

Nutrition in Amoeba

A. Choose the Correct Answer:

1. What is the process by which Amoeba obtains its food?
 - A) Photosynthesis
 - B) Ingestion by pseudopodia
 - C) Absorption through the skin
 - D) Excretion
2. Which organelle in Amoeba helps in the digestion of food?
 - A) Nucleus
 - B) Contractile vacuole
 - C) Food vacuole
 - D) Mitochondria
3. How does Amoeba engulf its food?
 - A) Using tentacles
 - B) By extending pseudopodia around the food
 - C) By secreting digestive juices outside the body
 - D) Through specialized mouthparts

B. Fill in the Blanks:

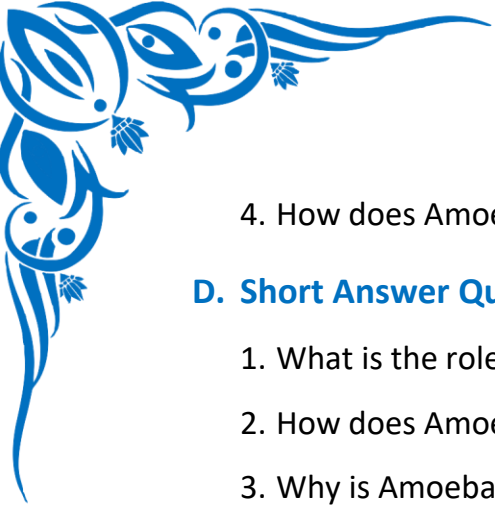
1. Amoeba captures food by extending _____ around its prey.
2. The food in Amoeba is digested inside the _____.
3. The process of eliminating undigested food in Amoeba is called _____.

C. Case Study:

A scientist observed an Amoeba under a microscope and recorded its feeding process. The Amoeba moved towards a small food particle, extended its pseudopodia around it, and engulfed it. Inside the cell, a food vacuole was formed, and digestive enzymes were released to break down the food. After digestion, the nutrients were absorbed, and the undigested waste was expelled from the body.

Case Study Questions:

1. How does Amoeba capture and ingest its food?
2. What is the role of the food vacuole in Amoeba?
3. Why does Amoeba need to digest its food inside the cell?



4. How does Amoeba eliminate undigested waste?

D. Short Answer Questions:

1. What is the role of pseudopodia in the nutrition of Amoeba?
2. How does Amoeba digest its food?
3. Why is Amoeba called a heterotrophic organism?

E. Long Answer Questions:

1. Explain the different steps involved in the nutrition process of Amoeba.
2. How does the mode of nutrition in Amoeba differ from that in multicellular organisms?
3. Describe the role of food vacuoles in digestion and how Amoeba excretes waste.