

Name Alexandra Engge
 Course BIO 102
 Dept MBBS
 M/N 19/mhs01/122

- 1) How are fungi important to mankind?
- Fungi eg yeasts are used in the food industry (eg baking)
 - They balance the ecosystem by material cycling.
 - They reduce waste on land by decomposition.
 - Some fungi species are eatable eg mushroom.

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

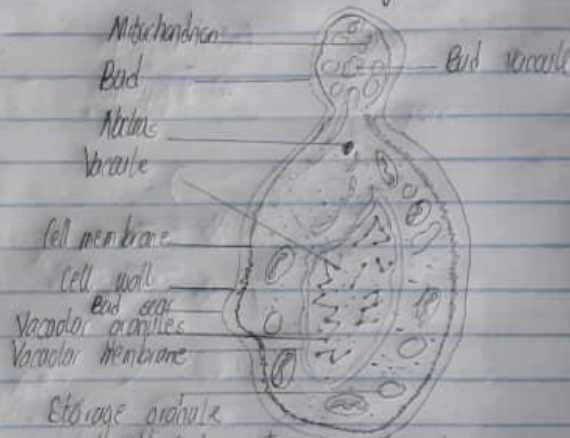


Diagram of A Unicellular Fungus (*Saccharomyces cerevisiae*)

- 3) Outline sexual reproduction in a typical filamentous form of algae.
- In ~~spirogyra~~ eg filamentous algae eg spirogyra sexual reproduction occurs by conjugation.
- Two filaments lying side by side produce outgrowths / buds.
 - These are usually called conjugation tubes and this allow contents of one cell to completely pass into and fuse with contents of another. This only occurs when the buds of opposite types meet.
 - The resulting zygote becomes surrounded by a thick wall. The nucleus of the zygote fuses in twos and undergoes meiosis ~~is~~ independently.

19/mhs01/12 2

Alexandra Bichele Briggs

The zygote germinates under favourable conditions.

How do Bryophytes adapt to their environment?

They adapt in two ways,

They have definite structures for water and nutrient absorption from the soil and hence the plant body is divided into an aerial portion and subterranean portion. The aerial portion, being exposed to atmosphere has undergone some modification to prevent excessive water loss through body surface, and some others not only gaseous exchange in the internal parts of plant therefore openings are in the aerial parts of the plant.

Describe with illustration the following a) eustele b) atactostele c) amphistele d) dictyostele



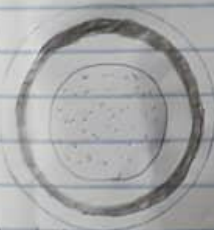
Eustele



Atactostele



Dictyostele



Amphistele



Ectophloic siphonostele

a) Eustele is a type of siphonostele in which vascular tissue in the stem forms a central ring of bundles around a pith.

b) Atactostele is a type of eustele found in monocots in which the vascular tissue in the stem exists as scattered bundles.

c) Dictyostele: This is a type of siphonostele in which vascular tissue in the stem forms a central cylinder around a pith tub with closely spaced leaf gaps.

d) Amphistele: Here the vascular tissue in the stem forms a central cylinder.

surrounding a pith (central) and possessing leaf gaps:

② Illustrate the life cycle of a primitive vascular plant.

