

Class7 Chapter 01 Nutrition in plants and Animals Cordova Science

Exercise

A (Tick) the correct options:

1. Rhizobium bacteria live in the root nodules of plant

- (a) wheat (b) rice (c) barley (d) pea✓

2. Plants store food as

- (a) cellulose (b) sugar (c) glucose (d) starch✓

3. Which of the following is an insectivorous plant?

- (a) Cucuta (b) Drosera✓ (c) mistletoe (d) lichen

4. The mode of nutrition shown by Cuscuta is

- (a) parasitic✓ (b) symbiotic (c) saprophyte (d) autotrophic

5. On adding iodine solution, starch

- (a) turns blue black✓ (b) turns green (C) remains colourless (d) turns red

6. We keep healthy potted plant in a dark room for some days to the leaves

- (a) decolourise (b) defragment (c) destarch✓ (d) deprotein

7. The portion of leaf that is not exposed to sunlight, will not make

- (a) fats (b) protein (c) glucose ✓ (d) starch

Fill in the blanks:

1. Rhizobium bacteria provide --nitrogen---- to the leguminous plants.

2. Green plants make their food by the process of photosynthesis.

3. Stomata are surrounded by guard cells.

4. Cuscuta is a -Total--- parasite.

5. The roots of saprophytes contain organisms calledsymbionts

C. Very Short Answer Questions:

1. Name any two heterotrophs.

Ans: Animals, Mushroom

2. Name any two insectivorous plants.

Ans: Venus flytrap, pitcher plants, butterworts, sundews

3. Name the pores through which leaves exchange gases.

Ans: Stomata

4. Name one plant in which photosynthesis occurs in plant part other than leaves. Name the plant part.

Ans: cactus in it's stem

5. What are the two main modes of nutrition in plants?

Ans: Autotrophic and heterotrophic

6. Name the green pigment present in the leaves.

Ans: Chlorophyll

D. Short Answer Type-I Questions:

1. What are autotrophs?

Ans: Organism prepare own food like green plants

2. Why is Cuscuta called parasite?

Ans: Cuscuta is called parasite as it draw nutrition from host.

3. In which form, do plants need nitrogen?

Ans: Plants absorb nitrogen from the soil in the form of nitrate (NO_3^-) and ammonium (NH_4^+)

4. Why are leaves of a plant green in colour?

Ans: leaves of a plant are green in colour due to presence of chlorophyll.

5. Why do some plants feed on insects?

Ans: some plants feed on insects to get nitrogenous compound from which they make protein

6. Define photosynthesis.

Ans: Photosynthesis is the food making process of green plant using CO_2 and water in the presence of sunlight

E. Short Answer Type-II Questions:

1. How can we decolorized a leaf? What will you conclude when white patches do not turn blue black adding iodine solution?

Ans: Leaf of green plant heated in a test tube containing alcohol in water bath to decolorize. If white patches do not turn blue black adding iodine solution showing absence of starch

2. What is saprotrophic mode of nutrition? Give one example.

Ans: The mode of nutrition in which organisms derive nutrients from dead and decaying organic matter. Eg. Mushroom.

Saprophytes breakdown organic matter by secreting digestive juice into it. Then they absorb what they need from the digested matter.

3. How does the pitcher plant catch its food?

Ans: Pitcher plants have leaves that look like pitchers. The lid of the pitcher closes when an insect lands on the pitcher. The trapped insect slides down the wall of the pitcher and is digested inside it.

4. Algae and fungi live together in lichens.

(a) What is this association called? (b) What value can we learn from this association in nature?

Ans: The fungus provides minerals and water to the alga. The alga supplies the fungus with food that it manufactures.

(a) Symbiotic relationship (b) We live with others in mutual benefit, take help and give help.

5. Discuss the importance of photosynthesis.

Ans: Photosynthesis helps green plants to prepare glucose. Photosynthesis uses CO_2 and releases O_2 and thus balances the oxygen and carbon dioxide levels in the atmosphere. Water vapor released during photosynthesis also helps in the formation of clouds and brings rain.

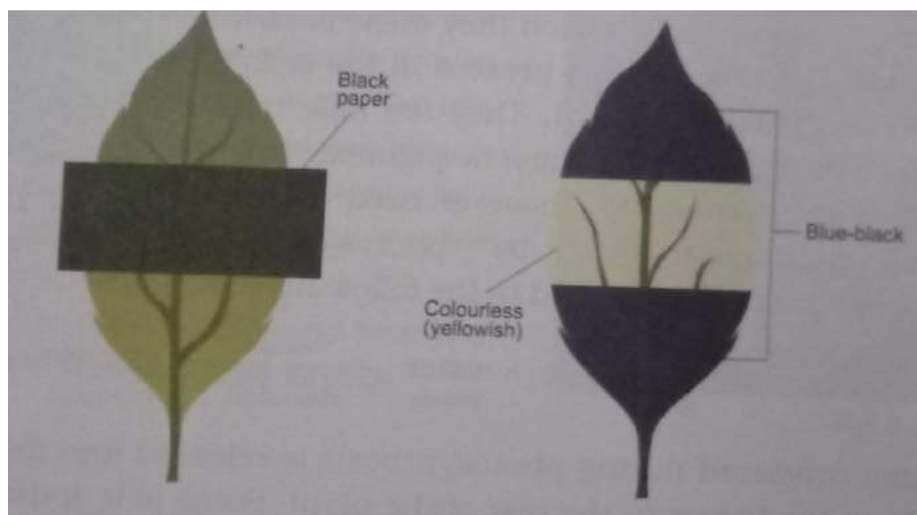
F. Long Answer Questions:

1. Write an experiment to show that sunlight is necessary for photosynthesis.

Ans: Cover a part of a leaf of a potted plant with black paper. Use paper clips to fix the paper on both sides of the leaf.

Make sure the plant gets enough sunlight. Pluck the leaf and take off the paper after two days.

Heat the leaf in alcohol, as in the previous activity, and test for starch. Only the part of the leaf which was exposed to sunlight will turn blue-black. This shows that sunlight is necessary for photosynthesis.



2. How do Rhizobium bacteria and leguminous plants help each other in survival?

Ans: Plant provide shelter to Rhizobium bacteria and Rhizobium bacteria provide nitrogenous compound that plants required to make plants protein.

G. HOTS (Higher Order Thinking Skills) Questions:

1. What will happen if plant leaves are devoid of stomata?

Ans: if plant leaves are devoid of stomata there is no exchange of gases like O_2 and CO_2 . Plants cannot perform photosynthesis

2. What will happen if all the plants disappear from the earth?

Ans: Food chain unbalance and no life exist.