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19/MHS01/370

MBBS

BIO 102

1 How are fungi important to mankind?

- They are responsible for the decay of organic matter.
- Fungi (yeast) is very important in the food industry.
- Mushrooms are eaten by some people.
- Some fungi are parasites to some pests eg housefly.
- Without fungi and other microbes, the earth will be littered with dead organic matter with various elements locked up in them.

2 Illustrate the cell structure of a unicellular fungus.

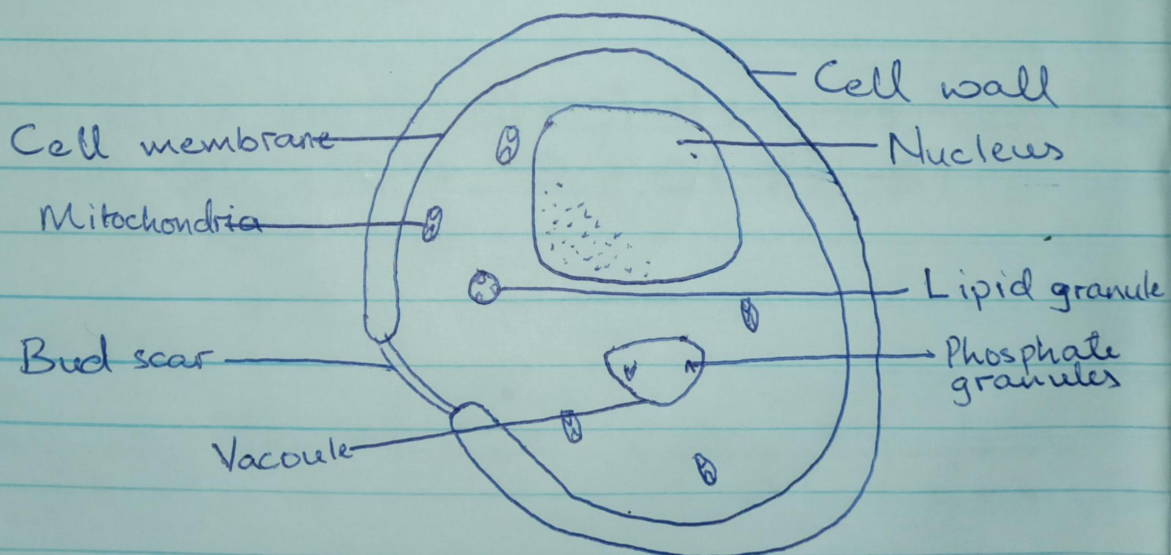


Diagram of the Cell Structure of a Fungus

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

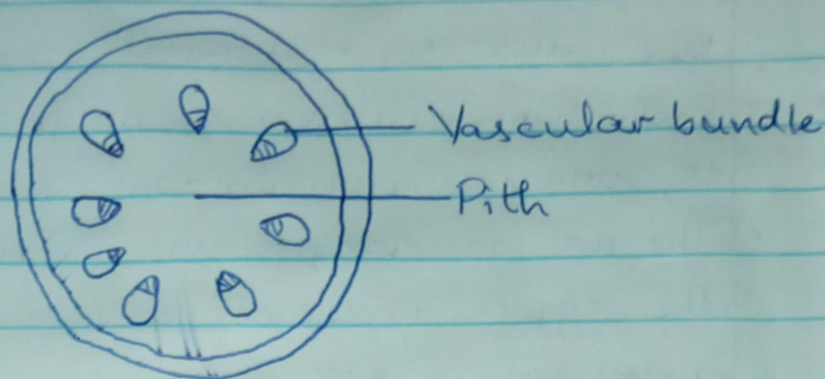
In Rhizopus, Stoloniper

- When two mating hyphae grow in the same medium, they induce some chemical reactions.
- Each hypha produces an outgrowth with a limiting wall to form a gametangium containing many nuclei.
- The two gametangia fuse to form a zygote by plasmogamy. The zygote undergoes a dormancy stage and the nuclei fuse in twos and undergo meiosis.
- The zygote germinates in favourable condition to produce a fruiting that produces haploid spores upon germination.

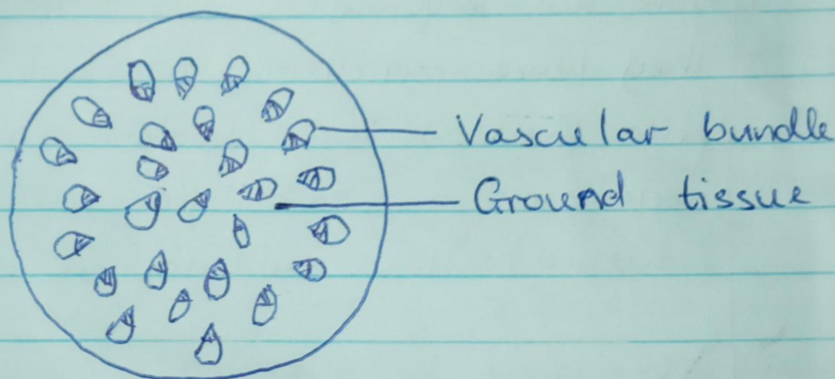
4 How do bryophytes adapt to their environment?

- They have structures to absorb water and nutrients from the soil. Their bodies are divided into the aerial portion and the subterranean portions (rhizoid). The rhizoid is not a true root.
- The aerial portion being exposed to air has modifications to prevent excessive water loss (desiccation) and to eliminate excess water.

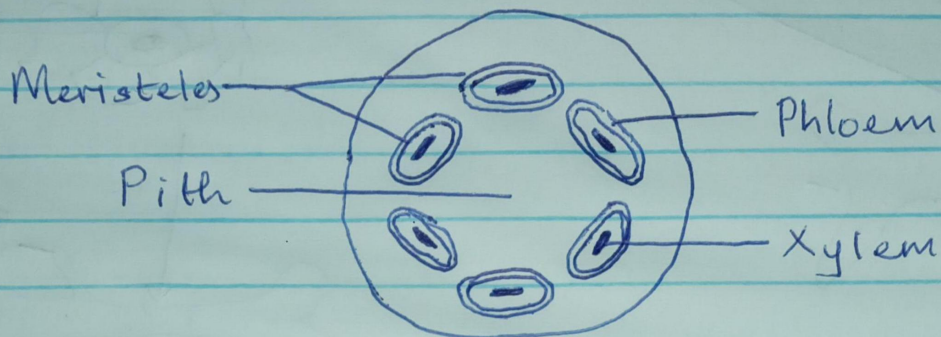
5. **Eustele:** A type of stele in which the vascular bundles in the stem forms a central ring around the pith. The vascular bundles are discrete, concentric bundles of xylem and phloem.



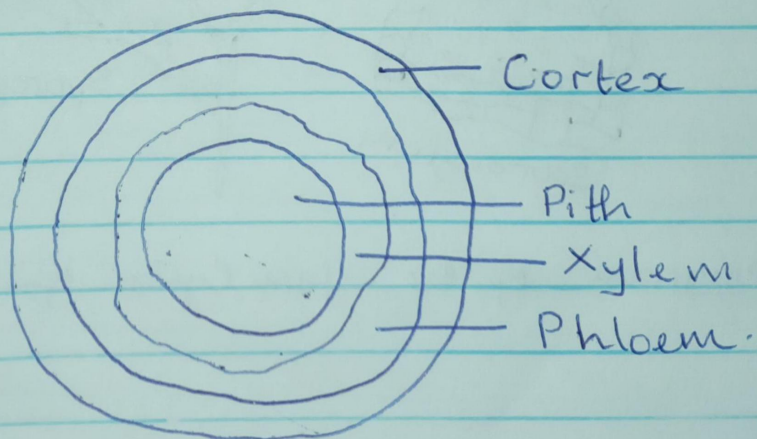
- **Atactostele:** A type of stele found in monocots in which vascular tissue in the stem exists as scattered bundles.



- **Dictyostele:** A type of stele in which the vascular cylinder is broken up into a longitudinal series or network of vascular strands around a pith.



- **Siphonostele:** A type of stele made up of a core pith and concentric layers of xylem and phloem.



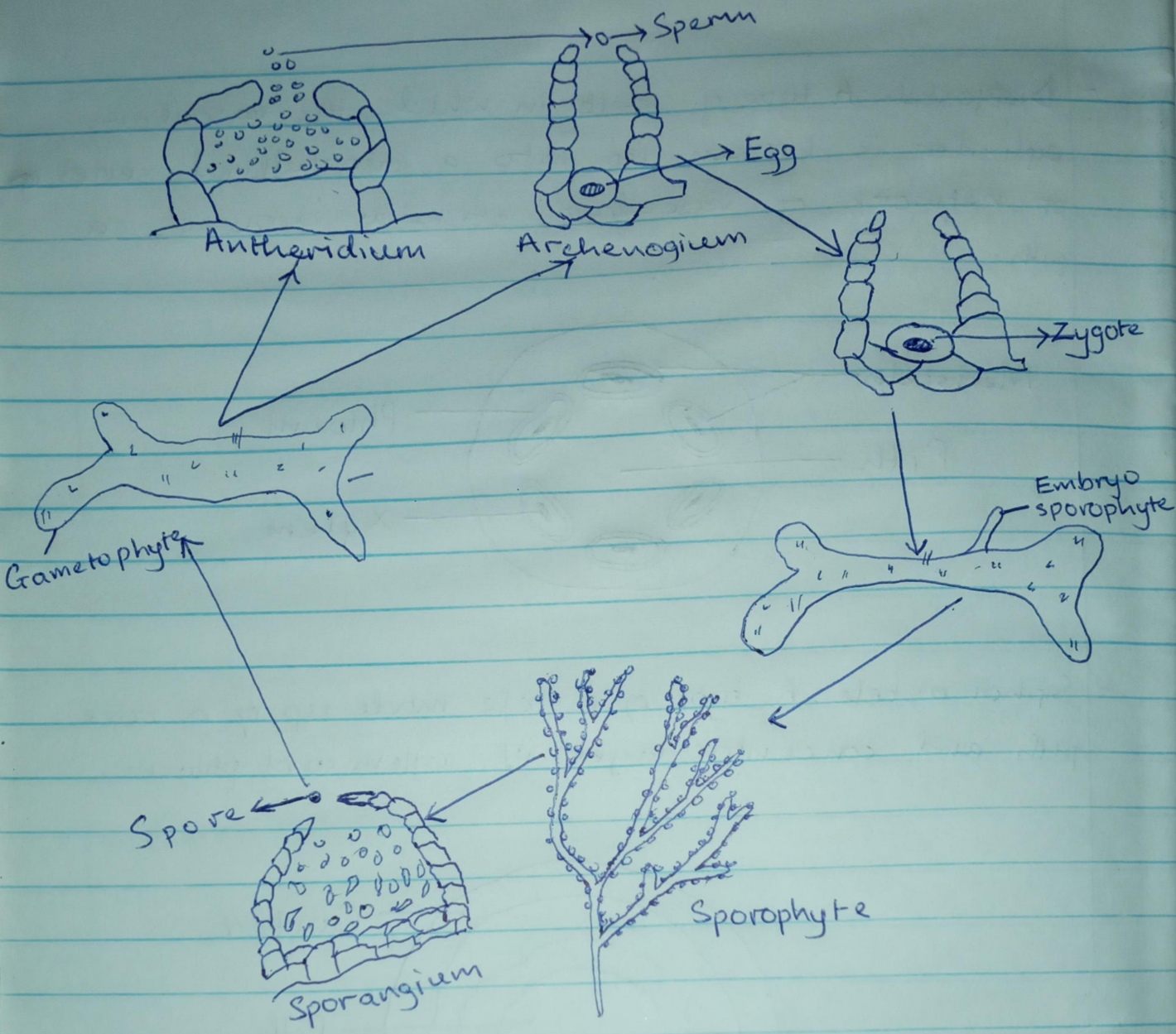


Diagram of the Life Cycle of the Psilotum