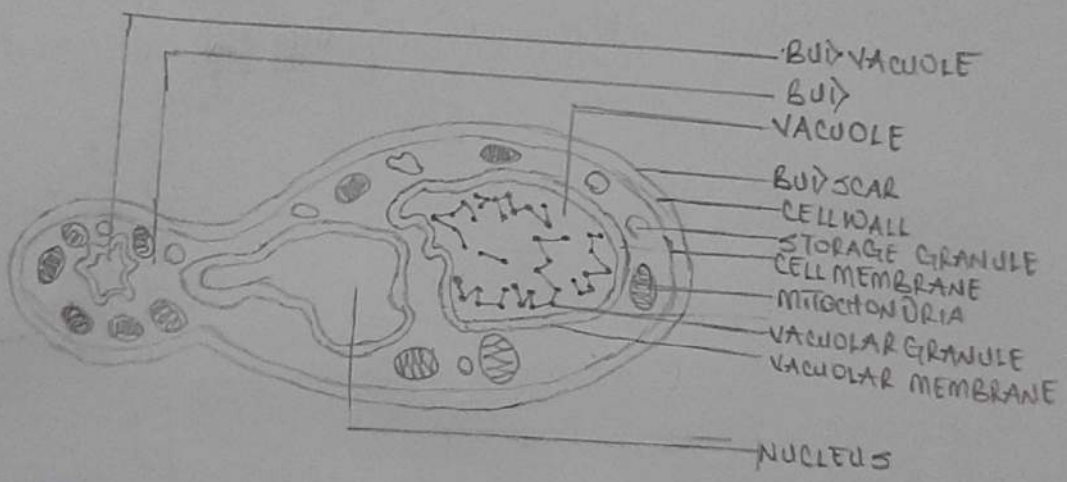
AULE GENEVIEVE MOURSHIMA
19/MHS01/108
MBBS
BIO 102
GENERAL BIOLOGY II

ASSIGNMENT ON FUNGI

1) How are fungi important to mankind?
→ Fungi like yeast (Saccharomyces cerevisiae) are important in food industries.
→ Species like penicillium notatum produce important antibiotics.
→ Fungi like mushrooms are eaten by human societies.
→ Many fungi species mediate the spoilage of wood, food, clothes and paper.
→ Fungi is responsible for the mediation of decay of organic matter.
→ Some fungi are parasites to some certain horrible obnoxious pests like houseflies.

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



SACCHAMYCES CEREVISIAE CYEAST), SECTIONAL VIEW OF BUDDING CELL.

3) Outline the sexual reproduction in a filamentous form of fungi.
The sexual reproduction in Rhizopus stolonifer. This occurs when two mating types of hyphae grow in the same medium. Chemical interaction in the two mating types of hyphae induces growth perpendicular to the hyphae in opposite directions. These growths are delimited by a wall such that many nuclei are isolated in what is called GEMATANGIUM. The two gametangia fuse (plasmogamy) and a zygote is formed which may undergo

Prolonged dormancy or resting stage. The nuclei in the zygotes fuse in [illegible] and undergo meiosis independently. The zygote germinates under favourable conditions to produce a filament which at maturity liberates the haploid spores.

4) How do Bryophytes adapt to their environment?

i) The presence of definite structures for water and nutrient absorption from the soil, therefore the plant body is divided into; an aerial portion and a subterranean portion.

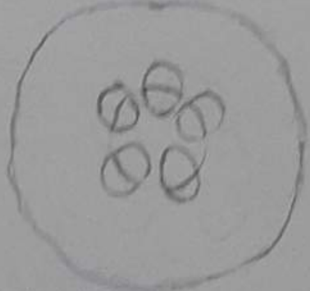
ii) The aerial portion being exposed to the atmosphere demands some modifications that prevents excessive loss of water through the body surface i.e desiccation.

iii) Some other modifications that permit elimination of excess water from the plant body and not only exchange of gases between the internal parts of the plant and the atmosphere therefore openings are available on the aerial parts of the plant.

5) Describe with illustration the following terminologies:

a) Eusteles

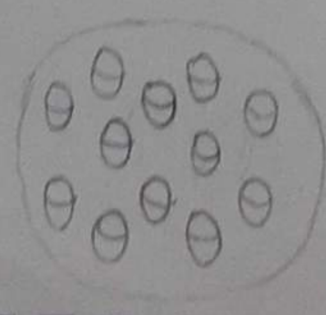
This is in herbaceous dicotyledonous plants, in which the vascular bundles are discrete, concentric collateral bundles of xylem and phloem.



EUSTELE

b) Atactostele

In grasses and many monocotyledonous plants, the vascular bundles are scattered.



ATACTOSTELE

c) Siphonostele

In more advanced vascular systems e.g stems of ferns and higher vascular plants, the stele is a cylinder enclosing a parenchymatous pith.

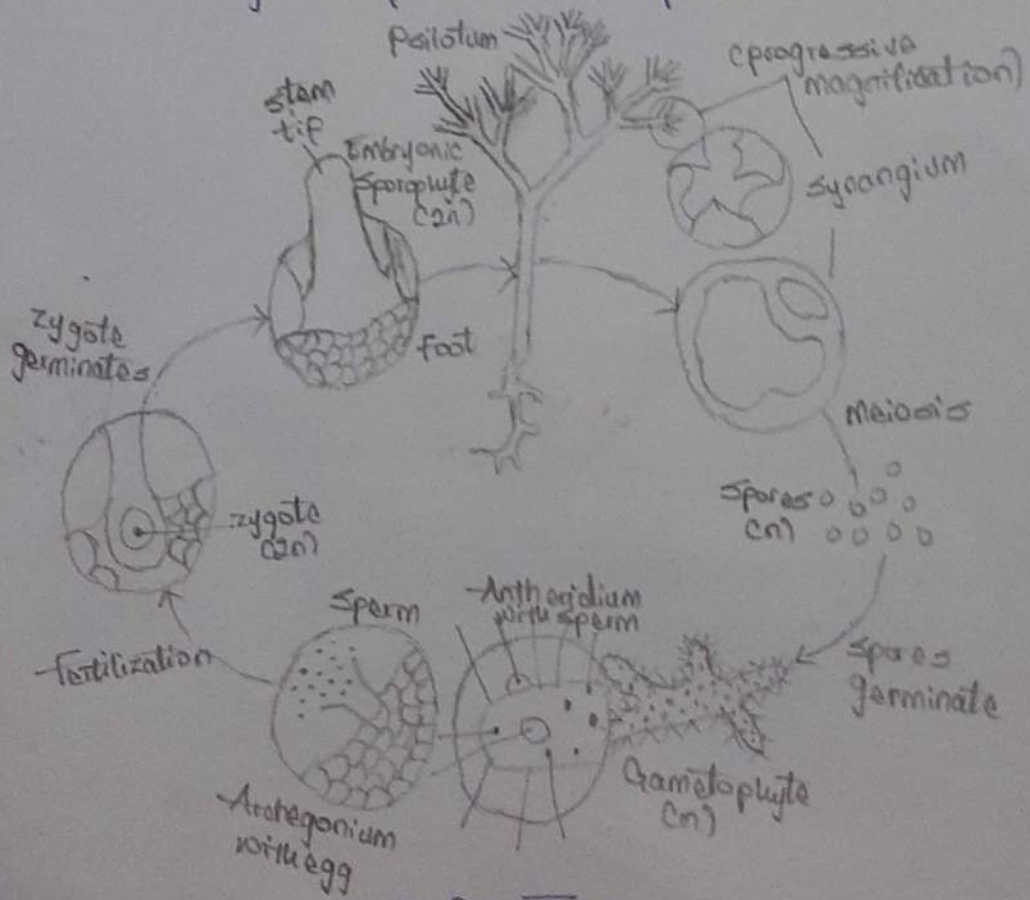
SIPHONOSTELE

d) Dictyostele

In siphonostele, vascular supply to leaves is associated with leaf gaps and the conducting cylinder is a dissected one.

DICTYOSTELE

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



A LIFE CYCLE OF PSILOTUM