

## Holozoic Nutrition

### A. Choose the Correct Answer:

**1. What is Holozoic nutrition?**

- A) The process of preparing food using artificial methods
- B) The mode of nutrition where organisms ingest solid food and digest it internally
- C) The absorption of nutrients directly from the environment
- D) The process of making food using chemicals

**2. Which of the following organisms follow holozoic nutrition?**

- A) Bacteria
- B) Amoeba
- C) Mushrooms
- D) Algae

**3. In which stage of holozoic nutrition does food get broken down into simpler substances?**

- A) Ingestion
- B) Digestion
- C) Absorption
- D) Egestion

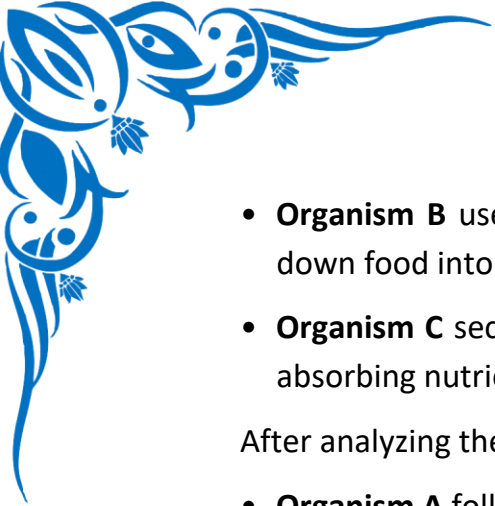
### B. Fill in the Blanks:

1. Holozoic nutrition involves five steps: ingestion, digestion, \_\_\_\_\_, assimilation, and egestion.
2. In humans, the digestion of food begins in the \_\_\_\_\_ and continues in the stomach and small intestine.
3. The process of eliminating undigested food from the body is called \_\_\_\_\_.

### C. Case Study:

A scientist, Dr. Mehra, conducted an experiment to observe holozoic nutrition in different organisms. He studied three cases:

- **Organism A** engulfed its food using pseudopodia and digested it in food vacuoles.



- **Organism B** used a specialized digestive system, including enzymes, to break down food into absorbable nutrients.
- **Organism C** secreted digestive enzymes externally to break down food before absorbing nutrients.

After analyzing the data, Dr. Mehra concluded that:

- **Organism A** followed phagocytosis as seen in amoeba.
- **Organism B** had a complex digestive system similar to humans.
- **Organism C** did not follow holozoic nutrition but instead used saprophytic nutrition.

#### **Case Study Questions:**

1. What was Dr. Mehra's objective in studying these organisms?
2. Which type of holozoic nutrition was observed in Organism A?
3. Why was Organism C not considered to follow holozoic nutrition?
4. Based on the case study, how does the mode of nutrition differ in unicellular and multicellular organisms?

#### **D. Short Answer Questions:**

1. Define holozoic nutrition and give an example.
2. How is digestion different in amoeba and humans?
3. What is the role of enzymes in the process of digestion?

#### **E. Long Answer Questions:**

1. Explain the five stages of holozoic nutrition in detail with suitable examples.
2. Describe how the digestive system in humans processes food step by step.
3. Compare and contrast holozoic nutrition with other types of nutrition like parasitic and saprophytic nutrition.