



<b>Class: VI</b>	<b>Department: SCIENCE 2022 - 23</b>	<b>Date: 09.05.2022</b>
<b>Worksheet No.: 2 with answers</b>	<b>Topic: COMPONENTS OF FOOD</b>	<b>Note: A4 FILE FORMAT</b>
<b>NAME OF THE STUDENT:</b>	<b>CLASS &amp; SEC:</b>	<b>ROLL NO.</b>

**I. VERY SHORT ANSWER TYPE QUESTIONS (1M):**

1. What are nutrients? **(The essential components of food are called nutrients.)**
2. Name two energy-producing nutrients. **(Carbohydrates, Fats)**
3. Which vitamin is produced in our body when the skin is exposed to sunlight? **(Vitamin D)**
4. What is obesity? **(Eating too much of fat rich food will lead to a condition called as obesity.)**
5. In which of the deficiency diseases will you advise the intake of iodised salt? **(Goitre)**
6. What are deficiency diseases? **(Diseases that occur due to lack of nutrients over a long period are called deficiency diseases.)**
7. State few dietary sources of water. **[milk, juices, watermelon]**
8. Name the major nutrients provided by the following food items:  
a. Butter b. Chapati c. Fish d. Sugar **[Fats, Carbohydrates, Proteins, carbohydrates]**
9. Dinesh kept few groundnuts in a paper and crushed it. After sometime he noticed an oily patch on the paper. Presence of which nutrient is responsible for the oily patch? **[Fat]**
10. A few sailors after sailing for a month in sea started suffering from bleeding gums. Which nutrient do you think was missing from their diet? Name the disease they are suffering from. **[Vitamin C. Scurvy]**

For question numbers 11 to 13, two statements are given- one labelled Assertion (A) and the other labelled Reason (R).

**Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below :**

- (i) **Both A and R are true and R is the correct explanation of the assertion.**
  - (ii) **Both A and R are true but R is not the correct explanation of the assertion.**
  - (iii) **A is true but R is false.**
  - (iv) **A is false but R is true.**
11. Assertion (A): Avoid washing of vegetables and fruits after cutting and peeling.  
Reason (R): It will lead to loss of some vitamins.  
**(i) Both A and R are true and R is correct explanation of the assertion.**
  12. Assertion (A): Growing children require more protein compared to others.  
Reason (R): Proteins are obtained from both animal and plant sources.  
**(ii) Both A and R are true but R is not the correct explanation of the assertion.**

13. Assertion (A): Bread slice when tested with iodine solution gives blue-black colour.  
Reason (R): Blue black colour confirms the presence of fat.  
(iii) A is true but R is false.

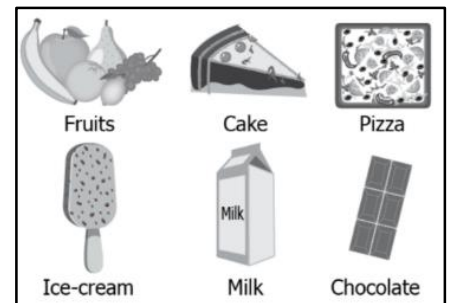
### II.PASSAGE BASED QUESTIONS:

Read the passage and answer the questions that follows:

The food we eat contains various nutrients such as carbohydrates, fats, proteins, vitamins and minerals. Carbohydrates and fats are energy giving foods whereas proteins are body building foods. One might be eating enough food but not necessarily the right type of food. If our diet does not contain appropriate amounts of any of the nutrients, our body starts showing signs and symptoms of deficiency diseases. The diet that contains all the different types of nutrients in correct amount is termed as a balanced diet. Such a diet also includes enough water and roughage.

- i) An individual consumes a diet rich in fats, carbohydrates, and proteins but ignores to incorporate adequate amount of fluids. What will be the likely effect to the body if the individual continues with the same diet?
- The body will show rapid growth and development.
  - The body will eliminate all the nutrients from body.
  - The body will reduce the output of sweat and urine.**
  - The body will readily digest the consumed food.

- ii) The picture alongside shows the list of some food items. Which of these food items is important to be included in a balanced diet?



- Fruits, milk**
- Cake, fruits
- Pizza, chocolate
- Ice-cream, cake

- iii) The table lists some food items. Which option correctly indicates a balanced diet?

- Samosa, poori, sweets, sweets
- Poori, jaggery, banana, cold drinks
- Soya bean, sweets, spinach, cold drinks
- Spinach, jaggery, banana, soya bean**

Soyabean,	Sweets
Spinach,	Poori
Samosa,	Jaggery
Banana,	Cold drinks

- iv) Roshan wants to build his muscles and thus joined a gymnasium. What changes should Roshan make in his diet to build strong muscles?

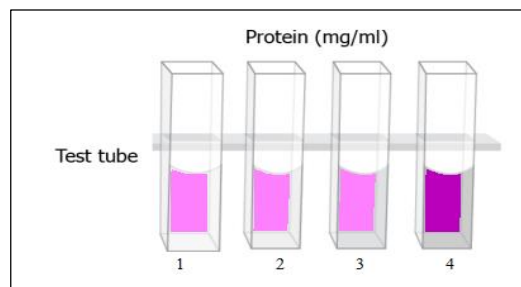
- Eat more carbohydrate rich foods.
- Eat more protein rich foods.**
- Eat more vitamin rich foods.
- Eat more fat rich foods.

### III. CASE STUDY BASED QUESTION

1) A student performed a test for the presence of nutrients in Cornbread. He placed a piece of Cornbread in a test tube and added 2-3 drops of dilute iodine solution. He observed the appearance of blue-black colour. What can be concluded from this observation?

- a) Presence of fat
- b) Presence of protein
- c) Presence of vitamins
- d) Presence of carbohydrate**

2) A group of students conduct an experiment to study the amount of protein in four different food items. They placed the paste of each item in different test tube and added a few drops of copper sulphate and caustic soda solution to each of the test tubes. After shaking, the test tubes were allowed to stand for a few minutes. The appearance of violet colour indicates the presence of proteins. The observation from the experiment is as shown. Based on the observations, which test tube has food item with maximum protein content?



- a) Test tube 1
- b) Test tube 2
- c) Test tube 3
- d) Test tube 4**

3) An individual consumes a diet rich in fats, carbohydrates, and proteins but ignores to incorporate adequate amount of fluids. What will be the likely effect to the body if the individual continues with the same diet?

- a) The body will show rapid growth and development.
- b) The body will eliminate all the nutrients from body.
- c) The body will reduce the output of sweat and urine.
- d) The body will readily digest the consumed food.

### IV. a) SHORT ANSWER TYPE QUESTIONS (2 M):

1. Name the major nutrients present in the food. [The food we eat contains certain chemical substances called nutrients. The major nutrients present in our food are carbohydrates, fats, proteins, vitamins and minerals]
2. Why are fats also called 'energy banks' of our body? [Fats provide more energy. The excess fats get stored in our body and will be broken down to release energy when needed.]
3. Name two sources of each plant and animal fats. [plant sources-vegetable oil, nuts and animal sources-meat, butter]

4. What is roughage? Why is it necessary to include roughage containing food in our diet? [Roughage or dietary fibres is mainly provided by plant products. It does not provide any nutrient to our body, but is an essential component of our food. It adds bulk to our food. It helps our body to get rid of undigested food.]
5. What is a balanced diet? [The diet that contains all the different types of nutrients in correct amounts is termed as a **balanced diet**. Such a diet also includes enough water and roughage,]
6. Why do we consider proteins as the ‘body building food’? [Proteins are required for making new cells. Thus, it helps in the growth of a person and also development of muscles.]
7. Why does obesity occur? [The condition caused due to the deposition of fats in our body is termed as obesity. It occurs due to the excessive intake of fatty foods. Obesity leads to weight gain.]
8. Write the symptoms of disease caused due to the deficiency of proteins in the diet. [Stunted growth, swelling of face, discolouration of hair, skin diseases and diarrhoea.]
9. People of a particular region eat a diet of only polished rice. They were suffering from extreme tiredness and weak muscles. Name the disease. How can it be cured? [Beriberi, Supplementing Vitamin B1]

#### **IV. b) SHORT ANSWER TYPE QUESTIONS (3 M)**

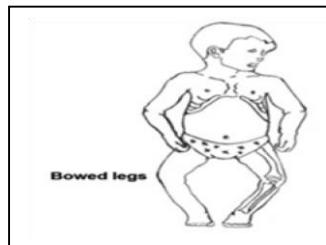
1. In Africa, due to shortage of food, children do not get enough of protein and energy giving food. Explain the symptoms of the disease. [Person becomes very lean and thin and so weak that he/she may not even be able to move.]
2. Give reasons:
  - a) Food should not be overcooked. [The essential nutrients like vitamin C will get destroyed on heating, Taste of the food will be affected.]
  - b) We should prefer consuming whole fruit instead of fruit juices. [Fruits contain dietary fibre whereas fruit juices do not contain fibres.]
  - c) An athlete is usually given glucose after a race. [Glucose provide instant energy.]
  - d) Our body will not function without sufficient water. [Water is essential for absorbing nutrients from the food and also helps in the removal of waste materials from our body in the form of urine and sweat.]
3. Minerals and vitamins are needed in very small quantities compared to other nutrients. Yet they are important part of a balanced diet. Explain. [Protects our body from diseases, helps in growth and maintaining good health.]

## V. LONG ANSWER TYPE QUESTIONS (5 M):

1. a. Observe the figure A and B answer the following questions:



**A**



**B**

- b. Identify the disease the person is suffering from in A and B. [A-Goitre, B-Rickets]
- c. The deficiency of which mineral/vitamin leads to this condition.  
[A-Iodine, B-Vitamin D]
- d. What are the symptoms of the disease shown in A and B? [A-Glands in the neck appear swollen, mental disability in children, B- Bones become soft and bent]
- e. Explain why people who eat sea food do not suffer from goitre. [Sea food is a rich source of iodine and prevents the occurrence of goitre.]
- f. Ravi wants to know whether potato chips contains starch or not. How can he identify the starch content in his food item? [Take the food sample and add a few drops of iodine solution to it. If the colour changes to blue-black, we confirm that the given food sample is rich in starch.]
2. Boojho was having difficulty in seeing things in dim light. The doctor tested his eyesight and prescribed a particular vitamin supplement. He also advised him to include a few food items in his diet.
- Which deficiency disease is he suffering from? [Loss of vision/Night blindness]
  - Which nutrient may be lacking in his diet? [Vitamin A]
  - Suggest any two food items that he should include in his diet. [Carrot and papaya]
3. Complete the blanks in the given table:

SL NO	VITAMIN/MINERAL	DEFICIENCY DISEASE/DISORDER	SYMPTOMS
a.	Vitamin A	Loss of vision	Poor vision, loss of vision in darkness.
b.	Iron	Anaemia	Weakness
c.	Vitamin D	Rickets	Bones become soft and bent
d.	Calcium	Bone and tooth decay	Weak bones, tooth decay

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