

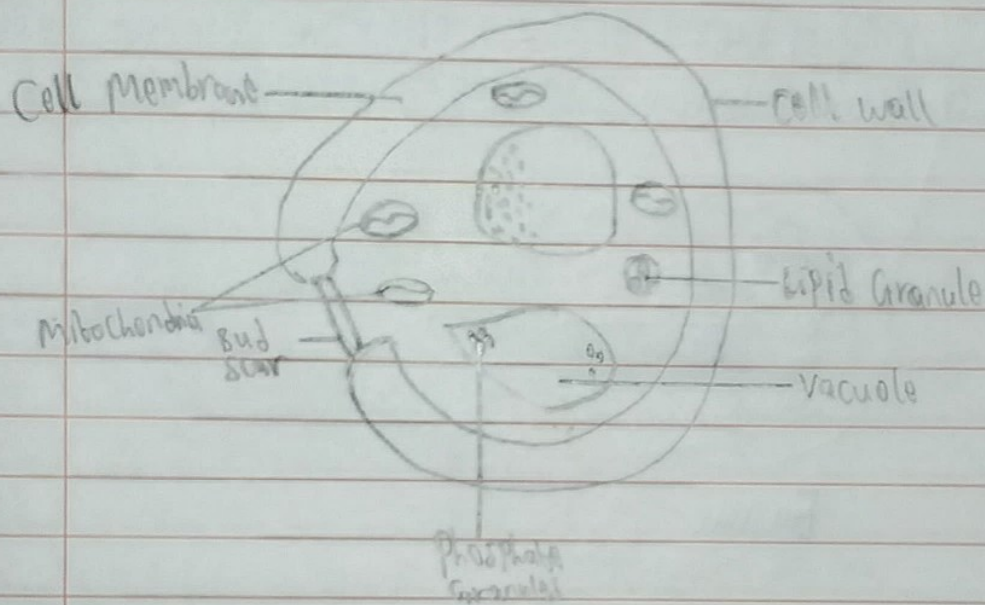
Name: Osasenaga Hero-Douglas Aghedo

Matric NO: 19/MIH501/054

BIO 102 ASSIGNMENT

1. Importance of Fungi to Mankind
 - i) They are responsible for the mediation of decay of organic matter
 - ii) Yeast is used in the food industry
 - iii) Fungi mediate the spoilage of woods, food, clothes and paper.

2. Cell structure of a Unicellular Fungus



3 Sexual Reproduction in a typical Filamentous form of fungi e.g. *Rhizopus stolonifer*

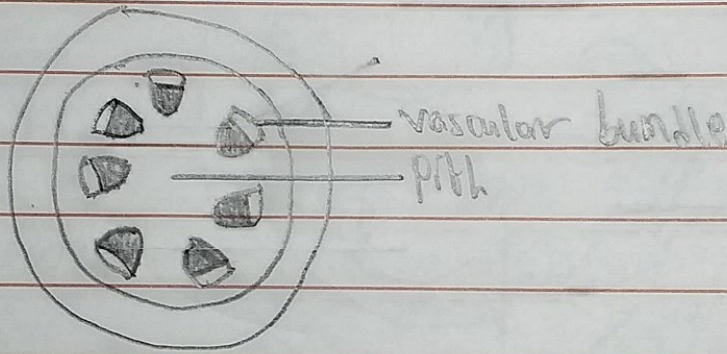
It occurs through the following processes;

- i) First, two mating types of hyphae grow in the same medium
- ii) A chemical interaction between them causes growth perpendicular to the hyphae in opposite directions, so they can meet with one another
- iii) The growths are delimited by a wall just so the nuclei are isolated in differentiated sex organs called gametangia
- iv) The gametangia fuse in a process called plasmogamy and together, they form a zygote which may undergo dormancy for a period.
- v) The nuclei in the zygote fuse in pairs and undergo meiosis independently, it then moves on to germinating under favorable conditions so as to liberate haploid spores at maturity through the production of a fruiting.
- vi) Therefore, Sexual reproduction consists of three stages namely; Plasmogamy, karyogamy and Meiosis.

4. Adaptation of Bryophytes to the Environment

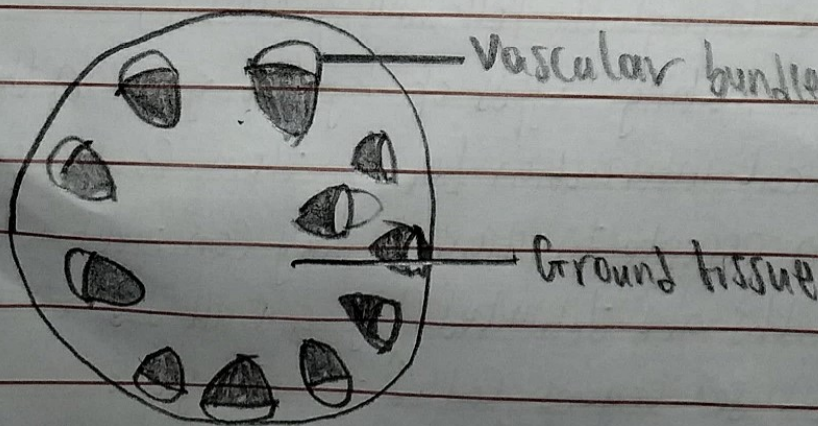
- i) They possess definite structures for water and nutrient absorption from the soil.
- ii) They also possess a waxy cuticle that keeps them from drying out through the process of desiccation.
- iii) They possess gametangia that keep the plants' gametes from drying out.

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



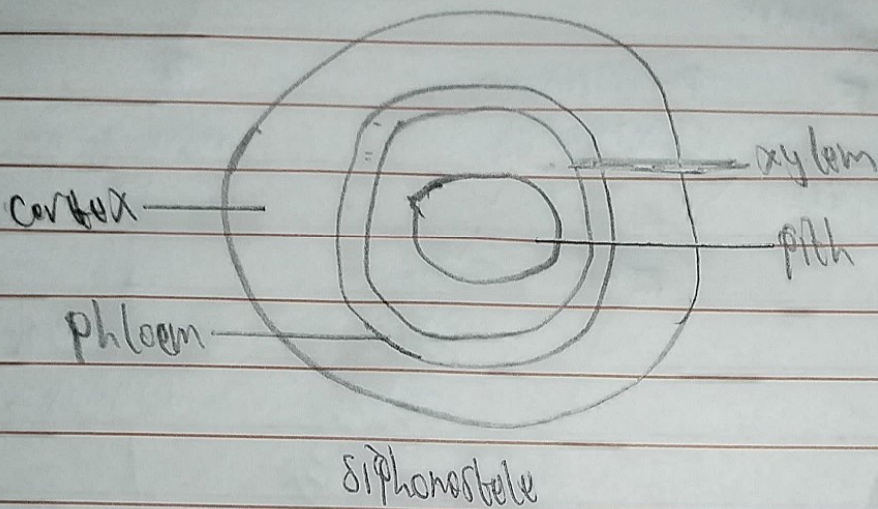
Eustele

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

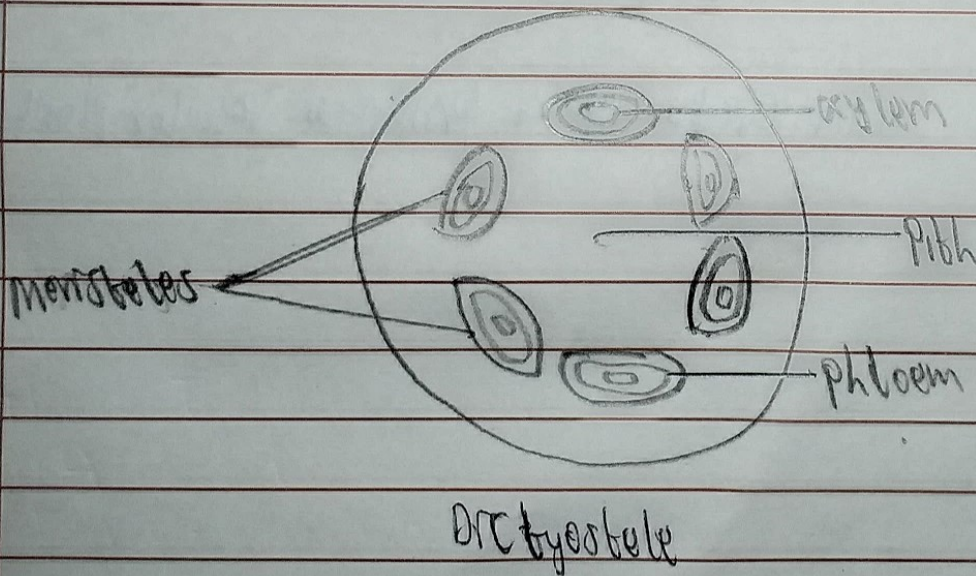


Atactostele

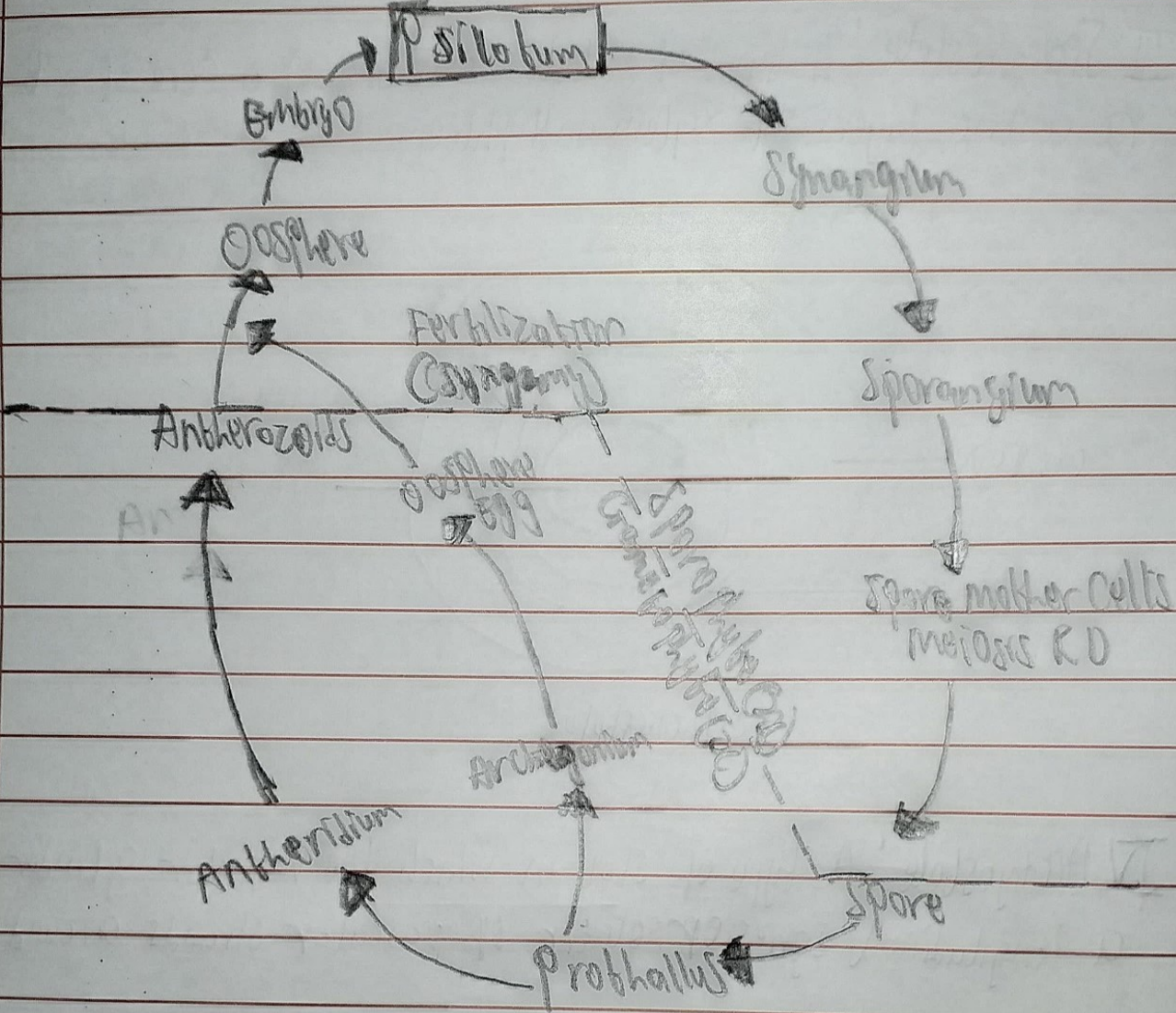
III Siphonostele: A type of stele consisting of a core of pith surrounded by concentric layers of xylem and phloem.



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



6.



Life cycle of a primitive vascular plant *Psilobum*