

**Subject** Biology assignment  
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**Date** Today at 10:41 pm

## Biology assignment

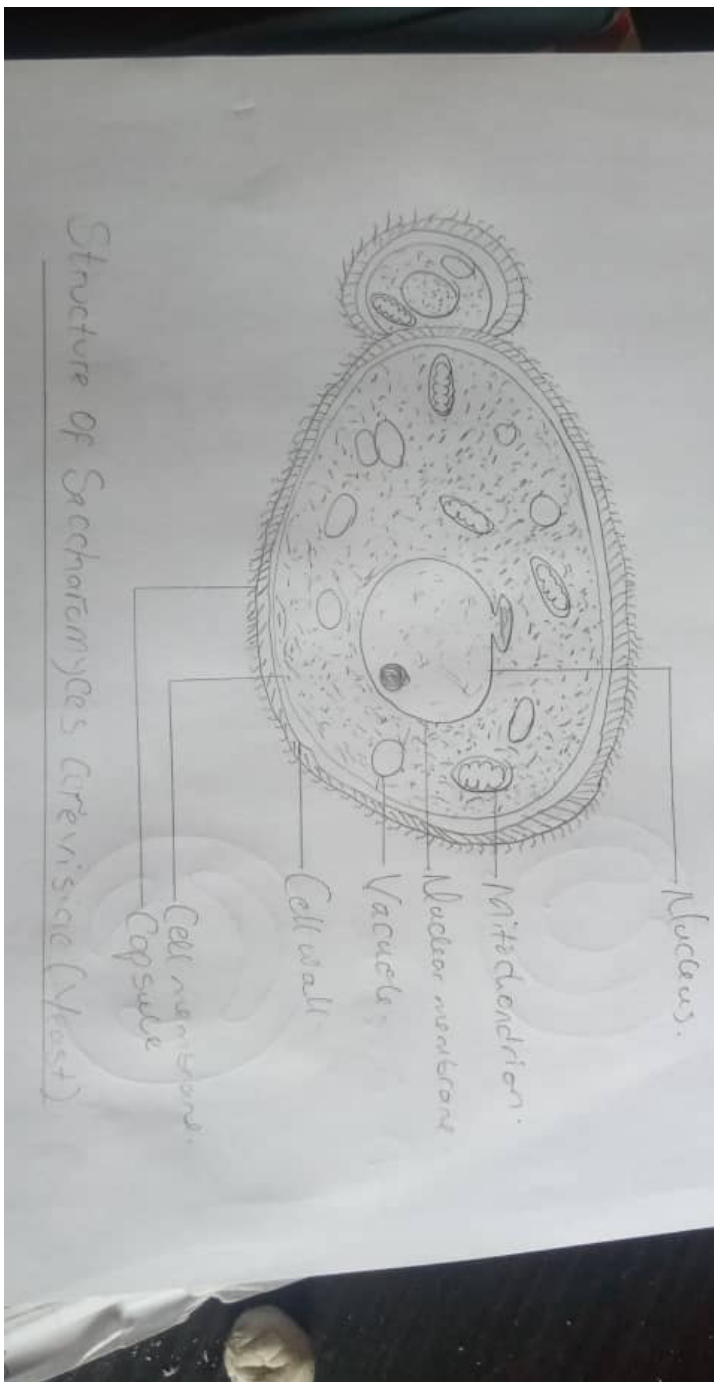
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Matric no: 19/mhs01/385

1. How are fungi important to mankind

- i) Fungi e.g. yeast is important in the food industry.
- ii) Many species of fungi mediate the spoilage of wood, food, clothes and even paper.
- iii) Mushrooms are eaten by humans and it therefore provides antibiotics for the body
- iv) Some fungi species acts as parasites to some horrible pests such as housefly and grasshopper.
- v) Fungi are responsible for the mediation of decay of organic matter to avoid clogging of the environment with dead matter and to aid material cycling.

1. Illustrate the cell structure of a unicellular fungus with a well labeled diagram.





1. Outline the sexual reproduction in a typical filamentous form of fungi.
  - i) Sexual reproduction occurs when two mating types of hyphae grow in the same medium.
  - ii) Chemical interaction in the two mating types of hyphae induces growth perpendicular to the hyphae in opposite directions.
  - iii) These growths are delimited by a wall such that many nuclei are isolated in what is called a gametangium.
  - iv) The two gametangia fuse (plasmogamy) and a zygote is formed which may undergo prolonged dormancy or resting stage.
  - v) The nuclei in the zygote fuse in twos and undergo meiosis independently.
  - vi) The zygote germinates under favorable

v) The zygote germinates under favorable conditions to produce a fruiting which at maturity liberates the haploid spores.

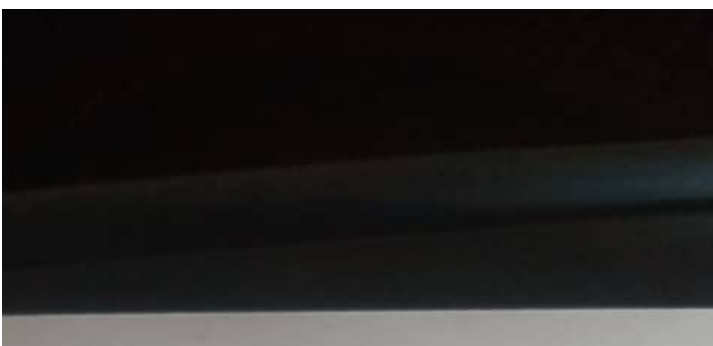
1. How do bryophytes adapt to their environment.

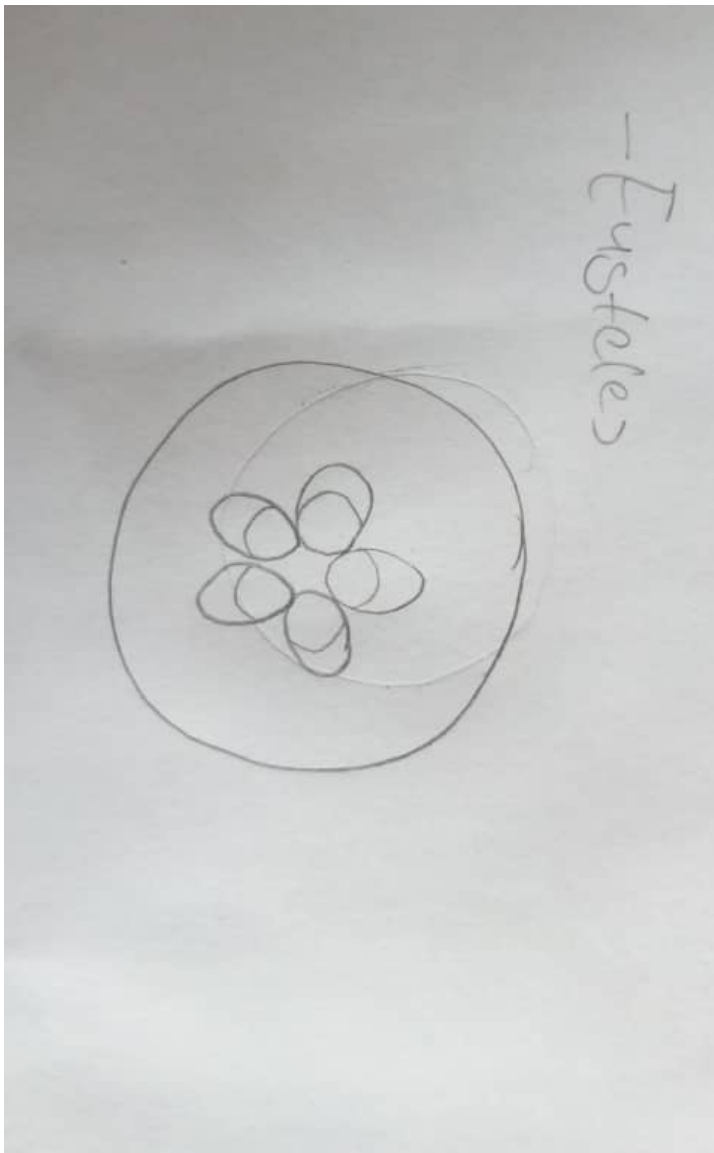
- a. They have definite structures for water and nutrient absorption from the soil; therefore the plant body is divided into two (an aerial portion and a subterranean portion). The subterranean portion is the rhizoid and it is not a true root as the case of land plants that are advanced.
- b. The aerial portion being exposed to the atmosphere demands some modifications that prevents loss of water through the body surface (i.e. desiccation)
- c. Some other modifications that permit removal of excess water from plant body and not only exchange of gases between the internal part of the plants and the atmosphere therefore openings are available on the aerial part of the plants.

1. Describe with illustration the following terminologies: (a) eusteles (b) atactostele (c) siphonostele (d) dictyostele

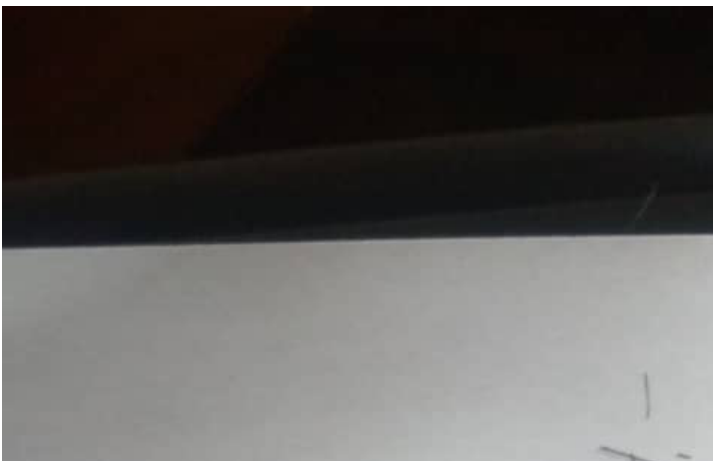
**a. eusteles:** A type of siphonostele, in which the vascular tissue in the stem forms a central ring of bundles around a pith.

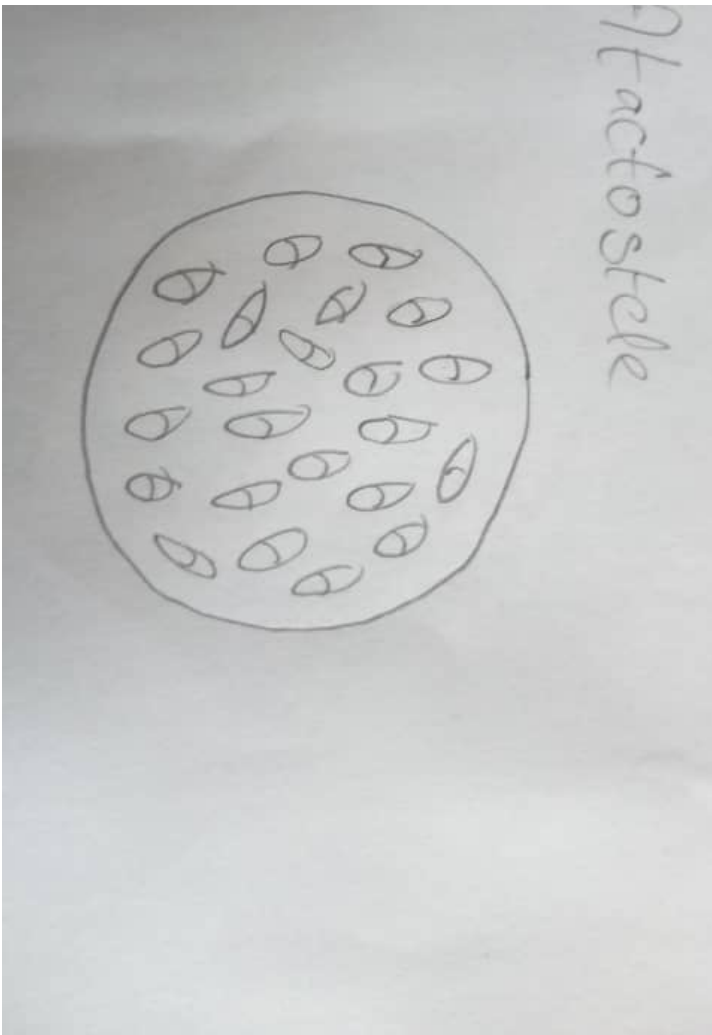
In herbaceous dicotyledonous plants; the vascular bundles are discrete, concentric collateral bundles of xylem and phloem.



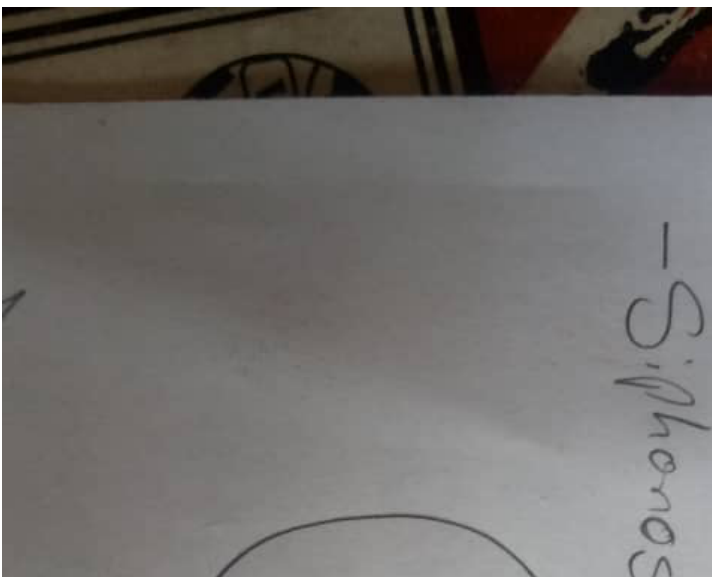


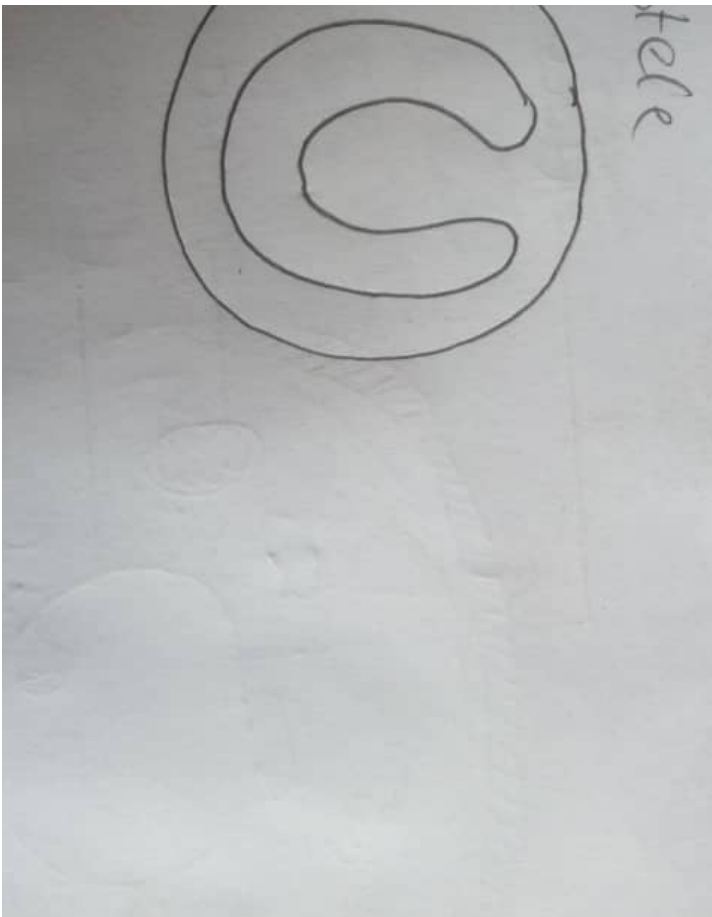
**b. atactostele:** A type of eustele, found in monocots in which the vascular tissue in the stem exists as scattered bundles. In grasses and many monocotyledonous plants; the vascular bundles are scattered.



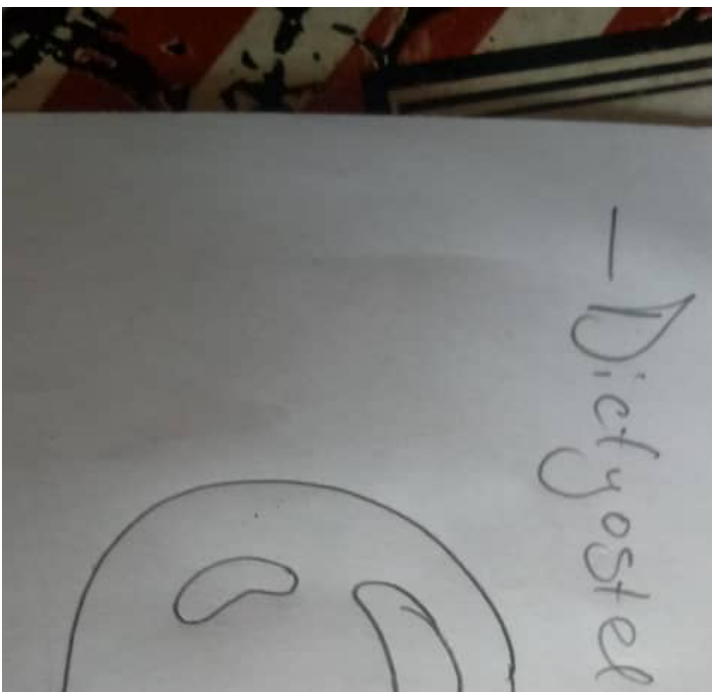


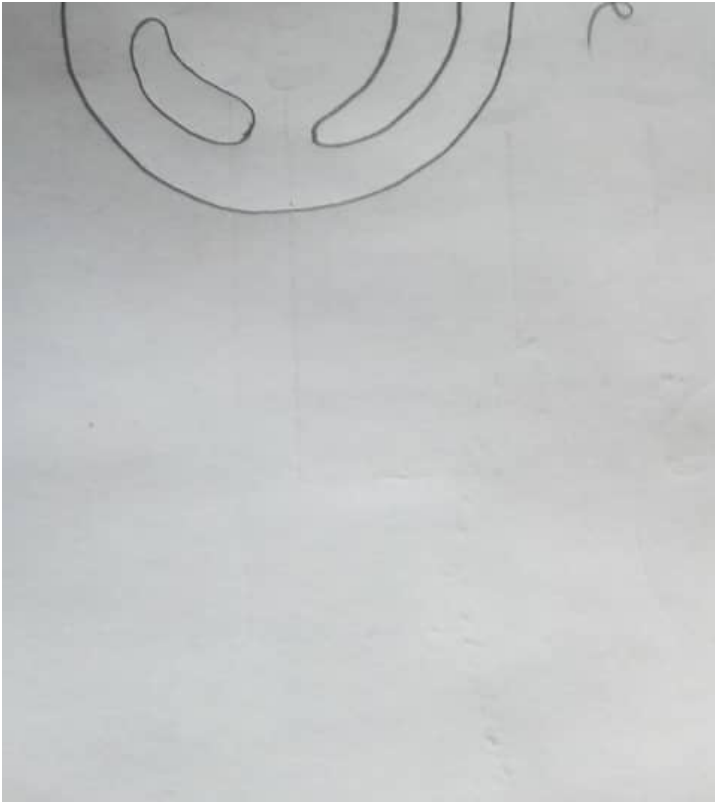
**c. siphonostele:** A stele consisting of a core of pith surrounded by concentric layers of xylem and phloem. In more advanced vascular systems e.g. stems of ferns and higher vascular plants, the stele is a cylinder enclosing a parenchymatous pith.



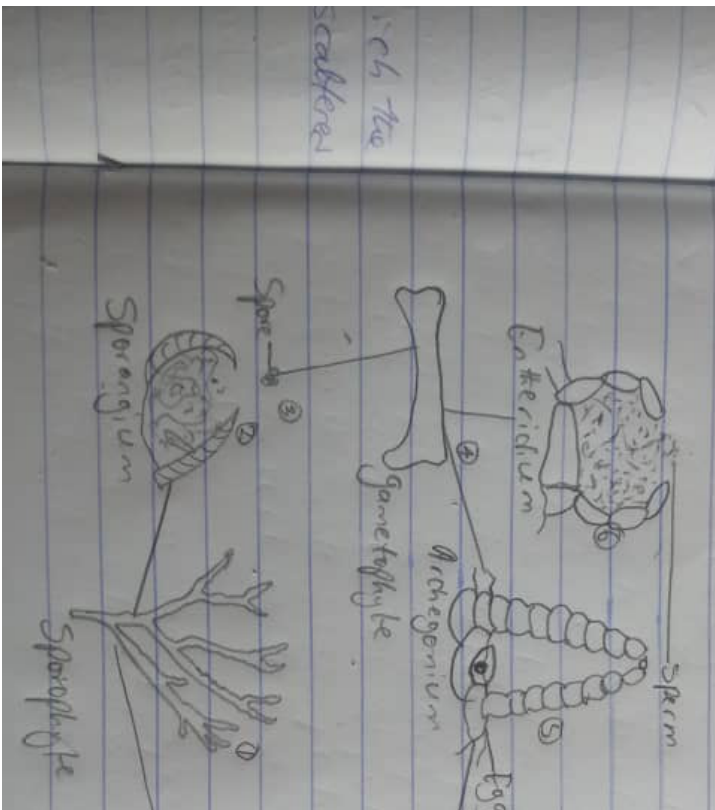


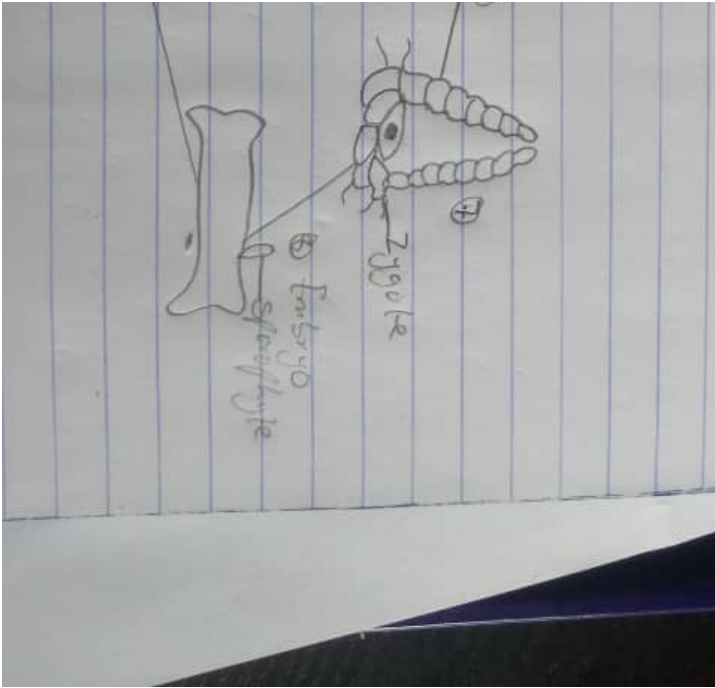
**d. dictyostele:** A stele in which the vascular cylinder is broken up into a longitudinal series or network of vascular strands around a central pith (as in many ferns). In siphonosteles, vascular supply to leaves is associated with leaf gaps and the conducting cylinder is a dissected one, it is known as dictyostele.





1. Illustrate the lifecycle of a primitive vascular plant .





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