

Mode of Nutrition

A. Choose the correct answer:

1. Which mode of nutrition is followed by green plants?
A) Parasitic nutrition B) Saprotrophic nutrition
C) Autotrophic nutrition D) Heterotrophic nutrition
2. What is the main source of energy for autotrophic organisms?
A) Soil nutrients B) Sunlight
C) Water D) Carbon dioxide
3. Which of the following is an example of a heterotrophic organism?
A) Mango tree B) Mushroom
C) Algae D) Cyanobacteria
4. Insectivorous plants show characteristics of both autotrophic and heterotrophic nutrition because:
A) They do not perform photosynthesis
B) They trap and digest insects for additional nutrients
C) They depend only on insects for survival
D) They store food in roots
5. Which of the following organisms obtains nutrition through saprotrophic mode?
A) Cow B) Amoeba
C) Bread mold D) Cactus

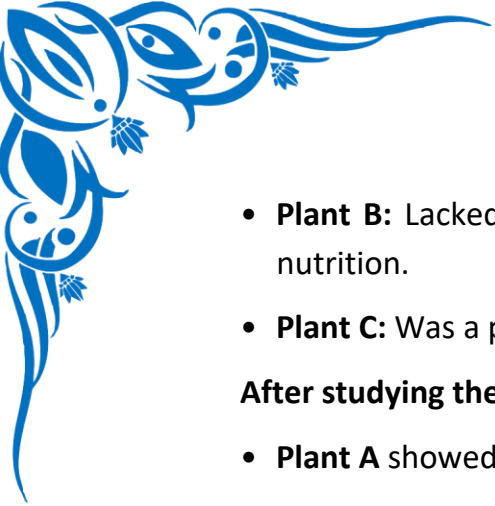
B. Fill in the Blanks:

1. Organisms that prepare their own food using sunlight are called _____.
2. Heterotrophs depend on _____ for their food.
3. Parasitic plants derive their nutrition from _____.
4. Saprotrophic organisms break down dead and decaying matter using _____.
5. The process by which green plants prepare food is called _____.

C. Case Study:

A scientist, Dr. Mehra, conducted research on different modes of nutrition in plants. She observed three types of plants:

- **Plant A:** Had green leaves and produced its own food using sunlight.



- **Plant B:** Lacked chlorophyll and grew by attaching itself to another plant for nutrition.
- **Plant C:** Was a pitcher plant that trapped insects for food.

After studying their growth patterns, she made the following observations:

- **Plant A** showed healthy growth and produced oxygen.
- **Plant B** weakened the host plant and survived by taking its nutrients.
- **Plant C** thrived in nutrient-poor soil and used trapped insects as a nitrogen source.

Case Study Questions:

1. Which mode of nutrition was followed by Plant A?
2. Why did Plant B need to depend on another plant for survival?
3. How did Plant C adapt to its environment for survival?
4. Why is photosynthesis important for autotrophic plants?

D. Short Answer Questions:

1. What is autotrophic nutrition? Give an example.
2. How does a parasite obtain its food?
3. What is the difference between saprotrophic and parasitic nutrition?

E. Long Answer Questions:

1. Explain different modes of nutrition with examples.
2. Describe the process of photosynthesis and its significance in the ecosystem.
3. How do heterotrophic organisms obtain their nutrition? Discuss with examples.