

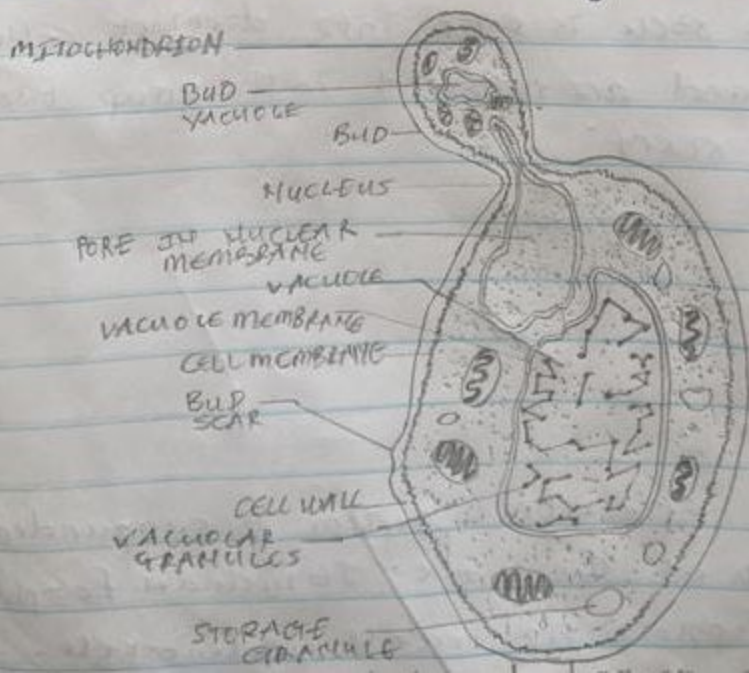
BIO 102 (ASSIGNMENT)

① How are fungi important to mankind?

Although we often think of fungi as organisms that cause disease and rot food, FUNGI are important to mankind on many levels. They influence the well-being of human populations on a large scale because they are part of the nutrient cycle in ecosystems. Some importance goes thus;

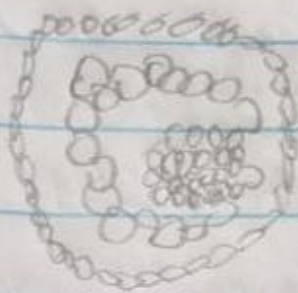
- Majority of grasses and trees require a mycorrhizal relationship with fungi to survive.
- Yeasts have been used for thousands of years in the production of beer, wine and bread.
- Fungi not only directly produce substances that humans use as medicine, but they are also versatile tools in the vast field of medical research.

② Illustrate the cell structure of a unicellular fungus with a well labelled diagram.

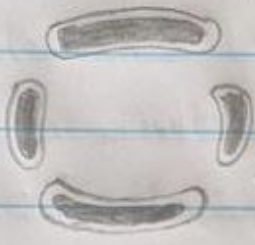


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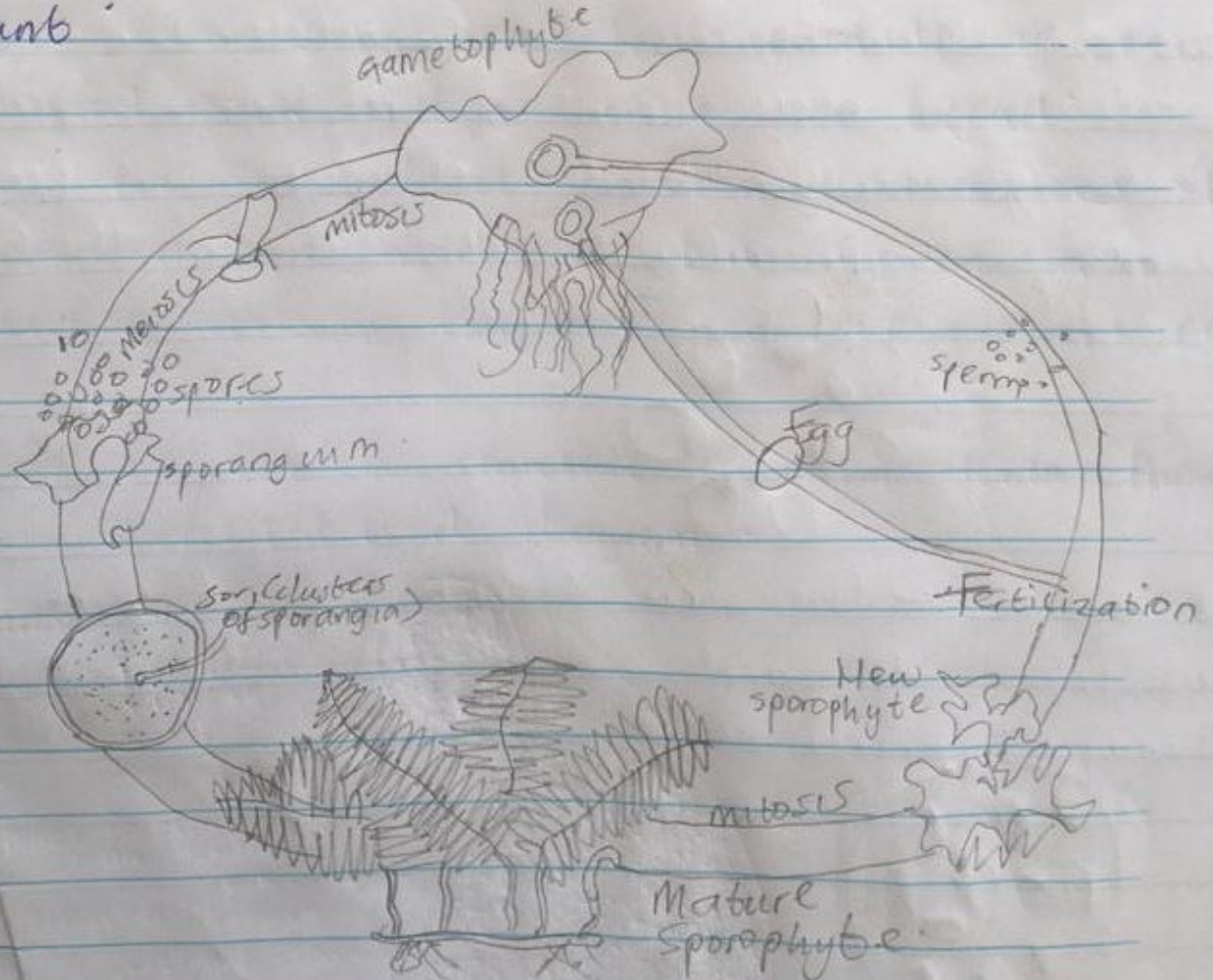
Unicellular Fungus



4) **Dicotyostele** - The stele is separated into several vascular strands and each one is called meristem. Example is *Adiantum capillus-veneris*.



6) Illustrate the life cycle of a primitive vascular plant.



Life Cycle of a Primitive Vascular Plant

③ Outline the sexual reproduction in a typical filamentous form of fungi:

- Plasmogamy
- Karyogamy
- Meiosis

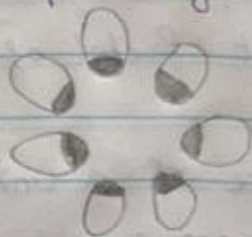
④ How do Bryophytes adapt to their environment?

- They have a waxy cuticle that prevents the body, the zygote, and the embryo from drying out.
- Spores are dispersed by the wind.

⑤ Describe with illustration the following terms:

(a) eustele (b) atactostele (c) siphonostele (d) dictyostele

(a) Eustele is a stele typical of dicotyledonous plants that consists of vascular bundles of xylem and phloem strands with parenchymal cells between the bundles.



(b) Atactostele - the stele is split into distinct collateral vascular bundles and are scattered in the ground tissue.
Example: monocot stem



(c) Siphonostele - In siphonostele, xylem is surrounded by phloem with pith at the centre. It includes Ectophloem siphonostele, Amphiphloem siphonostele, and Entophloem siphonostele.

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ANATOMY

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