organs.

**7.What is a balanced diet, and why is it important?**

**Answer:**

A balanced diet is one that provides all the necessary nutrients in the right quantities, including carbohydrates, proteins, fats, vitamins, minerals, roughage, and water. It is important for maintaining good health and preventing deficiency diseases.

**8.Mention two deficiency diseases and the nutrients responsible for them.**

**Answer:**

(a) Scurvy: Caused by a deficiency of Vitamin C.

(b) Rickets: Caused by a deficiency of Vitamin D.

**5marks:**

**1.Explain the components of food and their role in the human body.**

**Answer:**

The components of food include carbohydrates, proteins, fats, vitamins, minerals, dietary fibers, and water. Carbohydrates and fats provide energy, proteins are essential for growth and repair, vitamins protect against diseases, minerals contribute to various bodily functions, dietary fibers aid digestion, and water helps in nutrient absorption and waste elimination.

**2.Describe the tests for the presence of starch, proteins, and fats in food items.**

**Answer:**

Test for Starch: Add a few drops of dilute iodine solution to a food item; a blue-black colour indicates the presence of starch.

Test for Proteins: Make a paste of the food item, add water, then add copper sulfate and caustic soda solutions. A violet colour indicates the presence of proteins.

Test for Fats: Crush a food item, wrap it in paper, and observe for an oily patch. An oily patch indicates the presence of fats.

**3.Explain why a balanced diet is essential for maintaining good health.**

**Answer:**

A balanced diet provides the necessary nutrients in the right proportions, including carbohydrates, proteins, fats, vitamins, minerals, roughage, and water. This ensures proper growth, repair, and functioning of the body, prevents deficiency diseases, and promotes overall well-being.

**4.Discuss the importance of vitamins in our diet. Provide examples of foods rich in different vitamins. (5 marks)**

**Answer:**

Vitamins play a crucial role in protecting the body against diseases and maintaining specific functions. Examples of vitamin-rich foods include:

**Vitamin A:** Carrots, mangoes.

**Vitamin B:** Liver, eggs.

**Vitamin C:** Oranges, tomatoes.

**Vitamin D:** Fish, eggs.

**Vitamin E:** Nuts, seeds.

**Vitamin K:** Green leafy vegetables.

**5.Explain the term "deficiency diseases" and provide examples.  
How can these diseases be prevented?**

**Answer:**

Deficiency diseases result from a prolonged lack of specific nutrients. Examples include scurvy (Vitamin C deficiency) and rickets (Vitamin D deficiency). These diseases can be prevented by consuming a balanced diet that includes all essential nutrients.

**6.Discuss the impact of cooking on the nutritional content of food.**

**Answer:**

Cooking improves taste and digestibility but may lead to the loss of certain nutrients. For example, excess water during cooking can cause the loss of proteins and minerals. Vitamin C is sensitive to heat. Therefore, incorporating raw fruits and vegetables in the diet can help retain their nutritional value.

**7.Why is water essential in our diet? Discuss different sources of water in our daily intake.**

**Answer:**

Water is essential for nutrient absorption, waste elimination, and overall bodily functions. Sources of water include liquids (water, milk, tea) and water present in foods, such as fresh fruits and vegetables. Additionally, the body can produce water during metabolic processes.

**4. Tick (✓) the statements that are correct.**

**(a) By eating rice alone, we can fulfil the nutritional requirements of our body. ( )**

**(b) Deficiency diseases can be prevented by eating a balanced diet. ( )**

**(c) Balanced diet for the body should contain a variety of food items. ( )**

**(d) Meat alone is sufficient to provide all nutrients to the body. ( )**

**Answer:**

(a) By eating rice alone, we can fulfil the nutritional requirements of our body. ( )

(b) Deficiency diseases can be prevented by eating a balanced diet. (✓)

(c) Balanced diet for the body should contain a variety of food items. (✓)

(d) Meat alone is sufficient to provide all nutrients to the body. ( )

**5.Fill in the blanks.**

**(a) \_\_\_\_\_ is caused by the deficiency of Vitamin D.**

**(b) Deficiency of \_\_\_\_\_ causes a disease known as beriberi.**

**(c) Deficiency of Vitamin C causes a disease known as \_\_\_\_\_.**

**(d) Night blindness is caused due to deficiency of \_\_\_\_\_ in our food.**



(e) \_\_\_\_\_ and \_\_\_\_\_ are considered "energy-giving foods" because they provide the body with the energy it needs for various activities and functions.

(f) Deficiency of \_\_\_\_\_ causes a disease known as beri-beri.

(g) A violet colour in the test for \_\_\_\_\_ indicates the presence of proteins in a food item.

(h) A balanced diet provides all the necessary nutrients in the right quantities, including \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

(i) \_\_\_\_\_ play a crucial role in protecting the body against diseases, and examples include Vitamin A, Vitamin C, and Vitamin D.

**Solution:**

(a) **Rickets** is caused by the deficiency of Vitamin D.

(b) Deficiency of **Vitamin B1** causes a disease known as beriberi.

(c) Deficiency of Vitamin C causes a disease known as **Scurvy**.

(d) Night blindness is caused due to deficiency of **Vitamin A** in our food.

(e) **Carbohydrates** and **fats** are considered "energy-giving foods" because they provide the body with the energy it needs for various activities and functions.

(f) Deficiency of **Thiamine (Vitamin B1)** causes a disease known as beri-beri.

(g) A violet colour in the test for **Proteins** indicates the presence of proteins in a food item.

(h) A balanced diet provides all the necessary nutrients in the right quantities, including **Carbohydrates**, **Proteins**, **Fats**, and **Minerals**

(i) **Vitamins** play a crucial role in protecting the body against diseases, and examples include Vitamin A, Vitamin C, and Vitamin D.

**Multiple choices:**

**1. What are the major nutrients in our food?**

**A) Carbohydrates and Proteins**

**B) Proteins and Fats**

**C) Carbohydrates, Proteins, Fats, Vitamins, and Minerals**

**D) Carbohydrates, Fats, and Roughage**

**Answer:**

**(C) Carbohydrates, Proteins, Fats, Vitamins, and Minerals**

**2. Which nutrients are considered "energy-giving foods"?**

**A) Carbohydrates and Fats**

**B) Proteins and Vitamins**

**C) Minerals and Roughage**

**D) Proteins and Fats**

**Answer:**

(A) Carbohydrates and Fats

**3.What is the main role of proteins in our body?**

**A) Provide energy**

**B) Aid digestion**

**C) Support growth and repair of tissues**

**D) Enhance vitamin absorption**

**Answer:**

(C) Support growth and repair of tissues

**4.Which test is used to check the presence of starch in a food item?**

**A) Copper sulfate test**

**B) Iodine test**

**C) Caustic soda test**

**D) Litmus test**

**Answer:**

(B) Iodine test

**5.Why is a balanced diet important for our health?**

**A) To prevent water retention**

**B) To maintain body temperature**

**C) To provide all necessary nutrients in the right proportions**

**D) To improve muscle flexibility**

**Answer:**

**C) To provide all necessary nutrients in the right proportions**

**6.Which vitamin is essential for good eyesight?**

**A) Vitamin C**

**B) Vitamin A**

**C) Vitamin D**

**D) Vitamin E**

**Answer:**

**(B) Vitamin A**

**7.What is the purpose of roughage in our diet?**

**A) Provides energy**

**B) Aids digestion**

**C) Supports growth**

**D) Enhances taste**

**Answer:**

**(B) Aids digestion**

**8.Which nutrient is sensitive to heat during cooking?**

- A) Proteins**
- B) Carbohydrates**
- C) Fats**
- D) Vitamins**

**Answer:**

(D) Vitamins

**9.What deficiency disease is caused by a lack of Vitamin C?**

- A) Rickets**
- B) Scurvy**
- C) Beri-Beri**
- D) Night blindness**

**Answer:**

(B) Scurvy

**10.What is the primary source of water in our diet?**

- A) Milk**
- B) Tea**

**C) Fresh fruits and vegetables**

**D) Soft drinks**

**Answer:**

(C) Fresh fruits and vegetables

### **Summary:**

The text explores the components of food, emphasizing the importance of a balanced diet for good health. It covers major nutrients like carbohydrates, proteins, fats, vitamins, and minerals, as well as dietary fibers and water. Practical tests for detecting these nutrients in food items are introduced.

The importance of a balanced diet is stressed for its role in providing the right proportions of essential nutrients and preventing deficiency diseases. Cooking's impact on nutritional content is discussed, highlighting the balance between taste enhancement and nutrient loss.

The significance of water in our diet is explained, focusing on its role in nutrient absorption and waste elimination. The concept of deficiency diseases is introduced, emphasizing the potential health issues resulting from prolonged nutrient deficiencies.

The text encourages readers to reflect on their diets and make informed nutritional choices. Throughout, practical activities and tests are used to engage readers in hands-on learning experiences.