

NAME: LOLOMARI IBITEIN DEBORAH

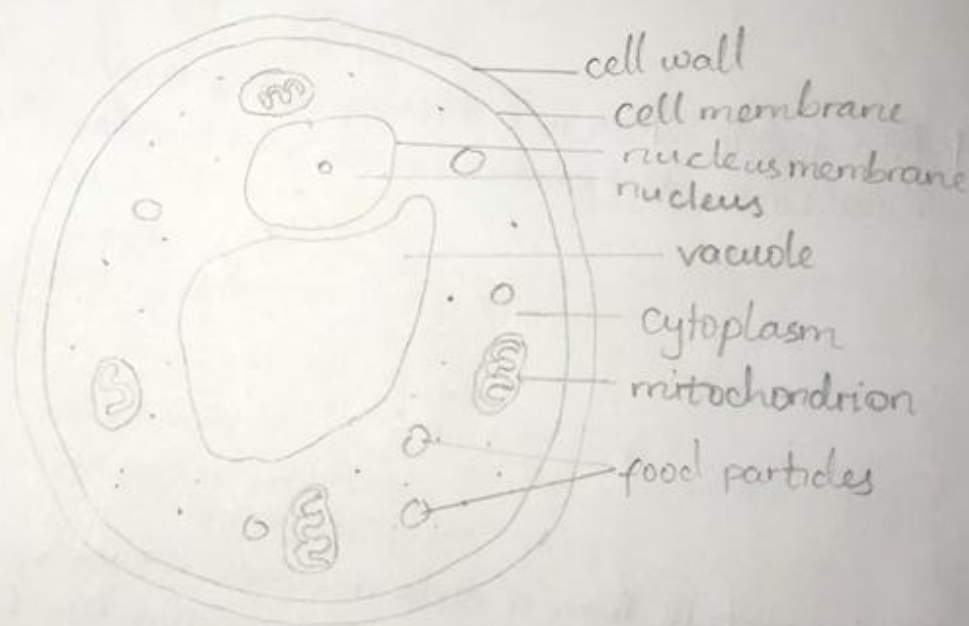
MEDICINE AND SURGERY

19/MHS01/237

BIO 102

- i Fungi are important decomposers of organic matter which improves soil fertility.
- ii Fungi are also important for producing antibiotics.
- iii Some fungi serve as source of food for man e.g. edible mushrooms.
- iv Brewing and Food industries make use of yeast for fermentation processes and as a raising agent respectively.
- v Fungi can also cause food to spoil. e.g. *Rhizopus nigricans* (bread mould).

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LABELED DIAGRAM OF THE CELL STRUCTURE OF A UNICELLULAR FUNGI (YEAST)

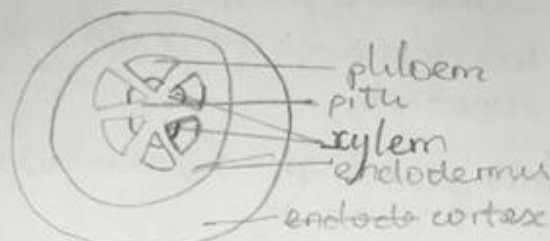
### 3 SEXUAL REPRODUCTION IN RHIZOPUS

- + The species are dioecious so, sexual reproduction occurs by mating or fusion of two haploid hyphae; male and female. These are known as GAMETANGIA.
- + During mating, the nuclei of the <sup>haploid</sup> male and female gametangium fuse many diploid nuclei.
- + A thick, spiny wall then develops around them to form a ZYGOSPORE, genetically different from the parent cells.

+ The zygospore then germinates mitotically to generate haploid cells that develop into new hyphae.

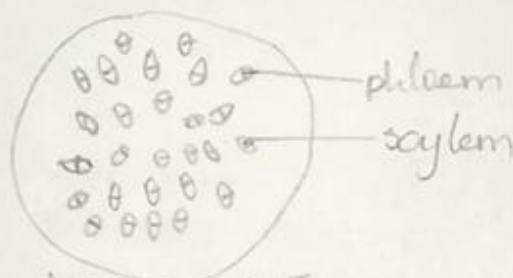
- 4 Bryophytes adapt to their water → land transitioning by:
- + Possessing a waxy cuticle that helped protect the plants' tissue from desiccation.
  - + Their bodies are divided into two
    - aerial portion: to reduce water loss (above the soil).
    - subterranean portion: below the soil for absorption of nutrients from the soil

5a Eustele: This is a type of siphonostele typical of dicotyledonous plants which consists of vascular bundles of xylem and phloem strands that form a central ring around the pith with parenchymal cells between the bundles.



EUSTELE

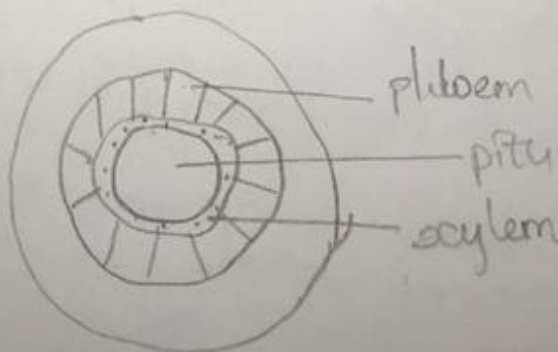
b Atactostele: This is a type of eustele that has its vascular tissues (xylem & phloem) in the stem existing as scattered bundles. This occurs in monocot stems.



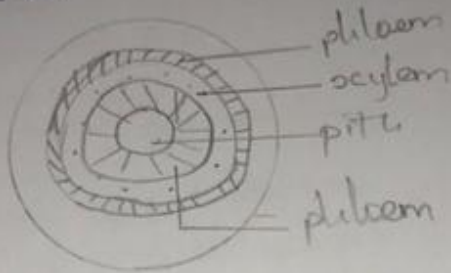
ATACTOSTELE

c Siphonostele: This is a stele in which its vascular tissue (xylem and phloem) are in concentric layers surrounding the pith. It is present in the stems of ferns and vascular seedless plants. This stele has pith but there is absence of leaf gap. This stele has two main types

+ Ectoploic Siphonostele: Siphonosteles are ectoploic only when the phloem is present only external to the xylem: e.g. Eustele



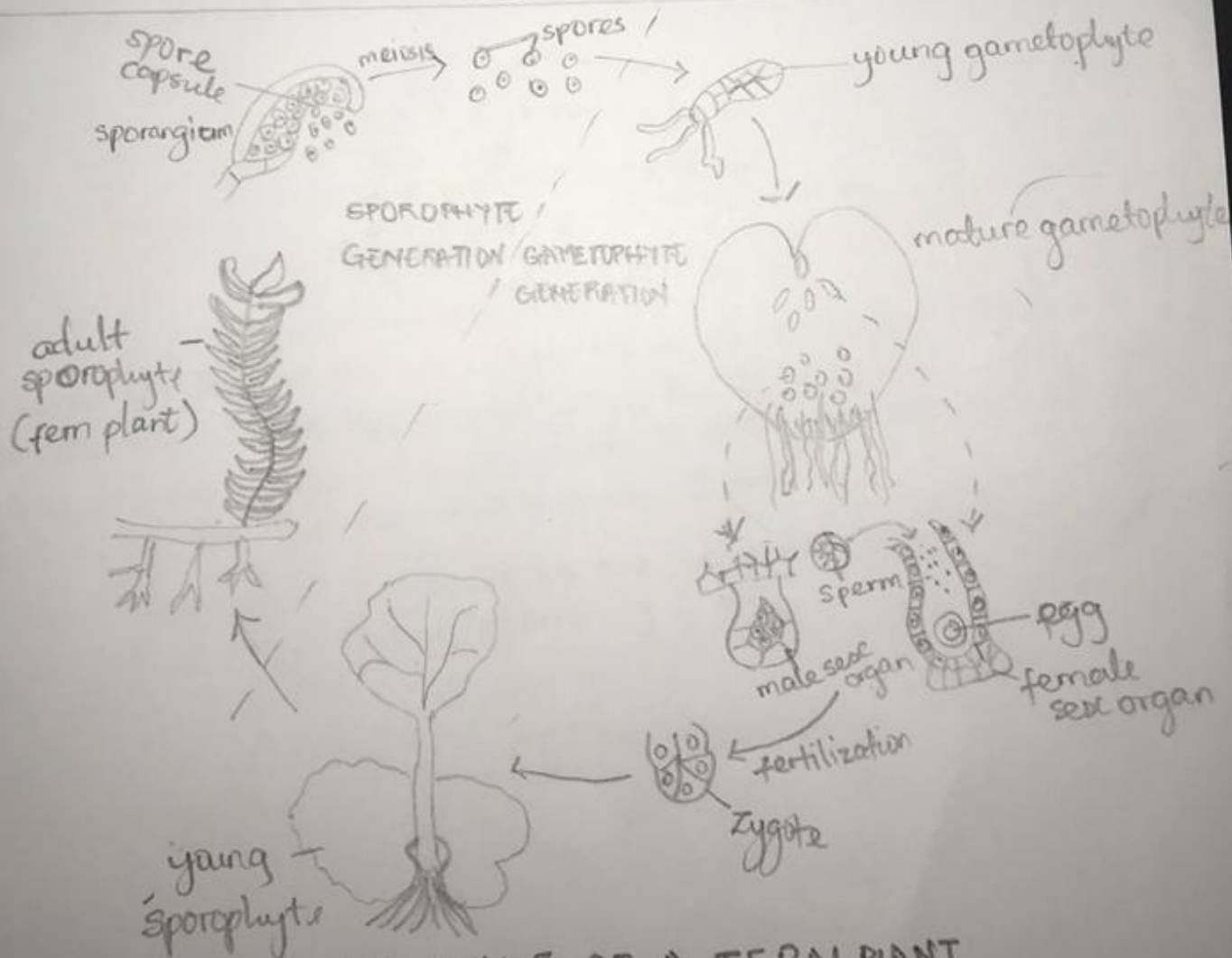
+ Amphiphloic Siphonostele: Siphonosteles are amphiphloic when the phloem is both external and internal to the xylem. eg Dictyostele



d Dictyostele: This is a type of siphonostele in which the vascular tissue in form of cylinder surrounds the pith and is broken up into closed-spaced spiral leaf gaps.



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LIFE CYCLE OF A FERN PLANT