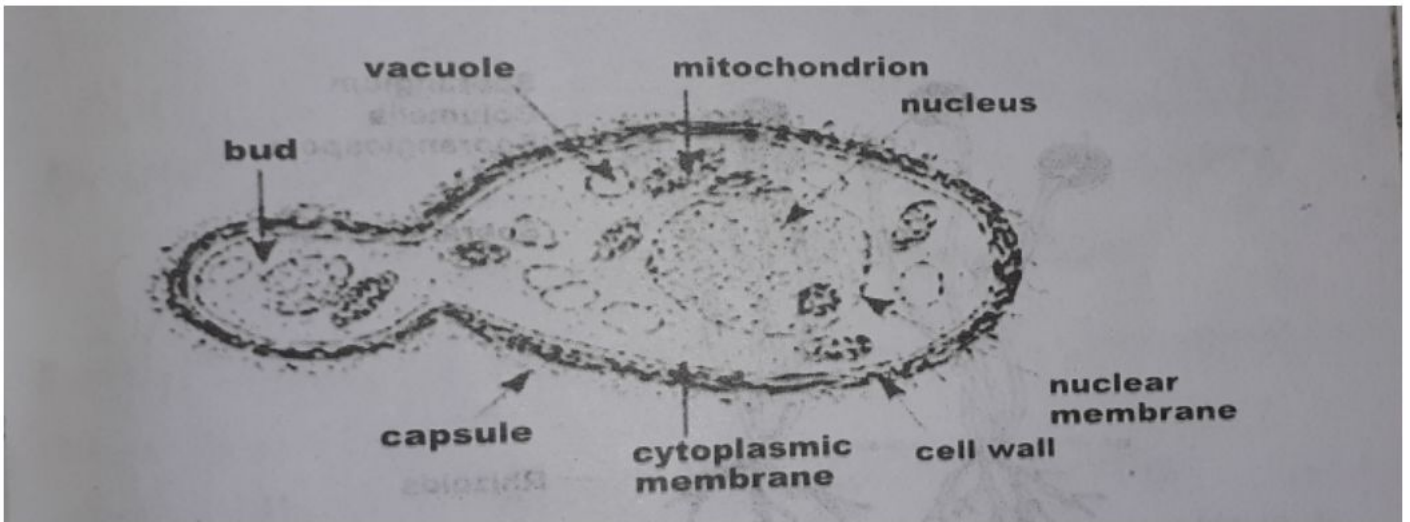
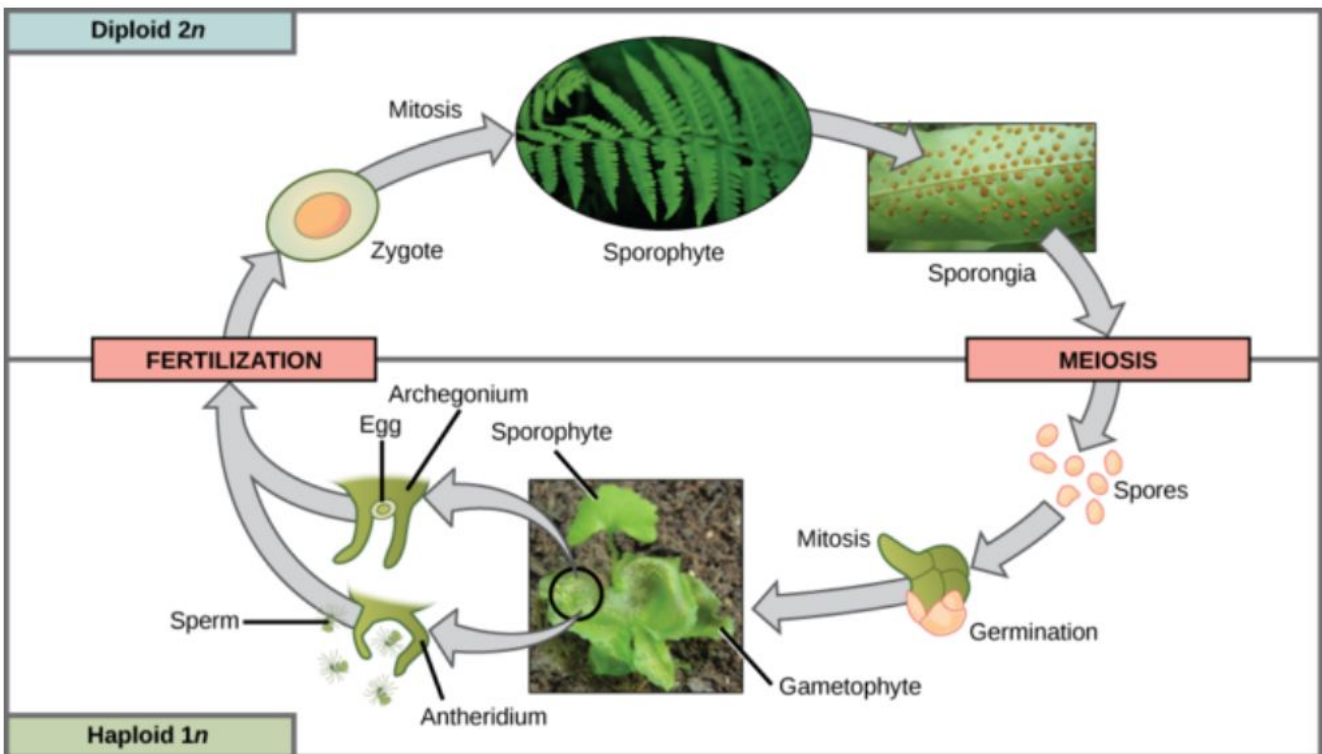


2.

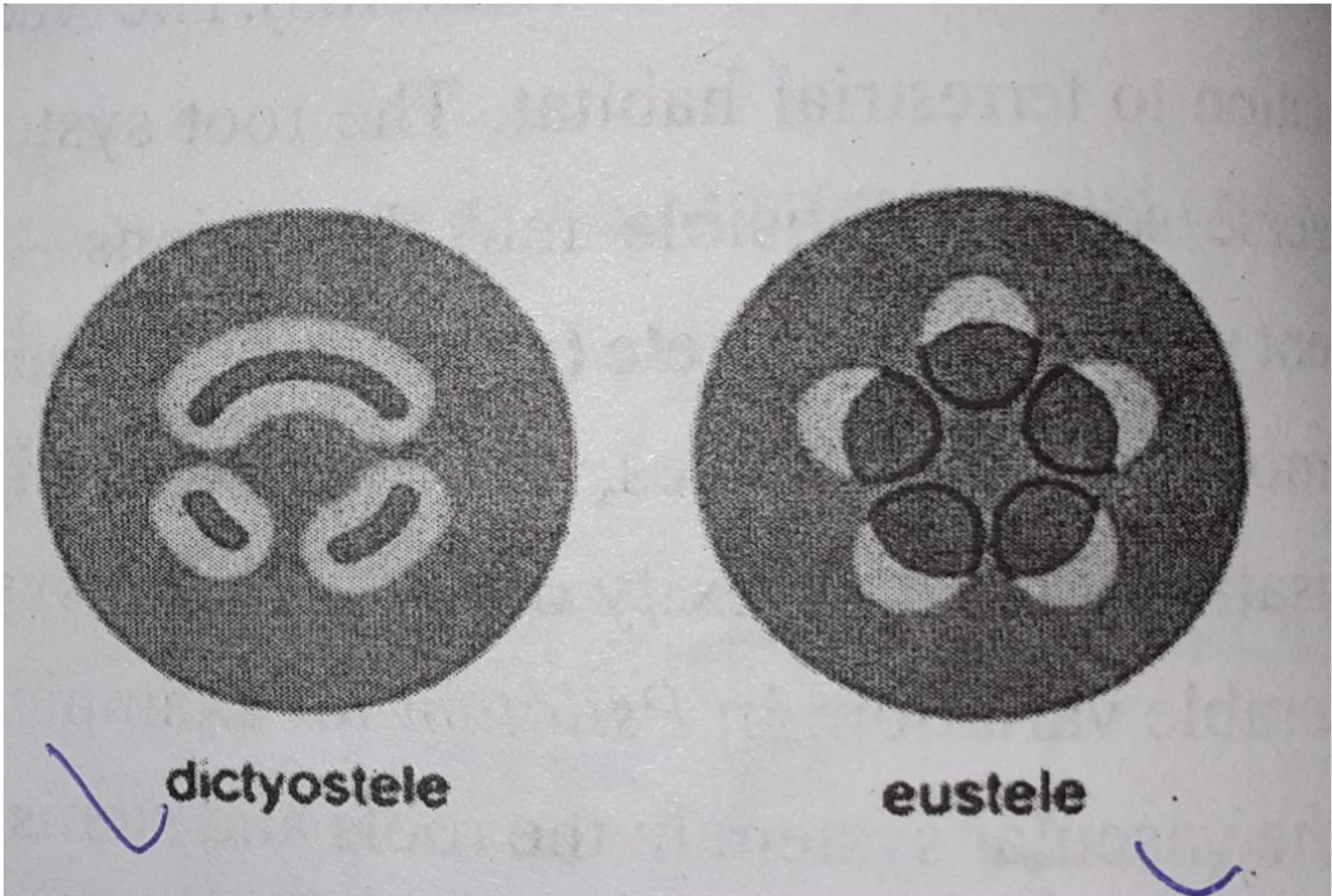


The cell structure of a unicellular fungus.

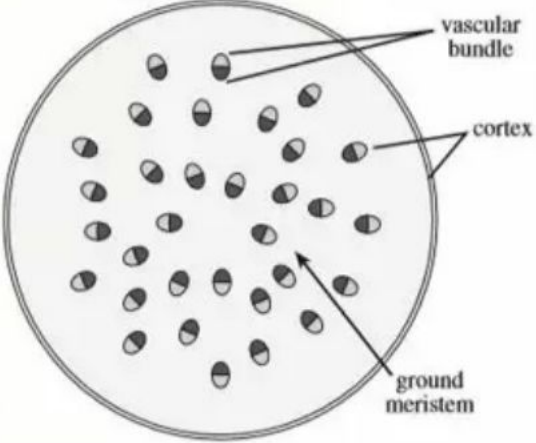
6. Life cycle of a primitive vascular plant

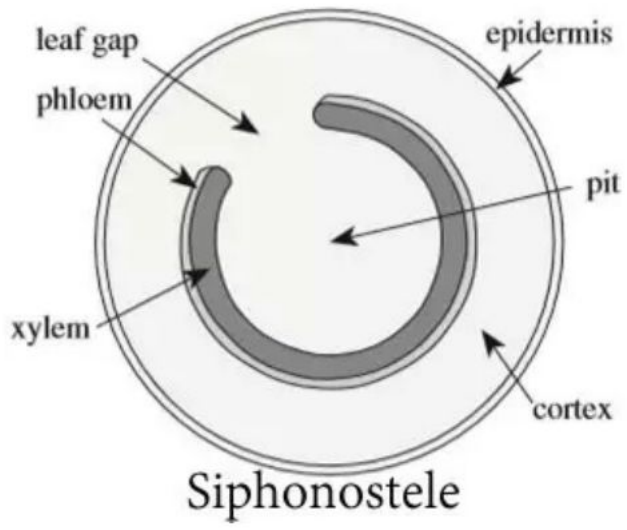


5.



Atactostele.





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BIO 102 Assignment

1.) Importance of Fungi to mankind

a.) Fungi are responsible for the mediation of decay of organic matter. Without fungi and other microbes, the surface of the earth would have been clogged up with dead matters with all the various elements locked up in them instead of returning into various cycles.

b.) Fungi e.g. yeast ( *Saccharomyces cerevisiae* ) are important in food industry. Mushrooms are eaten by many human societies. Species e.g. *Penicillium notatum* produce important antibiotics.

3.) Sexual reproduction in a filamentous form of Fungi

a.) Sexual reproduction occurs when two mating types of hyphae grow in the same medium. Chemical interaction in the two mating types of hyphae induces growths perpendicular to the hyphae in opposite directions. These growths are delimited by

a wall such that many nuclei are isolated in what is called a GAMETANGIUM.

The two gametangia fuse (plasmogamy) and a zygote is formed which may undergo prolonged dormancy or resting stage. The nuclei in the zygote fuse in two's and undergo meiosis independently.

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

4.) Adaptation of Bryophytes 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 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 excessive loss of water through the body surface (l.e. dessication ).

c.) Some other modifications that permit elimination of excess water from the plant

body and not only exchange of gases



body and not only exchange of gasses between the internal parts of the plant and the atmosphere therefore openings are available on the aerial parts of the plant.

5.) Eustele: the typical vascular cylinder of a dicotyledonous plant or a gymnosperm, consisting of a ring of collateral bundles of xylem, cambium, and phloem.

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 )

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

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