

CBSE Class–VII Science
NCERT Solutions
CHAPTER-1
NUTRITION IN PLANTS

Question 1. Why do organisms need to take food?

Answer: Organism needs food to

- (i) Get energy to do work.
- (ii) Build body
- (iii) Repair damage in the body
- (iv) Maintain the functions of the body

Question 2. Distinguish between a parasite and saprophyte.

Answer:

Parasite	Saprotroph
The organism that grows on the body of another organism and derives nutrients from it is known as a parasite	The organism that obtains nutrients from the dead or decaying organic matter is called saprotroph.
They directly feed on living organisms for their nutrition.	They feed on dead and decaying organism.
They take the readymade food from the host.	They take the digested and decayed food.
Examples: Cuscuta and orchids	Examples: Fungi and some bacteria.

Question 3. How would you test the presence of starch in leaves?

Answer: Steps to test the presence of starch in leaves :

Step 1: A fresh leaf is taken.

Step 2: The leaf is boiled in water for few minutes to kill the cells in the leaf.

Step 3: Now, dip this leaf in iodine solution.

Step 4: The color of the leaf will changes into blue black color when iodine is added to it

which shows the presence of starch in it.

Question 4. Give the brief description of the process of synthesis of food in green plants.

Answer: Photosynthesis is the process synthesis of food in the plants with the help of chlorophyll and carbon dioxide in the presence of sunlight. Water and minerals present in the soil are absorbed by the roots and transported to the leaves by the vessels. Carbon dioxide from air is taken through stomata present in leaves. Leaves are the food factories of the plants which capture the energy of the sunlight with the help of chlorophyll. This energy is used to synthesize food from carbon dioxide and water.



Question 5. Show with the help of a sketch that the plants are ultimate source of food.

Answer:



Question 6. Fill in the blanks:

- Green plants are called ----- since they synthesise their own food.
- The food synthesised by the plants is stored as -----.
- In photosynthesis solar energy is captured by the pigment called -----.
- During photosynthesis plants take in ----- and release -----.

Answer: Fill in the blanks:

- Green plants are called **autotrophs** since they synthesise their own food.
- The food synthesised by the plants is stored as **starch**.
- In photosynthesis solar energy is captured by the pigment called **chlorophyll**.
- During photosynthesis plants take in **carbon dioxide** and release **oxygen**.

Question 7. Name the following:

- A parasitic plant with yellow, slender and tubular stem.
- A plant that has both autotrophic and heterotrophic mode of nutrition.

(c) The pores through which leaves exchange gases.

Answer: (i) Cuscuta

(ii) Insectivorous plants

(iii) Stomata

Question 8. Tick the correct answer:

(a) Amarbel is an example of :

(i) Autotroph

(ii) Parasite

(iii) Saprophyte

(iv) Host

(b) The plant which traps and feeds on insects is:

(i) Cuscuta

(ii) China rose

(iii) Pitcher plant

(iv) Rose

Answer:(a) (ii) parasite (b) (iii) Pitcher plant

Question 9. Match the item in given column I with those in column II.

Column I	Column II
Chlorophyll	Bacteria
Nitrogen	Heterotrophs
Amarbel	Pitcher plant
Animals	Leaf
Insects	Parasite

Answer:

Column I	Column II
Chlorophyll	Leaf

Nitrogen	Bacteria
Amarbel	Parasite
Animals	Heterotrophs
Insects	Pitcher plant

Question 10. Mark “T” if the statement is true and “F” if it is false:

- (i) Carbon dioxide is released during photosynthesis. (T/F)
- (ii) Plants which synthesis their food themselves are called saprotrophs. (T/F)
- (iii) The product of photosynthesis is not a protein. (T/F)
- (iv) Solar energy is converted into chemical energy during photosynthesis. (T/F)

Answer: (i) F (ii) F (iii) T (iv) T

Question 11. Choose the correct option from the following:

Which part of plant takes in carbon dioxide from the air for photosynthesis?

- (i) Root hair
- (ii) Stomata
- (iii) Leaf veins
- (iv) Sepals

Answer: (ii) Stomata

Question 12. Choose the correct option from the following:

Plants take carbon dioxide from the atmosphere mainly through their:

- (i) Roots
- (ii) Stem
- (iii) Flowers
- (iv) Leaves

Answer: (iv) leaves