

Food, Nutrition and Health

Science · Class 5 · Topic-wise Practice Worksheet

TIME 40 minutes	QUESTIONS 18	TOTAL MARKS 24	MAX. SCORE ___ / 24
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Name: _____ Class/Sec: _____ Date: _____

INSTRUCTIONS

- There are **18 questions** in this worksheet. All questions are compulsory.
- Each question has four options (A), (B), (C) and (D). Exactly **one** option is correct.
- Questions 1–15 carry **1 mark** each. Questions 16–18 (Achievers Section) carry **3 marks** each.
- There is no negative marking. Do not use a calculator.
- Study every diagram and table carefully before answering.

Section A — Nutrients and Their Work

Q1–Q7 · 1 mark each

- Which nutrient is the body's main source of energy?
 (A) Carbohydrates (B) Proteins
 (C) Vitamins (D) Minerals
- Foods such as pulses, eggs, fish and milk are called body-building foods because they are rich in _____.
 (A) Fats (B) Roughage
 (C) Starch (D) Proteins
- Bleeding gums and slow healing of wounds are signs of a deficiency of _____.
 (A) Vitamin C (B) Vitamin A
 (C) Vitamin D (D) Iron
- Which mineral is needed in large amounts for strong bones and teeth?
 (A) Iron (B) Iodine
 (C) Calcium (D) Sodium
- The part of our food that cannot be digested but helps to keep the digestive system clean is called _____.
 (A) Mineral (B) Protein
 (C) Fat (D) Roughage
- A person who feels weak and tired all the time and looks pale is most likely short of _____.
 (A) Iron (B) Calcium
 (C) Roughage (D) Water
- Which vitamin can our body make on its own when the skin is exposed to sunlight?
 (A) Vitamin A (B) Vitamin C
 (C) Vitamin D (D) Vitamin B

8. The bar graph shows the energy given by 100 g of four different foods. A runner wants the food that will give her the **most energy** from the same 100 g. Which food should she choose?

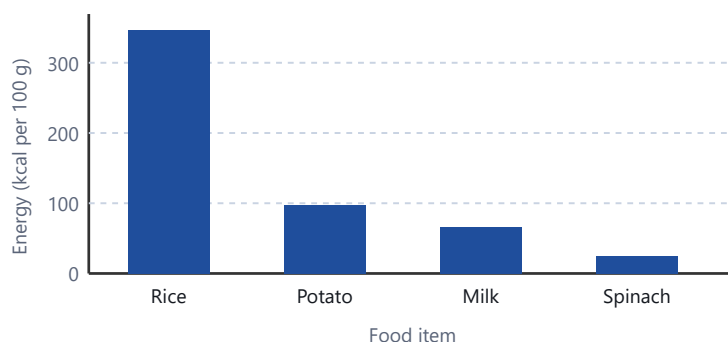


Fig. 8.1 — Energy content of four foods

- (A) Milk
(B) Potato
(C) Spinach
(D) Rice
9. In the table below, which row is **incorrectly** matched?

Row	Food	Nutrient present in plenty
(A)	Butter	Fat
(B)	Bread	Carbohydrate
(C)	Orange	Protein
(D)	Soyabean	Protein

Table 9.1 — Foods and nutrients

- (A) Row (A)
(B) Row (B)
(C) Row (C)
(D) Row (D)
10. **Assertion (A):** Fruits and vegetables should be washed thoroughly before they are eaten.
Reason (R): Fruits and vegetables are rich in vitamins and minerals.
Choose the correct option.
- (A) Both A and R are true, and R explains A
(B) Both A and R are true, but R does not explain A
(C) A is true but R is false
(D) A is false but R is true
11. A few drops of iodine solution are put on a slice of raw potato. The potato turns blue-black. This shows that potato contains _____.
(A) Starch
(B) Protein
(C) Fat
(D) Vitamin C
12. Pickles keep for months without spoiling mainly because salt and oil _____.
(A) Add extra vitamins to the food
(B) Stop the growth of the microbes that spoil food
(C) Make the food taste sweeter
(D) Cool the food down
13. Why is it advised to boil water before drinking it during the rainy season?
(A) Boiling adds minerals to the water
(B) Boiling makes water sweeter
(C) Boiling kills the disease-causing germs in the water
(D) Boiling removes the water's colour

14. A boy finds it very hard to see in dim light after sunset. Which food should be added to his diet?

(A) Sugar

(B) Rice

(C) Butter

(D) Carrots and papaya

15. Ravi's lunch is rice, chapati and a boiled potato. Which one addition would make his meal closest to a **balanced diet**?

(A) A dal and a green vegetable

(B) More rice

(C) A glass of sugar syrup

(D) A second chapati

Achievers Section

Q16–Q18 · 3 marks each

16. Consider the following statements.

(i) A balanced diet is the same for every person, whatever their age or work.

(ii) Vitamins and minerals are needed in small quantities but are essential for good health.

(iii) Overcooking vegetables destroys some of the vitamins in them.

Which of the statements is/are correct?

(A) (i) and (ii) only

(B) (ii) and (iii) only

(C) (i) and (iii) only

(D) All three

17. Match each deficiency disease in Column I with its cause in Column II.

Column I	Column II
(P) Goitre	(1) Lack of vitamin C
(Q) Rickets	(2) Lack of iodine
(R) Scurvy	(3) Lack of iron
(S) Anaemia	(4) Lack of vitamin D

Table 17.1

(A) P-4, Q-2, R-3, S-1

(B) P-2, Q-4, R-1, S-3

(C) P-2, Q-1, R-4, S-3

(D) P-3, Q-4, R-1, S-2

18. Two identical slices of bread are left in two dishes for four days. Slice X is kept damp in a warm, dark cupboard; slice Y is kept dry in a closed tin. After four days, slice X is covered with greenish-black mould while slice Y is unchanged. Which conclusion is best supported by this experiment?

(A) Bread always turns mouldy after four days

(B) Moulds grow well when moisture and warmth are available

(C) Darkness alone causes mould to grow

(D) Moulds can grow only on bread

Answer Key

1	A	2	D	3	A	4	C	5	D
6	A	7	C	8	D	9	C	10	B
11	A	12	B	13	C	14	D	15	A
16	B	17	B	18	B				

Solutions

1. Answer: (A) Carbohydrates

Carbohydrates such as rice, wheat, potato and sugar are broken down quickly to release energy, so they form the largest part of a normal diet. Fats also give energy, but they are used mainly as a store.

2. Answer: (D) Proteins

Proteins are needed to build new cells, so they help the body grow and repair worn-out or injured parts. That is why they are called body-building foods.

3. Answer: (A) Vitamin C

A lack of vitamin C causes scurvy, whose signs include swollen and bleeding gums, loose teeth and wounds that take a long time to heal. Citrus fruits, amla and guava are rich in vitamin C.

4. Answer: (C) Calcium

Calcium is the mineral that hardens bones and teeth. Milk, curd, cheese and green leafy vegetables are good sources. Iron is needed for blood and iodine for the thyroid gland.

5. Answer: (D) Roughage

Roughage, or dietary fibre, comes from the tough parts of fruits, vegetables and whole grains. It is not digested, but it adds bulk to the food and helps waste move easily through the intestines, preventing constipation.

6. Answer: (A) Iron

Iron is needed to make haemoglobin, the red substance in blood that carries oxygen. Too little iron causes anaemia, whose signs are paleness, weakness and constant tiredness. Green leafy vegetables, jaggery and dates are good sources.

7. Answer: (C) Vitamin D

Sunlight falling on the skin allows the body to make vitamin D, which helps it absorb calcium from food. This is why children who play outdoors in the morning sun are less likely to develop rickets.

8. Answer: (D) Rice

The bar for rice is by far the tallest, reaching about 345 kcal, while potato gives about 97 kcal, milk about 67 kcal and spinach only about 26 kcal. Rice therefore supplies the most energy per 100 g because it is very rich in carbohydrates.

9. Answer: (C) Row (C)

An orange is valued for its vitamin C, not for protein — it contains hardly any. Butter is almost pure fat, bread is rich in starch (a carbohydrate) and soyabean is one of the richest plant sources of protein.

10. Answer: (B) Both A and R are true, but R does not explain A

Both statements are true, but they are not connected. The real reason for washing is to remove dust, germs and traces of pesticide from the surface, which could otherwise cause stomach infections such as diarrhoea. Being rich in vitamins and minerals is a true fact about fruits and vegetables, but it is not the reason they must be washed.

11. Answer: (A) Starch

Iodine solution is the standard test for starch: it changes from brown to blue-black wherever starch is present. Since potato is rich in starch, the slice turns blue-black. Fat is tested with a paper spot test and protein with copper sulphate and caustic soda.

12. Answer: (B) Stop the growth of the microbes that spoil food

Food spoils because bacteria and moulds grow on it. A heavy dose of salt draws water out of these microbes and a layer of oil keeps air away, so they cannot grow. Drying, freezing and boiling work in the same way — by making conditions unsuitable for microbes.

13. Answer: (C) Boiling kills the disease-causing germs in the water

Rainwater running over the ground carries germs into wells and pipelines, so drinking water may be contaminated. Boiling water for a few minutes kills these germs and prevents diseases such as cholera, typhoid and diarrhoea. Boiling does not add minerals — in fact it removes nothing but the germs.

14. Answer: (D) Carrots and papaya

Difficulty in seeing in dim light is called night blindness, and it is caused by a shortage of vitamin A. Carrots, papaya, mango and green leafy vegetables are rich in vitamin A. Sugar, butter and rice supply energy but almost no vitamin A.

15. Answer: (A) A dal and a green vegetable

Rice, chapati and potato are all carbohydrate-rich, so the meal already has plenty of energy but almost no protein, vitamins or minerals. Adding dal supplies protein and a green vegetable supplies vitamins, minerals and roughage. Every other option only adds more carbohydrate.

16. Answer: (B) (ii) and (iii) only

Statement (i) is false — a growing child, a labourer and an elderly person all need different amounts of food, so a balanced diet differs from person to person. Statement (ii) is true; vitamins and minerals are called protective foods because tiny amounts keep the body working properly. Statement (iii) is true; vitamin C in particular is destroyed by prolonged heating, which is why vegetables should be lightly cooked. Hence (ii) and (iii).

17. Answer: (B) P-2, Q-4, R-1, S-3

Goitre, a swelling in the neck, is caused by a lack of iodine (2) — which is why iodised salt is sold. Rickets, in which bones stay soft and bend, is caused by a lack of vitamin D (4). Scurvy, with bleeding gums, is caused by a lack of vitamin C (1). Anaemia is caused by a lack of iron (3). Hence P-2, Q-4, R-1, S-3.

18. Answer: (B) Moulds grow well when moisture and warmth are available

The two slices differ in moisture, so the moisture must be responsible for the difference in the result. Mould spores are present in the air everywhere, but they can only grow when they get moisture and warmth. Option (A) is contradicted by slice Y, and (C) is wrong because darkness was not the only difference. This is also why food is preserved by drying.