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MATRIC NO: 19/MH501/006

DEPT: MEDICINE AND SURGERY.

BIO 102 ASSIGNMENT

1. How are fungi important to mankind?
 - a. they help in decomposing organic matter.
 - b. it is useful in the food industry e.g yeast.
 - c. Some fungi species can be used to produce important antibiotics.
 - d. they are important to the entire ecosystem.
 - 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).

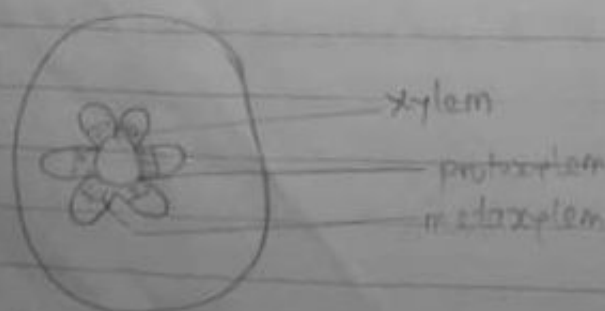
3. Describe the sexual reproduction in a typical filamentous form of fungi.
- Sexual reproduction occurs when two mating types of hyphae grow in the same medium.
 - Chemical interaction in the two mating types of hyphae induces growth perpendicular to the hyphae in the opposite directions.
 - The growths are delimited by a wall such that many nuclei are isolated in a gametangium.
 - The two gametangia fuse and a zygote is formed which may undergo prolonged dormancy or resting stage.
 - The nuclei in the zygotes fuse in twos and undergo meiosis independently.
 - The zygote germinates under favorable conditions to produce a fruiting.

4. How do Bryophytes adapt to their environment?

- They have definite structures for water and nutrient absorption from the soil.
- The aerial portion of the plant being exposed to the atmosphere demands some modifications that prevent excessive loss of water through the body surface.
- The aerial parts of the plants also permit elimination of excess water from the plant body.

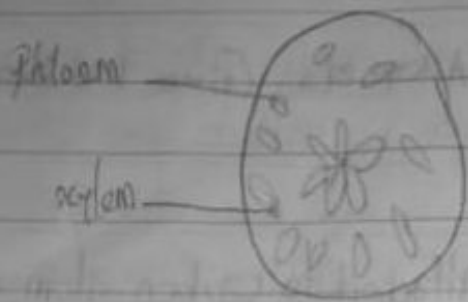
5. Describe with illustration the following terminologies; (a) Eustele (b) atactostele (c) siphonostele (d) dictyostele.

(a) Eustele: the vascular bundles are discrete, concentric collateral bundles of xylem and phloem. It is found in herbaceous dicotyledonous plants.



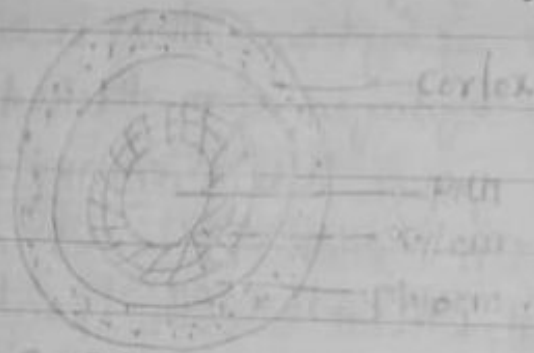
Eustele

- b. Atactostele: The vascular bundles are scattered. The nature of the vascular supply to ~~lower~~ leaves is also not worthy element of the vascular system.



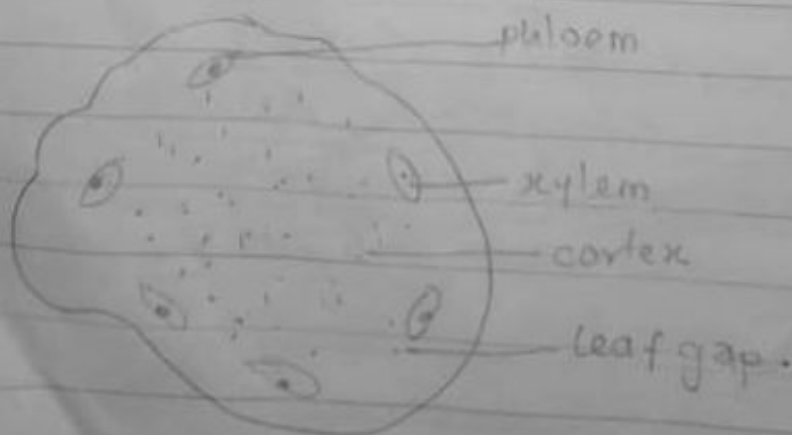
ATACTOSTELE

- c. Siphonostele: The stele is a cylinder enclosing a parenchymatous pith.



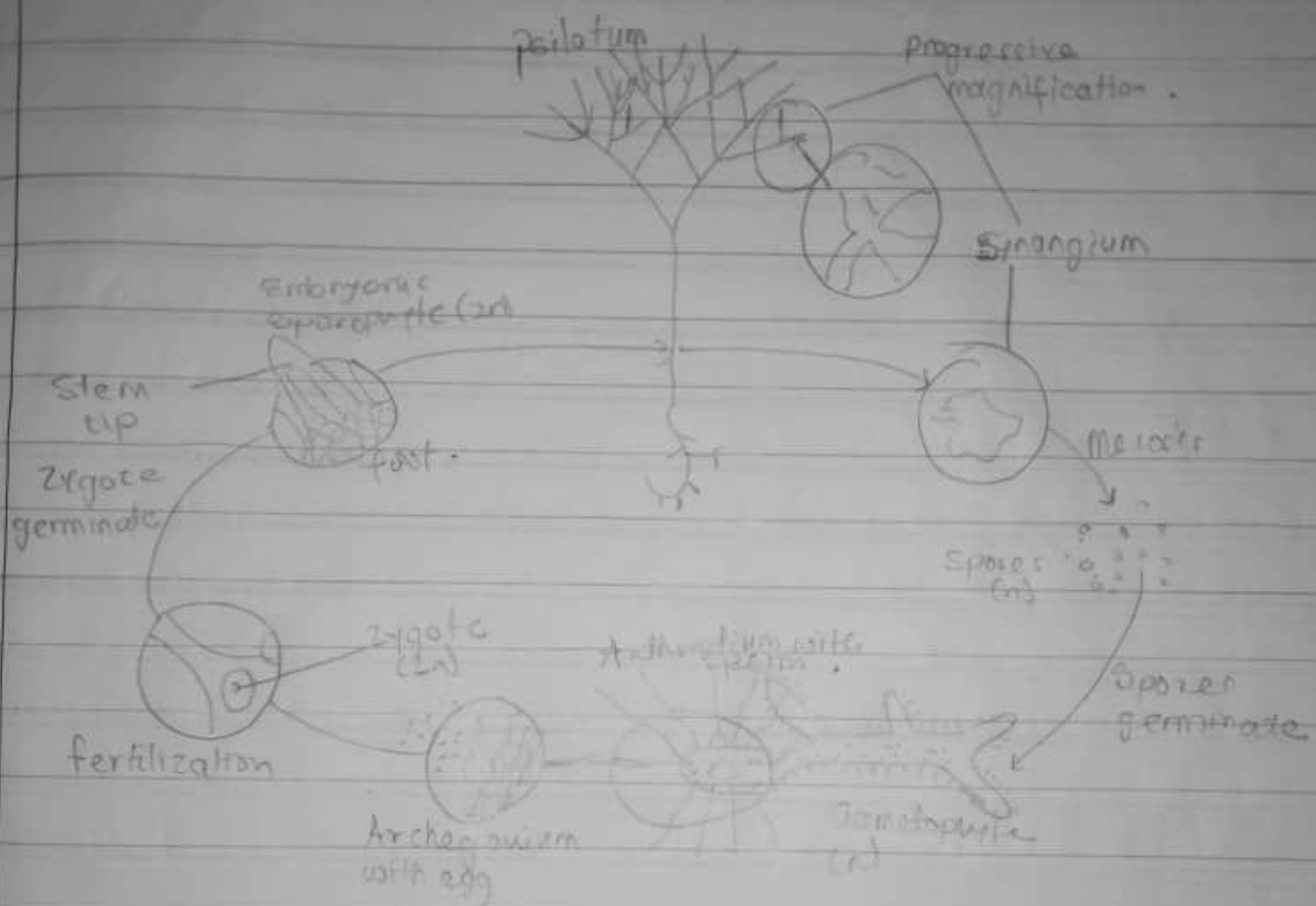
SIPHONOSTELE

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



DICTYOSTELE

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



A LIFE CYCLE OF A PRIMITIVE VASCULAR PLANT.