

NCERT Exemplar Solutions CBSE Class 6

Science (Biology)

Chapter 2- Components of Food Exercise

MULTIPLE-CHOICE QUESTIONS

1. Which one of the following food items does not provide dietary fibre?

- a) Whole grains
- b) Whole pulses
- c) Fruits and vegetables
- d) Milk

Ans: The correct option is d) Milk. Milk is an animal product and is obtained from cows, buffalo, goats.

2. Which of the following sources of protein is different from others?

- a) Peas
- b) Gram
- c) Soybeans
- d) Cottage cheese (paneer)

Ans: The correct option is d) Cottage cheese.

3. Which of the following nutrients is not present in milk?

- a) Protein

b) Vitamin C

c) Calcium

d) Vitamin D

Ans: The correct option is (b) Vitamin C

4. Read the food items given below:

i) Wheat

ii) Ghee

iii) Iodised salt

iv) Spinach (palak)

Which of the above food items are “energy-giving foods”?

a) (i) and (iv)

b) (ii) and (iv)

c) (i) and (ii)

d) (iii) and (iv)

Ans: The correct option is c) (i) and (ii).

5. Read the following statements about diseases.

(i) They are caused by germs.

(ii) They are caused due to a lack of nutrients in our diet.

(iii) They can be passed on to another person through contact.

(iv) They can be prevented by taking a balanced diet.

Which pair of statements best describes a deficiency disease?

- (a) (i) and (ii)
- (b) (ii) and (iii)
- (c) (ii) and (iv)
- (d) (i) and (iii)

Ans: The correct option is c) (ii) and (iv)

6. Given below are the steps to test the presence of proteins in a food item:

- (i) Take a small quantity of the food item in a test tube, add 10 drops of water to it and shake it.
- (ii) Make a paste or powder of food to be tested.
- (iii) Add 10 drops of caustic soda solution to the test tube and shake well.
- (iv) Add 2 drops of copper sulphate solution to It.

Which of the following is the correct sequence of the steps?

- (a) i, ii, iv, iii
- (b) ii, i, iv, iii
- (c) ii, i, iii, iv
- (d) iv, ii, i, iii

Ans: The correct option is b) ii, i, iv, iii.

VERY SHORT ANSWER

7. Unscramble the following words related to components of food and write them in the space provided.

- a) Reinpot
- b) menliars
- c) tivanmi
- d) bocatradhyer
- e) nitesturn
- f) tfa

Ans: The correct words are

- a) Protein
- b) Minerals
- c) Vitamin
- d) Carbohydrate
- e) Nutrients
- f) Fat

8. Which of the following food items does not provide any nutrients?

Milk, water, Orange juice, Tomato soup

Ans: Water does not provide any nutrients.

SHORT ANSWER QUESTIONS

9. Fill in the blanks from the list of words given below: (carbohydrate, fat, protein, starch, sugar, Vitamin A, Vitamin C, roughage, balanced diet, obesity, goitre)

(a) Egg yolk is rich in _____ and egg albumin is rich _____.

Ans: Fat, Protein

(b) Deficiency diseases can be prevented by taking a _____.

Ans: Balanced diet

(c) Eating too many fat-rich foods may lead to a condition called _____.

Ans: Obesity

(d) The component of food that does not provide any nutrient to our body and yet is essential in our food is _____.

Ans: Roughage

(e) The vitamin that gets easily destroyed by heating during cooking is _____.

Ans: Vitamin C

10. Read the items of food listed below. Classify them into carbohydrate-rich, protein-rich and fat-rich foods and fill them in the given table.

Moong dal, fish, mustard oil, sweet potato, milk, rice, egg, beans, butter, buttermilk (chhachh), cottage cheese (paneer), peas, maize, white bread.

Ans: The classification is as done below:

Carbohydrate Rich food items	Protein-rich food items	Fat rich food items
Sweet potato	Moong dal	Mustard oil
Maize	Fish	Milk
Rice	Egg	Egg
White bread	Beans, pea	Butter
	Milk, buttermilk	Fish
	Cottage cheese	

11. Tasty food is not always nutritious and nutritious food may not always be tasty to eat. Comment with examples.

Ans: Foods like burgers, potato chips, pizza is delicious but are not nutritious. These contain a lot of refined flour, oil and spices that are not for the liver. Whereas food like boiled vegetables, juices, pulses etc are not always tasty but they are highly rich in nutrients like vitamins and proteins that keep us healthy.

12. While using iodine in the laboratory, some drops of iodine fell on Paheli's socks and some fell on her teacher's saree. The drops of iodine on the saree turned blue-black while their colour did not change on the socks. What can be the possible reason?

Ans: Iodine solution turned blue-black because the saree worn by Paheli's teacher must have contained starch and starch turns blue-black when exposed to iodine solution. Paheli's socks would have been free from starch that's why her socks did not change colour.

13. Paheli and Boojho peeled some potatoes and cut them into small pieces. They washed and boiled them in water. They threw away the excess water and fried them in oil adding salt and spices. Although the potato dish tasted very good, its nutrient value was less. Suggest a method of cooking potatoes that will not lower the nutrients in them.

Ans: Potatoes are rich in nutrients like carbohydrates, vitamins, dietary fibre and minerals. Potato peel provides extra dietary fibre and nutrients to the body. A method of cooking potatoes that will not lower their nutrient value is:

- i. Wash the potatoes thoroughly
- ii. Cut the potatoes into small slices and cook them in the cooking pot with oil, spices and salt. Cover up the pot while cooking. This method maintains the nutrients of potatoes.

14. Paheli avoids eating vegetables but likes to eat biscuits, noodles and white bread. She frequently complains of stomachache and constipation. What are the food items that she should include in her diet to get rid of the problem? Give a reason for your answer.

Ans: Paheli should avoid eating biscuits and other such junk food as they contain maida (refined flour) which has a minimum quantity of fibre or roughage. Instead, she should start eating whole pulses, whole grain food, fresh fruits and vegetables especially green ones to get rid of constipation as they have a higher amount of nutrients and dietary fibre or roughage.

15. (a) List all those components of food that provide nutrients.

(b) Mention two components of food that do not provide nutrients.

Ans: a) Components of food that provide nutrients are Carbohydrates, vitamins and minerals, fats, proteins.

b) Two components of food that do not provide nutrients are roughage and water.

16. 'Minerals and vitamins are needed in very small quantities by our body as compared to other components, yet they are an important part of a balanced diet.' Explain the statement.

Ans: We need minerals and vitamins, however, in very less amount because

- i. They protect us from catching many diseases and fighting against many diseases.
- ii. They help us in maintaining good health.
- iii. The deficiency of minerals and vitamins leads to many deadly diseases.

17. Water does not provide nutrients, yet it is an important component of food.' Explain?

Ans: Water is very important for our body because:

- i. Water helps our organs to absorb nutrients from food.
- ii. Water helps in the removal of wastes in the form of urine and sweat.
- iii. Water helps our body in maintaining temperature.

LONG ANSWER QUESTIONS

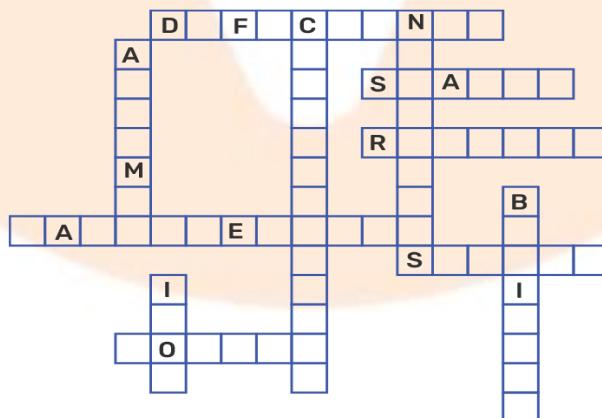
18. Boojho was having difficulty seeing things in dim light. The doctor tested his eyesight and prescribed a particular vitamin supplement. He also advised him to include a few food items in his diet.

- (a) Which deficiency disease is he suffering from?
- (b) Which food component may be lacking in his diet?
- (c) Suggest some food items that he should include in his diet. (Any four)

Ans: a) Boojho is suffering from night blindness.

- b) Absence or minimum amount of vitamin A in the body causes night blindness.
 c) He should eat papaya, carrot, green leafy vegetables like spinach, fish oil etc.

19. Solve the cross-word puzzle given below from the clues given below



Across

1. Lack of nutrients in our diet over a long period causes these diseases (10)
 2. Rice and potato are rich in this type of carbohydrate (6)
 3. Deficiency disease in bones making it become soft and bent (7)
 4. The diet that provides all the nutrients that our body needs, in the right quantities, along with an adequate amount of roughage and water (8. 4)
 5. Deficiency disease with bleeding gums (6)
 6. Disease caused due to deficiency of iodine (6)

Down

- 7. Starch and sugar in our food are rich in this type of energy-giving nutrient (13)**

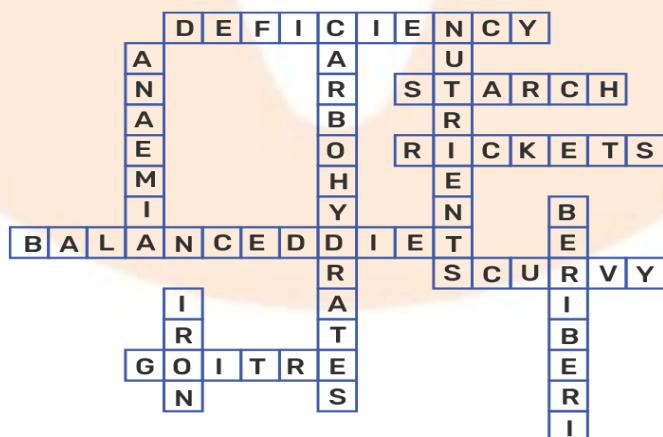
8. The term is given to the useful components of food (9)

9. The disease caused by deficiency of iron in diet (7)

10. Green leafy vegetables, liver and apples are rich in this mineral (4)

11. Deficiency disease caused due to lack of vitamin B1, in the diet (8)

Ans:



20. Observe the items given below carefully and answer the questions that follow:



- a) Food item rich in carbohydrates is (i) _____.
- b) Egg is a rich source of protein, the mineral (ii) _____ and vitamin (iii) _____.
- c) (iv) _____ is a rich source of fat.
- d) Milk provides (v) _____ vitamin D and (vi) _____ (mineral)
- e) (vii) _____ (fruit) is a rich source of vitamin A.
- f) Spinach is a good source of the mineral (viii) _____.
- g) Both eggs and (xi) _____ are rich in (x) _____.

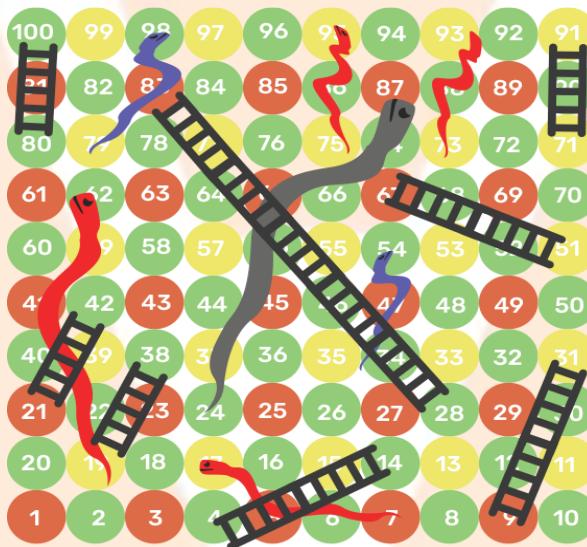
Ans:

- a) i. Chapati.
- b) ii. Phosphorus iii. Vitamin D
- c) iv. Butter
- d) v. Protein, vi. Calcium
- e) vii. Papaya

- f) viii. iron
 g) ix. Peas, x. Proteins

21. SNAKES AND LADDERS

Make a board game just like 'snakes and ladders' with 10 x 10 grid boxes. The mouth of the snake will represent the faulty food habit or faulty method of cooking. Its tail will represent the deficiency disease caused or loss of any nutrient in food. Similarly, the box at the base of a ladder will represent healthy food habits or healthy methods of cooking. Its upper end will represent the beneficial effect of that habit. Complete the board and play with your friends.



Ans: The terms to name at the mouth and tails of snakes at different grid numbers are as follows:

The mouth of the snake:

- 17. Eating food deficient in protein
- 54. Lack of exposure to sunlight
- 62. Absence of iron in the diet
- 64. Intake of fibre rich food in a smaller amount
- 83. Excessive cooking of food
- 95. Not taking yellow fruits and green leafy vegetables.

- 98. Not using iodised salt for cooking

The tail of snake:

- 7. Kwashiorkor
- 34. Rickets
- 19. Anaemia
- 60. Constipation
- 73. Vitamin C
- 75. Vitamin A deficiency
- 79. Goitre

The base of the ladder:

- 4. Intake of milk, cheese and green vegetables.
- 9. Regular consumption of spinach and apple.
- 19. Eating carrots, papaya and banana.
- 21. Eating whole grains, pulses and fruits.
- 51. Drinking plenty of water
- 71. Intake of citrus fruits
- 80. Avoiding junk foods.

The upper end of the ladder:

- 14. Health, bones and teeth
- 38. Sufficient haemoglobin
- 42. Proper bowel movements
- 67. Body remains hydrated
- 91. Healthy gums
- 100. Staying fit and healthy.