

NCERT TEXTBOOK QUESTIONS WITH SOLUTIONS

1. Pick the odd one out and give reasons.

- (i) Jowar, Bajra, Ragi, Chana
- (ii) Kidney beans, Green gram, Soya bean, Rice.

Ans. (i) Chana is odd one as it's a pulse while jowar, bajra and ragi are millets (cereal).

(ii) Rice is odd one as it's a cereal grain while kidney bean, soya bean, green bean are pulses or legumes.

2. Discuss traditional versus modern culinary practices in India.

Ans. Traditional and modern culinary practices in India showcase a rich tapestry of culture, ingredients and techniques as traditional Indian cooking relies heavily on local, seasonal ingredients. Spices, grains and vegetables.

Methods like slow cooking, steaming and fermentation are common. Tandoors, clay pots and open flames are often used

Each region has distinct culinary traditions like the use of mustard oil in Bengal or coconut in South Indian cuisine – reflecting local geography and climate whereas **modern Indian cuisines** incorporates international flavours and techniques, leading to fusion dishes that blend Indian spices with global ingredients.

There's a growing focus on health and nutrition, with a rise in vegetarian and vegan options, as well as gluten-free and organic choices. With busy lifestyle, many modern cooks prefer quick, easy recipes and pre-packaged ingredients. Technology, like microwaves and pressure cookers are widely used.

3. A teacher says that good food may act as medicine. Ravi is curious about this statement and has some questions for his teacher. List at least two questions that he can ask.

Ans. Ravi can ask the following question –

(i) How can certain food contribute to improving health or preventing illness?

(ii) Are these specific food or ingredients particularly effective in promoting wellness?

(iii) How traditional dietary practices align with the idea of food as medicine?

4. Not all delicious food are necessarily healthy, while not all nutritious food are always enjoyable. Share your thoughts along with a few examples.

Ans. The relationship between deliciousness and healthiness in food is complex.

Fast food items like burgers, fries and pizza can be high in unhealthy fats, sugars and sodium, leading to health issues if consumed regularly.

Also, desserts like cakes, pastries and ice creams are often loaded with sugars and refined carbohydrates and on the other hand bitter vegetables like kale or brussels sprouts are highly nutritious, packed with vitamins and minerals.

so it's important to find a balance and explore ways to make healthy food more enjoyable.

5. Medu does not eat vegetables but enjoys biscuits, noodles and white bread. He often has stomach ache and constipation. What changes should he make in his diet to get rid of these problems? Explain your answer.

Ans. For Medu to alleviate his stomach ache and constipation, he should incorporate More Vegetables to his diet like carrots, cucumbers or spinach and

Include high-fibre food such as whole grains (like whole wheat bread and brown rice) fruits (like apples, pears and berries) and legumes (like lentils and beans). Fibre helps regulate digestion and can prevent constipation.

Ensure he drinks plenty of water throughout the day.

Reduce the intake of biscuits, noodles and white bread, which often lack fibre. Includes healthy fats, such as avocados, nuts and seeds, which can promote better digestion.

6. Reshma had trouble seeing things in dim light. The doctor tested her eyesight and prescribed a particular vitamin supplement. He also advised her to include a few food items in her diet.

- (i) Which deficiency disease is she suffering from?
- (ii) Which food component may be lacking in her diet?
- (iii) Suggest some food items that she should include in her diet to overcome this problem (any four).

Ans. (i) Reshma may be suffering from night blindness, which is often associated with a deficiency in vitamin-A.

(ii) The component likely lacking in her diet is vitamin-A.

(iii) Suggested food items:

Carrots: Rich in beta-carotene, which the body converts into vitamin-A.

Sweet potato: Another excellent source of beta-carotene.

Greens Leafy vegetables: Such as spinach and kale, which are high in vitamin-A.

Eggs: Provide vitamin-A in a readily absorbable form.

7. You are provided the following –

- (i) Canned fruit juice
- (ii) Fresh fruit juice
- (iii) Fresh fruit

Which one would you prefer and why?

Ans. I would prefer fresh fruit as they contain higher levels of vitamins, minerals and antioxidants, provide dietary fibre, which aids digestion. They have natural sugars, whereas canned fruit juices can contain added sugars and preservatives, making them less healthy options. Overall, choosing fresh fruit supports better health and offers a more satisfying eating experience.

8. Gourav got a fracture in his leg. His doctor aligned the bones and put on a plaster. The doctor also gave him calcium tablets. On the second visit, the doctor gave him Vitamin D syrup along with calcium tablets. Now answer the following questions –

- (i) Why did the doctor give calcium tablets to Gourav?
- (ii) On the second visit, why did the doctor give Vitamin D syrup along with calcium tablets?
- (iii) What question arises in your mind about the choices made by the doctor in giving the medicines?

Ans. (i) The doctor likely gave calcium tablets to aid in the healing process of the fracture as calcium is essential for bones health and healing which will promote bone strength and helping the body to recover properly.

(ii) The doctor likely prescribed vitamin-D along with calcium to improve calcium absorption and optimize the healing of the fracture.

(iii) Questions that might arise –

- a. Is the fracture healing properly?
- b. Does the patient have vitamin – D deficiency?
- c. What are the possible side effects or risks of taking calcium and vitamin – D together?

9. Sugar is an example of carbohydrates. Sugar is tested with iodine solution, but it does not change to blue-black colour. What can be a possible reason?

Ans. Sugar does not give blue-black colour when tested with iodine. Iodine specifically reacts with starch, a complex carbohydrate and not with simple sugars like glucose or sucrose. Thus, the lack of colour change with iodine indicates that the substance being tested is a simple sugar and not starch.

10. What do you think of Raman's statement, "All starches are carbohydrates but not all carbohydrates are starches." Describe the design of an activity to test your answer.

Ans. To illustrate the relationship between starch and carbohydrates through an activity.

Material Needed:

- **Different food items:** Bread, rice, potatoes, fruits (like apples or bananas) and sugary snack (like candy).
- Two large bowls and containers labelled "starch" and "other carbohydrates".

Steps:

(i) Observation: Look at each food items and discuss its characteristics (texture, appearance etc.).

(ii) Sorting:

- Place items like bread, rice and potatoes in the "Starch" bowl.
- Place fruits and sugary snacks in the "other carbohydrates" bowl.

(iii) Discussion:

- Talk about how all starches are carbohydrates, but food like fruits and candies are also carbohydrates, just not starches.
- Highlight the different roles of starches (energy storage) versus simple sugars (quick energy).

(iv) Conclusion:

- Reinforce the idea that while all starches fall under the carbohydrate category, not all carbohydrates are starches.

This activity demonstrates the relationship between starches and carbohydrates.

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

Ans. The colour change of iodine to blue-black occurs in the presence of starch, which forms a complex with iodine. If the teacher's saree had starch (common in fabrics like cotton), the iodine would react, causing the colour change. Mishti's socks might not have been made from a synthetic material that doesn't react with iodine in the same way.

12. Why are millets considered a healthy choice of food? Can eating just millets suffice for the nutritional requirements of the body? Discuss.

Ans. Millets like pearl millet (Bajra), Finger millet (Ragi), Foxtail millets, Barnyard millet, little millet, Proso millet are healthy for several reasons as they are rich in protein, fibre, vitamins (especially B vitamins) and essential minerals like iron, magnesium and phosphorus and also their fibre content can help reduce cholesterol levels, promoting cardiovascular health. Millets are suitable for those with gluten intolerance or celiac disease. Millets are nutritious but they cannot completely fulfil all dietary needs on their own. A balanced diet should be there to ensure you receive all essential nutrients.

13. You are given a sample of a solution. How would you check the possibility of it being an iodine solution?

Ans. To check if a sample solution is iodine using food items, you can use the starch test –

(i) Gather Materials: Obtain a food item rich in starch, such as a potato, rice or corn.

(ii) Prepares the Starch Test:

- If using a potato, you can slice it open to expose the flesh.
- If using cooked rice, place a small amount in a dish.

(iii) Add the Sample: Place a few drops of the sample solution onto the starch-rich food item.

(iv) Observe the Colour Change: If the iodine is present, the area where the sample was applied will turn blue-black, indicating a positive reaction.

This simple test effectively demonstrates the presence of iodine in the solution.