

Wednesday NUTRITION IN PROTOZOA DI S/G

INTRODUCTION:- Every living organism requires some form of nourishment to provide energy to make up for the wear and tear of body components lost during its manifold activities. All processes which directly or indirectly help an animal in building up the body and providing energy for its metabolic activity are included within the term "nutrition".

Protozoa obtain and utilise their food in many different ways. They are either:

- I. Heterotrophic or
- II. Autotrophic depending on whether they rely on other organisms for the nutritional requirements or synthesize their own food.

Heterotrophic Nutrition

Heterotrophs require many organic substances but the autotrophs use inorganic substances to synthesize organic products.

Heterotrophs are further classified into:

- (a) Holozoic or zootrophic or phagotrophic,
- (b) Saprotrophic

① Saprophytic and  
② mixotrophic types.

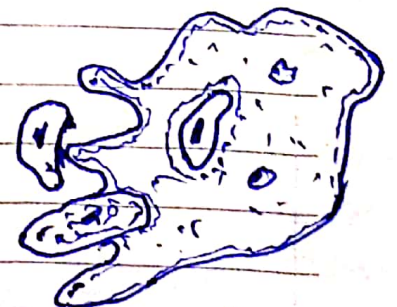
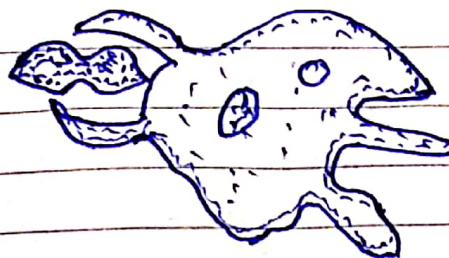
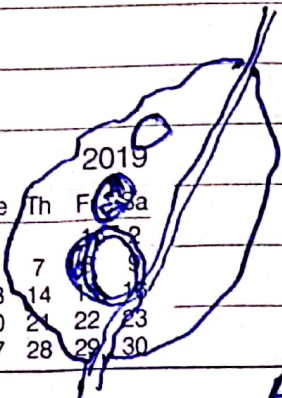
③ Holozoic nutrition:

Majority of free-living protozoa utilize holozoic method. It is a complex method including a number of steps:

- ① Ingestion including food capture and formation of food vacuole
- ② Digestion including secretion of digestive enzymes into food vacuole
- ③ Assimilation including absorption of digested food products from the food vacuole into adjacent cytoplasm.
- ④ Egestion or removal of undigested food residue and
- ⑤ Storage of surplus food as reserves.

Ingestion:-

The first step in holozoic nutrition is ingestion or engulfing of food. When live food organisms are used they have to be captured with the help of ingestory organelle.



Amoeba Ingesting Oscillatoria by import

| MARCH 2019 |    |    |    |    |    |    |
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| 24         | 25 | 26 | 27 | 28 | 29 | 30 |