Worksheet

Class 7th (science)

Chapter 1st Nutrition in plants

1. **Autotrophic nutrition**
2. **Heterotrophic Nutrition**

The mode of nutrition in which organisms obtain their food from others (plants and animals) is called heterotrophic nutrition.

Heterotrophs :- Organisms that are not capable of synthesising their own food and depend on other organisms for their food requirements are called heterotrophs.

They are also called consumers.

Heterotrophic Nutrition in plants

Heterotrophic nutrition in non-green plants are of three types-

(i) Saprotrophic (ii) Parasitic (iii) Symbiotic

(I) Saprotrophic nutrition

The mode of nutrition in which organisms take in nutrients from dead and decaying matter is called saprotrophic nutrition.

Saprotrophs or saprophytes

Saprotrophs are the organisms that feed on dead and decaying matter.

Example :- Fungi, mushrooms

Saprophytes are also called cleaners of the environment.

(II) Parasitic Nutrition

The mode of nutrition in which an organism lives on or inside the body of other living organism (host) is called parasitic nutrition.

Parasitic plants are of two types

- **Total parasites**
- **Partial parasites**

Total parasites

These plants cannot make their own food and derive all of it from the host plant. E.g.- cuscuta (amarbel) is total stem parasite and Rafflesia is total root parasite plant.

Partial parasites

They have green leaves, therefore can make their food for themselves. However, they get water and minerals from host plant. E.g.- mistletoe is a partial stem parasite and sandalwood is a partial root parasite.

(III) Symbiotic Nutrition

Symbionts:- Two organisms living in close physical contact with each other and providing mutual benefits are called symbionts.

Symbiosis:- Condition of living together is called symbiosis.

Symbiotic nutrition:- Symbionts live together and share shelter and nutrients. This mode of nutrition is called symbiotic nutrition. Example:- (i) Mycorrhiza (symbiotic system of fungi and tree), (ii) Lichens (symbiotic system of algae and fungi)

REVIEW TIME

Name the following :

1. **The food factories of green plants. _____**
2. **Tiny pores on a leaf through which exchange of geese takes place. _____**
3. **The organisms in which autotrophic nutrition is found. _____**
4. **They are the cleaners of the environment. _____**
5. **This association shows symbiotic relationship.**

Ans. 1. Leaves,; 2. Stomata,; 3. Plants,; 4. Saprotrophs,; 5. Lichens

A. Tick the correct answer:

1. **The green pigment present in the leaves is:**
   a. Xanthophyll
   b. Chlorophyll
   c. Chromophyll
   d. Alcohol
2. **The tiny pores present in the leaves through which exchange of gases takes place are called :**
   a. Stomata
   b. Guard cell
   c. Cuticles
   d. Chloroplasts
3. **Mistletoe is an example of:**
   a. Autotroph
   b. Parasite
   c. Saprotroph
   d. Host
4. **Mode of nutrition in fungi is :**
   a. Autotrophic
   b. Holozoic
   c. Parasitic
   d. Saprophytic

5. **The organisms that feed on dead and decaying matter are:**
    a. **Herbivores**
    b. **Carnivores**
    c. **Autotrophs**
    d. **Saprotrophs**
6. **The part of a plant that perform photosynthesis is :**
    a. **Leaf**
    b. **Flower**
    c. **Root**
    d. **Fruit**
7. **The gas released during photosynthesis is :**
    a. **Nitrogen**
    b. **Carbon dioxide**
    c. **Oxygen**
    d. **Hydrogen**
8. **Food is stored in the plants in the form of :**
    a. **Gum**
    b. **Starch**
    c. **Rubber**
    d. **None of these**

Ans. 1. (b); 2. (a); 3. (b); 4. (d); 5. (d); 6. (a); 7. (c); 8. (b)