

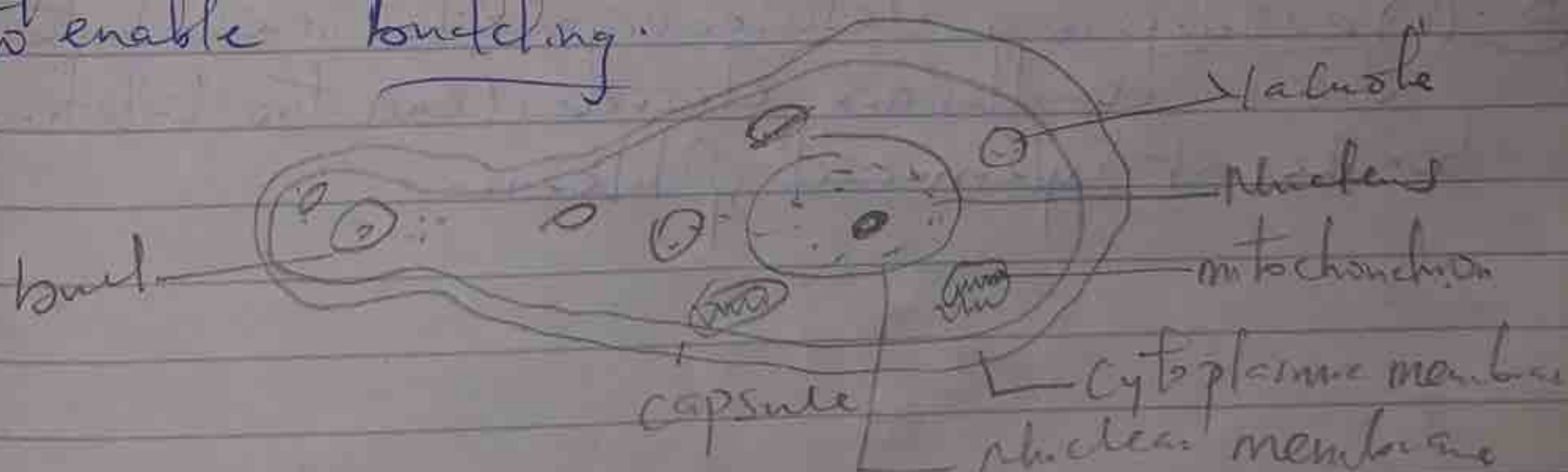
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Medicine and Surgery
19/MH501/308
BIO 102 Assignment

1. Importance of Fungi

1. Some fungi e.g. yeast are used in making alcohols during fermentation of sugar.
2. Some are useful antibiotics e.g. penicillium notatum.
3. They help to decompose dead organic matter.
4. They are used in baking industry.

2. Cell structure of unicellular fungi (yeast)

The cell of yeast is composed of a centrally building machinery nucleus capable of controlling cell activities in them. The cytoplasm is made up of vacuole for osmoregulation, mitochondrion for energy production and capsule. The cytoplasm is bounded by a membrane and nucleus, is bounded by its own membrane too. Their body is built in a way to enable budding.



3. Sexual reproduction in filamentous fungi (Rhizopus / Stoloniifers)

The sexual reproduction occurs when two mating hyphae grow in the same medium. Chemical interaction in the two mating type of hyphae induces growths perpendicular to each other in opposite directions. The growths are delimited by a wall so that the nuclei are isolated in what is called a gametangium.

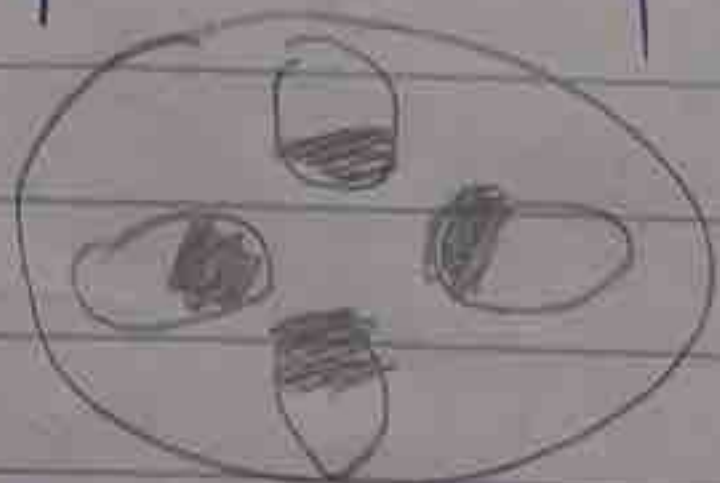
The two gametangia fuse (Plasmogamy) and a zygote

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is formed which may undergo prolonged dormancy or resting stage. The nucleus in the zygote fuse in twos and undergo meiosis independently. Zygote germinates under favourable conditions to produce a fruiting which at maturity liberates the haploid spores.

4. Adaption of Bryophytes to its environment

- (i) They have structures for water and nutrient absorption from the soil.
- (ii) A type of its plant body, regarded as ~~an~~ aerial portion being exposed to the atmosphere demands some modification that prevents excess loss of water through the body surface.
- (iii) Possession of other modification responsible for elimination of excess water from the body.

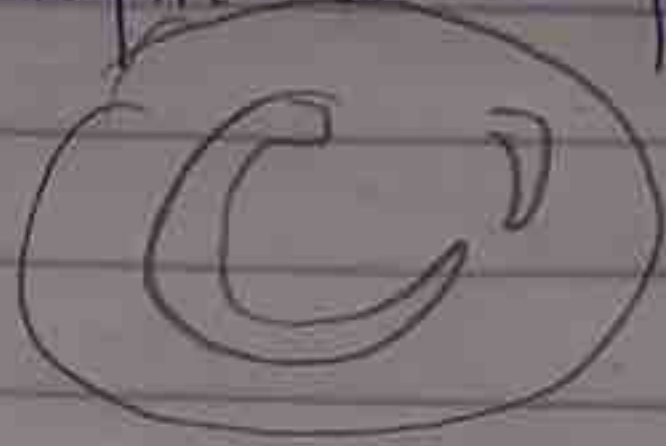
5. (i.) eustele: is a vascular organization in which the vascular bundles are discrete, concentric collateral bundles of Xylem and phloem.



(ii.) atactole: the vascular bundles are scattered. The nature of vascular supply to leaves is also note worthy element of the vascular system.



iii - Siphonostele: A vascular system, in which the stele (conducting tissues) is a cylinder enclosing a parenchymatous pith.

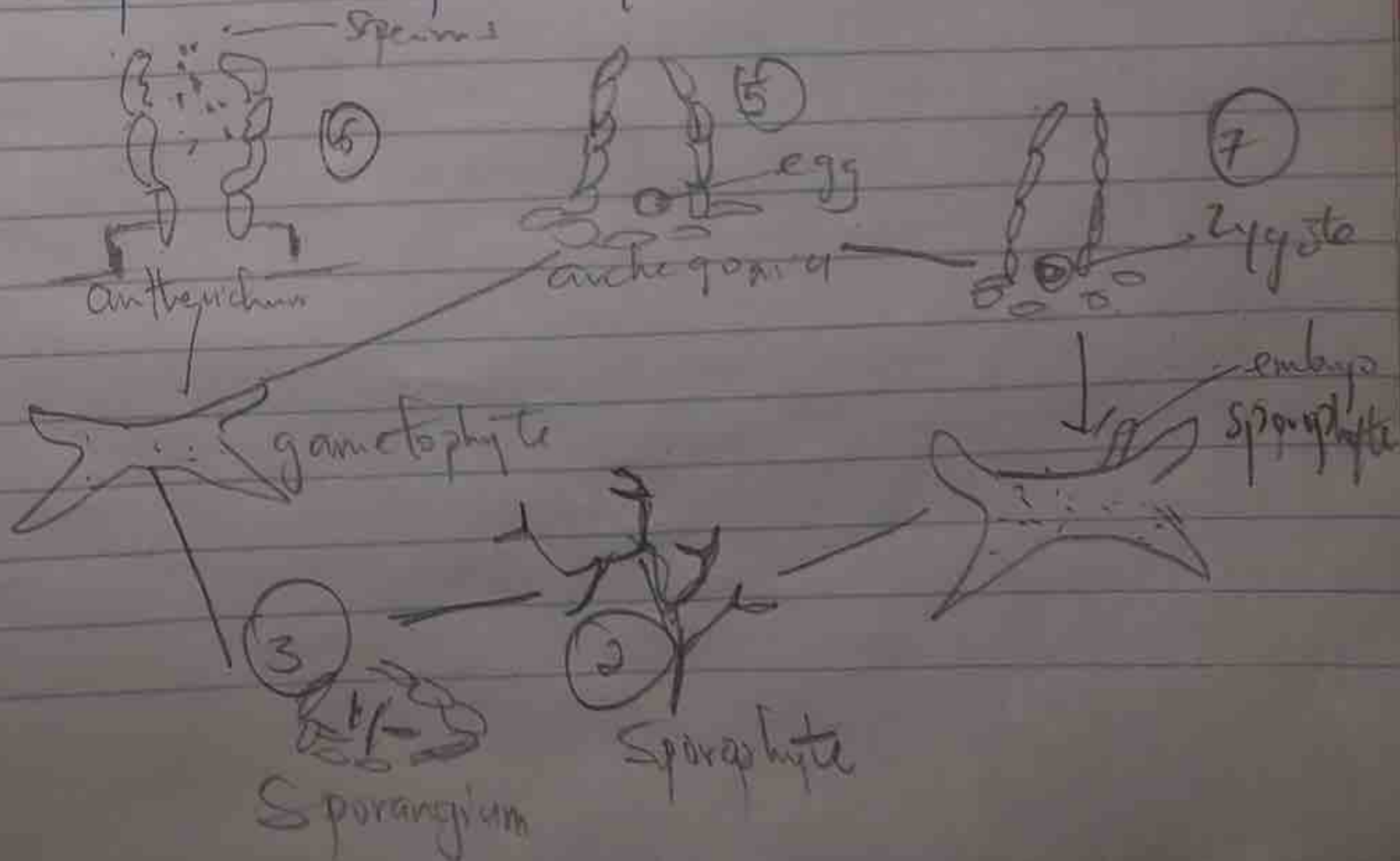


iv. Dictyostele: having leaf gaps and the conducting cylinder is dissected one.



b) Life cycle of primitive vascular plant (psidium)

The sporangium contains haploid spores and originate from diploid cells of the stem. The spore after liberation germinate into cylindrical dichotomously-branched gametophytes. Gametophytes are saprophytic and often associated with certain filamentous fungi. Externally, they possess many rhizoids but internally, they have largely parenchymatous. At maturity, the terminal ends of the cylindrical branches bear the archegonia while the antheridia are borne as protuberance lower down on the branches. Sperms are released into the archegonia resulting in zygote which develops into a sporophyte.



summary
got from
leafy, zygote
to produce
the haploid
gametophyte
and nutrient
and aerial
atmosphere
leaves excrete
cell.
responsible for
on the body.
in which the
entire collateral
scattered.
to leaves is also
vascular system