



## NUTRITION IN PLANTS

### EXERCISE

#### Question 1:

Why do organisms need to take food?

#### Answer 1:

Food is needed by all organisms for many purposes:

- (a) The main function of food is to help in growth.
- (b) Food provides energy for movements such as running, walking or raising our arm.
- (c) Food is also needed for replacement and repairing damaged parts of body.
- (d) Food gives us resistance to fight against diseases and protects us from infections

#### Question 2:

Distinguish Between a parasite and a saprotroph.

#### Answer 2:

<i>Parasite</i>	<i>Saprotrophs</i>
(i) Parasite feeds on a living organism.	(i) They feed on dead and decaying organism.
(ii) The organism on which it feeds is called host.	(ii) They do not feed on a living organism.

#### Question 3:

How would you test the presence of starch in leaves?

#### Answer 3:

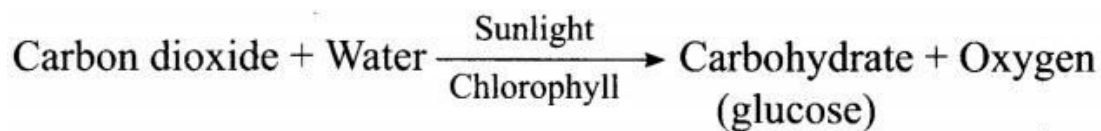
The presence of starch in leaves can be tested by Iodine test. When we remove chlorophyll from leaf by boiling it in alcohol and then put 2 drops of iodine solution, its colour change to blue indicates the presence of starch.

**Question 4:**

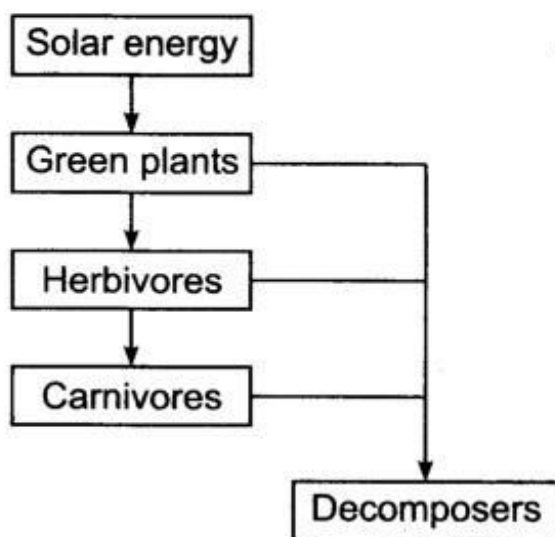
Give a brief description of the process of synthesis of food in green plants.

**Answer 4:**

The green plants have chlorophyll in the leaves. The leaves use CO<sub>2</sub> and water to make food in presence of sunlight.

**Question 5:**

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

**Answer 5:****Question 6:**

Fill in the blanks:

(a) Green plants are called \_\_\_\_\_ since they synthesise their own food.

(b) The food synthesised by the plants is stored as \_\_\_\_\_.

(c) In photosynthesis solar energy is captured by the pigment called \_\_\_\_\_

(d) During photosynthesis plants take in \_\_\_\_\_ and release \_\_\_\_\_.

**Answer 6:**

- (a) Autotrophs
- (b) starch
- (c) chlorophyll
- (d) carbon dioxide, oxygen

**Question 7:**

Name the following:

- (i) A parasitic plant with yellow, slender and tubular stem.
- (ii) A plant that has both autotrophic and heterotrophic mode of nutrition.
- (iii) The pores through which leaves exchange gases.

**Answer 7:**

- (i) Cuscuta
- (ii) Insectivorous plant
- (iii) Stomata

**Question 8:**

Tick the correct answer:

(a) Amarbel is an example of:

- (i) Autotroph
- (ii) Parasite ✓
- (iii) Saprotroph
- (iv) Host

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

- (a) Cuscuta
- (ii) China rose
- (iii) Pitcher plant ✓
- (iv) Rose

**Question 9:**

Match the items given in Column I with those in Column II:

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

**Answer 9:**

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

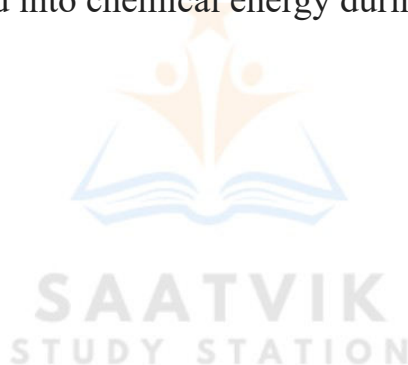
**Question 10:**

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 synthesise 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 10:**

- (i) F
- (ii) F
- (iii) T
- (iv) T

**Question 11:**

Choose the correct option from the following.

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

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

**Answer 11:**

- (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 12:**

(iv) Leaves

**Question 13:**

Why do farmers grow many fruits and vegetable crops inside large green houses?  
What are the advantages to the farmers?

**Answer 13:**

Fruits and vegetable crops are grown in large greenhouses because it protects crops from external climatic condition and to provide suitable temperature for the growth of crops. It protects crops from diseases and adverse climatic conditions.

The advantages of green houses to farmers are -

1. Optimal Climate Control and Environmental Regulation
2. Extended Growing Season and Year-round Production
3. Improved Pest and Disease Management
4. Enhanced Resource Efficiency
5. Increased Crop Diversity and Specialisation
6. Vertical Farming and Space Optimisation
7. Enhanced Environmental Impact and Sustainability
8. Integration with Smart Agricultural Technologies

