

Food and Its Components

Science · Class 6 · Topic-wise Practice Worksheet

TIME 45 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. Study every diagram and table carefully.

Section A — Scientific Reasoning

Q1–Q8 · 1 mark each

- Carbohydrates and fats are together called _____ foods.

(A) Energy-giving
(B) Body-building

(C) Protective
(D) Roughage
- Which test is used to show the presence of **starch** in a food sample?

(A) Lime water turns milky
(B) Copper sulphate and caustic soda turn violet

(C) A grease spot appears on paper
(D) Iodine solution turns blue-black
- A deficiency of vitamin B₁ causes the disease _____.

(A) Beriberi
(B) Scurvy

(C) Rickets
(D) Goitre
- Which of these is the richest source of **roughage**?

(A) Butter
(B) Sugar

(C) Whole wheat flour
(D) Boiled egg
- The disease caused by a severe shortage of protein in children is _____.

(A) Scurvy
(B) Night blindness

(C) Anaemia
(D) Kwashiorkor
- Which mineral is needed for the proper working of the thyroid gland?

(A) Iodine
(B) Calcium

(C) Iron
(D) Phosphorus
- Which nutrient forms the largest part by weight of most foods and of our body?

(A) Protein
(B) Water

(C) Fat
(D) Vitamins
- Which of these vitamins is **lost most easily** when vegetables are boiled for a long time?

(A) Vitamin A
(B) Vitamin D

(C) Vitamin C
(D) Vitamin K

9. In the table below, which row is **incorrectly** matched?

Row	Deficiency disease	Nutrient lacking
(A)	Night blindness	Vitamin A
(B)	Scurvy	Vitamin C
(C)	Anaemia	Calcium
(D)	Rickets	Vitamin D

Table 9.1 — Deficiency diseases

- (A) Row (A)
(C) Row (C)

(B) Row (B)
(D) Row (D)

10. A food sample is crushed and shaken with water. A few drops of copper sulphate solution and caustic soda are added, and the mixture turns violet. What does the sample contain?

(A) Starch
(C) Fat

(B) Vitamin C
(D) Protein

11. A person's diet consists mainly of polished rice with very little else. Which disease is he most likely to develop?

(A) Beriberi
(C) Goitre

(B) Rickets
(D) Scurvy

12. Why are sprouted pulses considered more nutritious than dry ones?

(A) Sprouting adds fat to them
(C) Sprouting removes all their protein

(B) Sprouting increases their vitamin content and makes them easier to digest
(D) Sprouting makes them sweeter

13. Which meal below is closest to a **balanced diet**?

(A) Rice, chapati and boiled potato
(C) Chapati, dal, green vegetable, curd and a fruit

(B) Fried chips and a cold drink
(D) Two bowls of rice and sugar

14. Two people eat the same amount of food, but one does heavy physical work and the other sits at a desk. Why does the labourer need more food?

(A) Because he is taller
(C) Because he digests food more slowly

(B) Because he drinks more water
(D) Because his muscles use up much more energy

15. Milk is often called a nearly complete food because it contains ____.

(A) Almost all the nutrients except roughage and enough iron
(C) Only fat and water

(B) Only protein
(D) Only vitamins

16. Consider the following statements.

- (i) A balanced diet is the same for a growing child and an elderly person.
- (ii) Roughage supplies no nutrients but is still essential.
- (iii) Vitamins are needed in small quantities but their absence causes disease.

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. A student tests four food samples. The results are shown below. Which sample is most likely to be a **boiled egg white**?

Sample	Iodine test	Copper sulphate + caustic soda	Paper spot test
P	Blue-black	No change	No spot
Q	No change	Violet	No spot
R	No change	No change	Translucent spot
S	Blue-black	Violet	No spot

Table 17.1 — Results of food tests

- (A) P
- (B) Q
- (C) R
- (D) S

18. Why do doctors advise eating fruits and salads raw rather than cooked?

- (A) Raw food has more fat
- (B) Cooking destroys some vitamins and dissolves minerals into the cooking water
- (C) Raw food is easier to chew
- (D) Cooking adds harmful protein

Answer Key

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

Solutions

1. Answer: (A) Energy-giving

Carbohydrates and fats both release energy when broken down in the body, so they are **energy-giving** foods. Fats give roughly twice as much energy per gram as carbohydrates.

2. Answer: (D) Iodine solution turns blue-black

Iodine solution turns blue-black wherever starch is present. The violet colour test is for protein and the translucent grease spot test is for fat.

3. Answer: (A) Beriberi

A shortage of vitamin B₁ (thiamine) causes **beriberi**, in which the muscles become weak and wasted. Scurvy comes from a lack of vitamin C and rickets from a lack of vitamin D.

4. Answer: (C) Whole wheat flour

Whole wheat flour keeps the fibrous bran of the grain, so it is rich in roughage. Butter, sugar and eggs contain no fibre at all.

5. Answer: (D) Kwashiorkor

Kwashiorkor is caused by a severe lack of protein. The child's growth stops, the face and legs swell, and the hair loses colour. Marasmus is caused by a shortage of both protein and energy.

6. Answer: (A) Iodine

The thyroid gland needs **iodine** to make its hormone. Too little iodine causes goitre, a swelling in the neck, which is why iodised salt is recommended.

7. Answer: (B) Water

Water makes up about two-thirds of the human body. It carries nutrients and waste around the body and helps control temperature, although it supplies no energy.

8. Answer: (C) Vitamin C

Vitamin C dissolves in water and is destroyed by heat, so prolonged boiling removes much of it. This is why vegetables should be lightly cooked and salads eaten raw.

9. Answer: (C) Row (C)

Anaemia is caused by a shortage of **iron**, which is needed to make haemoglobin — not of calcium. Calcium deficiency weakens the bones and teeth. The other three rows are correct.

10. Answer: (D) Protein

The violet colour in this test shows the presence of **protein**. Iodine would be used for starch and a paper spot test for fat.

11. Answer: (A) Beriberi

Polishing removes the outer layer of the rice grain, where most of the vitamin B₁ is stored. A diet of polished rice alone therefore leads to **beriberi**.

12. Answer: (B) Sprouting increases their vitamin content and makes them easier to digest

During germination the seed becomes chemically active. **Its vitamin content rises and the stored food is partly broken down**, which makes sprouts easier to digest as well as richer in vitamins.

13. Answer: (C) Chapati, dal, green vegetable, curd and a fruit

A balanced diet supplies every nutrient in the right amount. Chapati gives carbohydrate, dal gives protein, the vegetable and fruit give vitamins, minerals and roughage, and curd gives protein and calcium. The other three meals are almost entirely carbohydrate or fat.

14. Answer: (D) Because his muscles use up much more energy

The amount of food a person needs depends on how much energy their body uses. A labourer's **muscles use up much more energy**, so he needs more energy-giving food than someone doing desk work.

15. Answer: (A) Almost all the nutrients except roughage and enough iron

Milk supplies protein, fat, carbohydrate (lactose), calcium and several vitamins — **almost every nutrient except roughage and enough iron**. That is why it is called a nearly, but not entirely, complete food.

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

Statement (i) is false — a growing child needs proportionally more body-building food than an elderly person, so a balanced diet differs with age, sex and activity. Statement (ii) is true; roughage is not digested but it adds bulk and prevents constipation. Statement (iii) is true. Hence **(ii) and (iii)**.

17. Answer: (B) Q

Egg white is almost pure protein — it has no starch and no fat. So the right sample must give a violet colour with copper sulphate and caustic soda, no colour with iodine and no grease spot. That is **Q**. P contains only starch, R only fat, and S contains both starch and protein.

18. Answer: (B) Cooking destroys some vitamins and dissolves minerals into the cooking water

Several vitamins, especially vitamin C and the B group, are destroyed by heat, and water-soluble minerals leach into the cooking water and are thrown away with it. Eating fruits and salads raw keeps those nutrients, so **cooking destroys some vitamins and dissolves minerals into the cooking water**.