



INDIAN SCHOOL AL WADI AL KABIR



CLASS: VII	DEPARTMENT: SCIENCE 2022 – 2023	DATE: 24/04/2022
TEXTBOOK Q & A	TOPIC: NUTRITION IN PLANTS	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.

Q.1. Why do organisms need to take food?

1. **Ans** - Organism needs food –

a] to get energy to do work.

b] to help in growth and development of the body.

c] for the replacement and repairing damaged parts of body.

d] to fight against diseases and protects us from infections.

Q.2. Distinguish between a parasite and a saprotroph.

Ans –

Parasite	Saprotroph
i. The organism that grows on the body of another organism and derives nutrients from it is known as a parasite.	i. The organism that obtains nutrients from the dead or decaying organic matter is called saprotroph.
ii. Example of parasites are cuscuta and rafflesia	ii. Example of saprotrophs are fungi and some bacteria

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

Ans - i. Take two healthy green potted plants of the same type.

ii. Keep one potted plant in a dark room for one or two days in order to remove all the starch from the leaves.

iii. Keep the other plant in sunlight.

iv. Now, take one leaf from each potted plant and boil it in water for 5min and then place them in a test tube containing alcohol. Place the test tube in a beaker containing water. Gently heat the beaker. The chlorophyll of the leaves will slowly dissolve in alcohol. Wash the leaves with water and put it on a plate. Add a few drops of iodine solution on each leaves .

v. No blue-black colour will be observed on the leaves of plant kept in the dark room.

vi. This indicates the absence of starch.

vii. Blue-black colour will be observed on the leaves of the plant kept in sunlight.

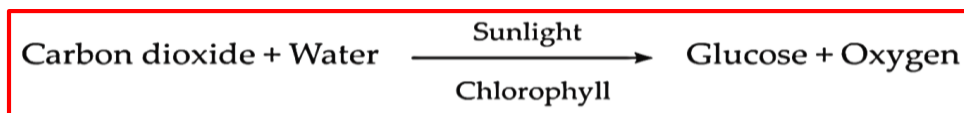
This indicates the presence of starch.

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

Ans - Photosynthesis is defined as the process in which the green plants synthesise food in the form of carbohydrates, using carbon dioxide and water in the presence of solar energy.

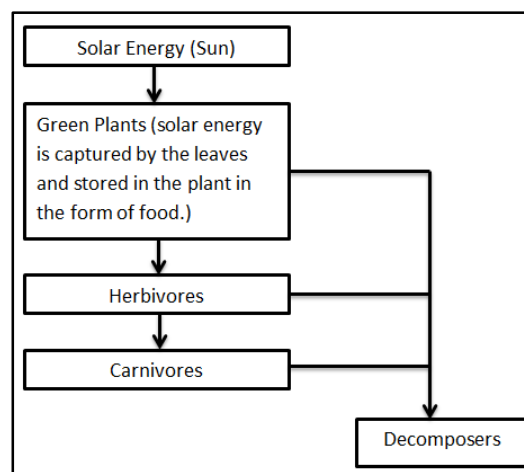
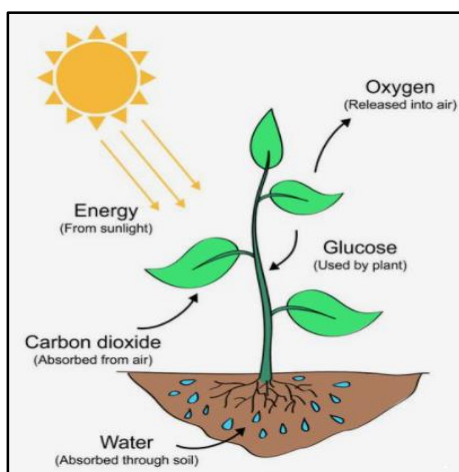
Sources of raw materials required for photosynthesis:

- a) Water is taken in, from the roots of the plant and is transported to the leaves.
- b) Carbon dioxide from the air enters the leaves through the pores called stomata.
- c) Solar energy from the sun is converted into chemical energy.
- d) Chlorophyll is present in the leaves to capture solar energy.



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

Ans –



Q.6. Fill in the blanks:

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

Q.7. Name the following:

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

Q.8. Tick the correct answer:

a) Amarbel (Cuscuta) is an example of -

- i) autotroph ii) parasite iii) saprotroph iv) host

[Ans - (ii) parasite]

b) The plant which traps and feeds on insects is -

- i) Cuscuta ii) china rose iii) pitcher plant iv) rose

[Ans - (iii) pitcher plant]

Q.9. Match the items given in Column I with those in Column II:

<i>Column I</i>	<i>Column II</i>
Chlorophyll	Bacteria
Nitrogen	Heterotrophs
Amarbel	Pitcher plant
Animals	Leaf
Insects	Parasite

Ans -

<i>Column I</i>	<i>Column II</i>
Chlorophyll	Leaf
Nitrogen	Bacteria
Amarbel	Parasite

Animals	Heterotrophs
Insects	Pitcher plant

Q.10. Mark 'T' if the statement is true and 'F' if it is false:

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

Q. 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

[Ans - (ii) Stomata]

Q.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

[Ans - (iv) leaves]

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