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DEPT/COLLEGE: Pharmacy/MHS
BIO 102

1) How are fungi important to mankind?
a. They help in decomposing organic matter
b. They are important to the entire ecosystem
c. It is useful in food industry e.g. yeast
d. Some fungi species are used to produce important antibiotics
e. Fungi are Parasites to some pests e.g. grasshopper.

2. Illustrate the cell structure of a Unicellular fungus with a well Labelled diagram

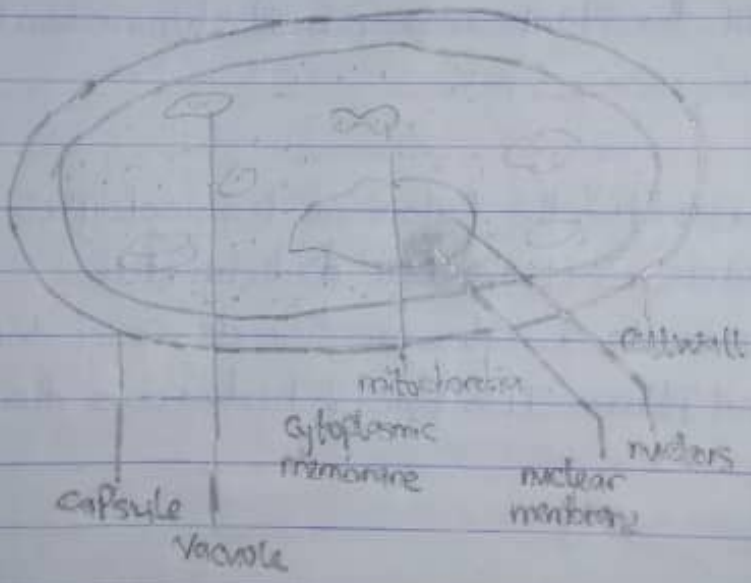


DIAGRAM OF A UNICELLULAR FUNGUS (YEAST)

3) Outline the Sexual reproduction in a typical filamentous form of fungi.
i. Sexual reproduction occurs when two mating types of hypae grow in the same medium
ii. Chemical interaction in the two mating types of hyphae induces growth perpendicular to the hyphae in the opposite directions.
iii. The growths are delimited by a wall such that many nuclei are isolated in a gametangium.

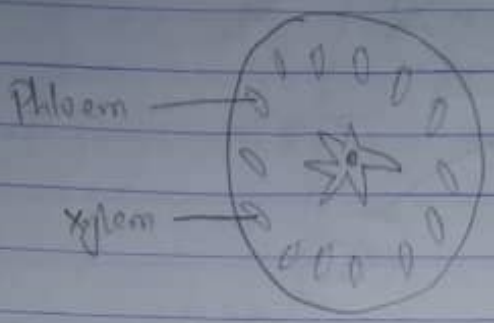
iv. The two gametangia fuse and a zygote is formed which may undergo prolonged dormancy or resting stage.
v. The nuclei in the zygotes fuse in twos and undergo meiosis independently
vi. The zygote germinates under favorable conditions to produce a fruiting.

4) How do Bryophytes adapt to their environment?
a. They have definite structure for water and nutrient absorption from the soil.
b. The aerial portion of the plant being exposed to the atmosphere demands some modifications that prevents excessive loss of water through the body surface.
c. The aerial parts of the plants also permit elimination of excess water from the plant body.

5. Describe with illustration the following terminologies
a) eusteles b) atactostele c) siphonostele d) dictyostele.
a) EUSTELES: The vascular bundles are discrete, concentric collateral bundles of xylem and phloem. It is found in herbaceous dicotyledonous plants.

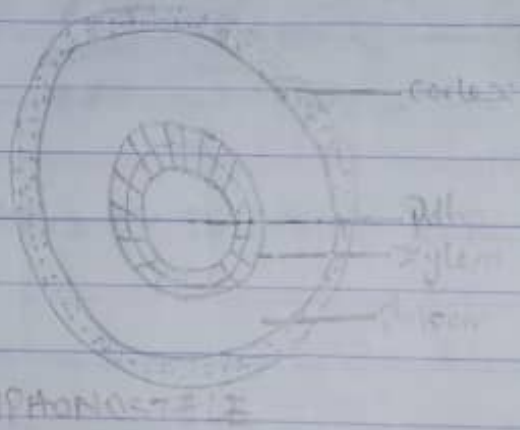
EUSTELE

b) ATACTOSTELE : The vascular bundles are scattered. The reduce of the vascular supply to leaves is also not worthy element of the vascular system.



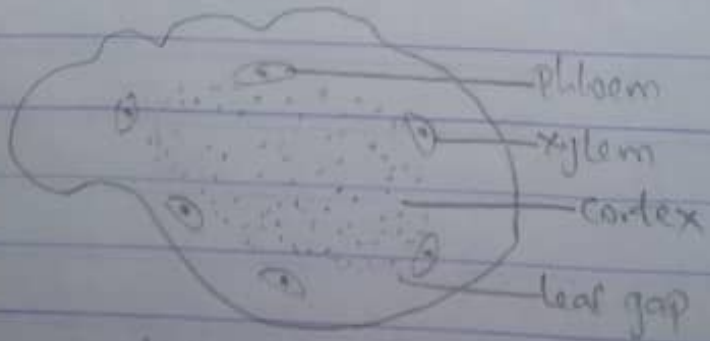
ATACTOSTELE

c) SIPHONOSTELE : The stele is cylinder enclosing a parenchymatous Pith



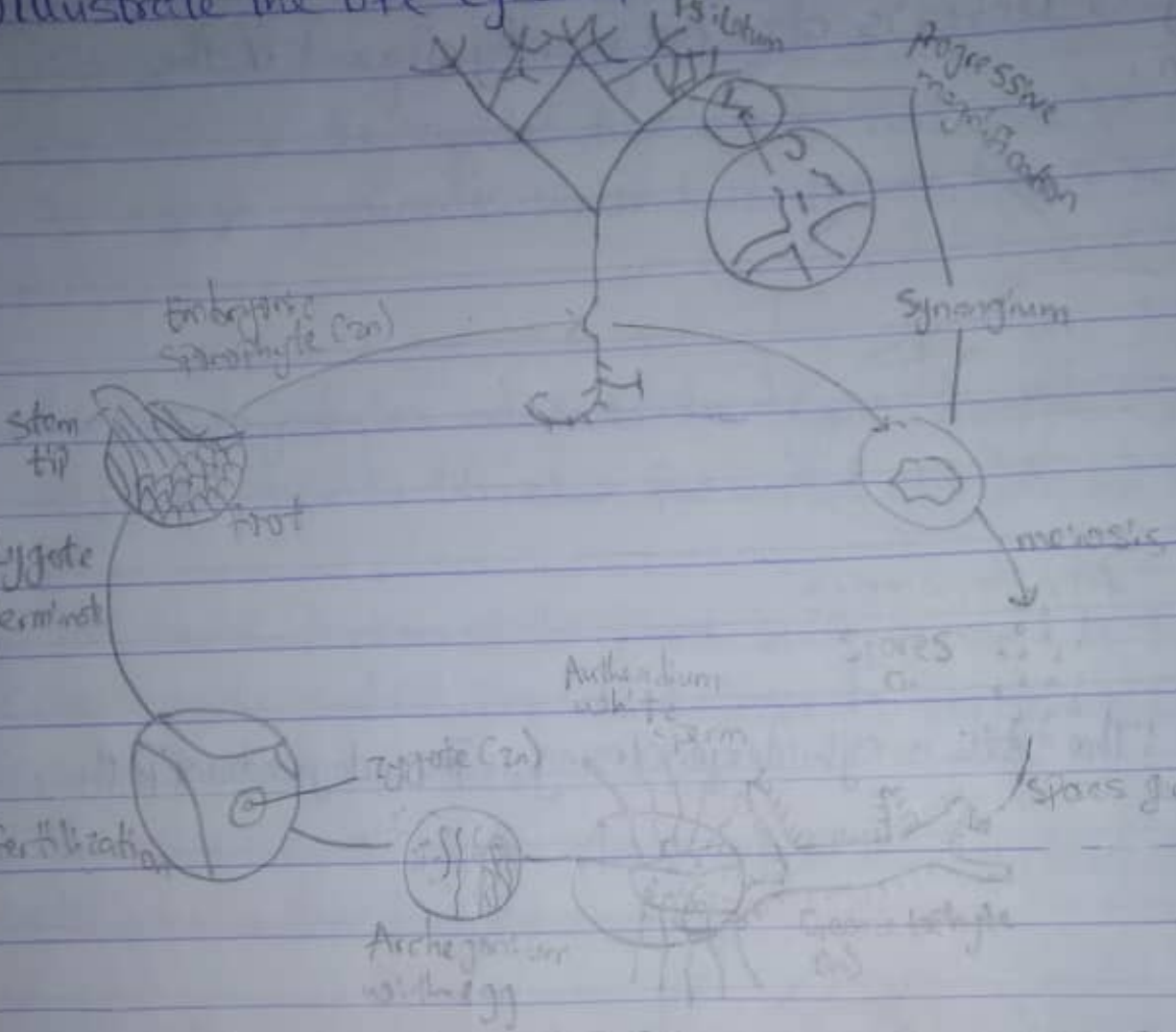
SIPHONOSTELE

d) Dictyostele: It consist of vascular strands interconnected in such a manner that many ~~green~~ given cross section of stem, several distinct bundles can be observed.



DICTYOSTELE

6) Illustrate the life cycle of a Primitive Vascular Plant.



A LIFE CYCLE OF A PRIMITIVE VASCULAR PLANT