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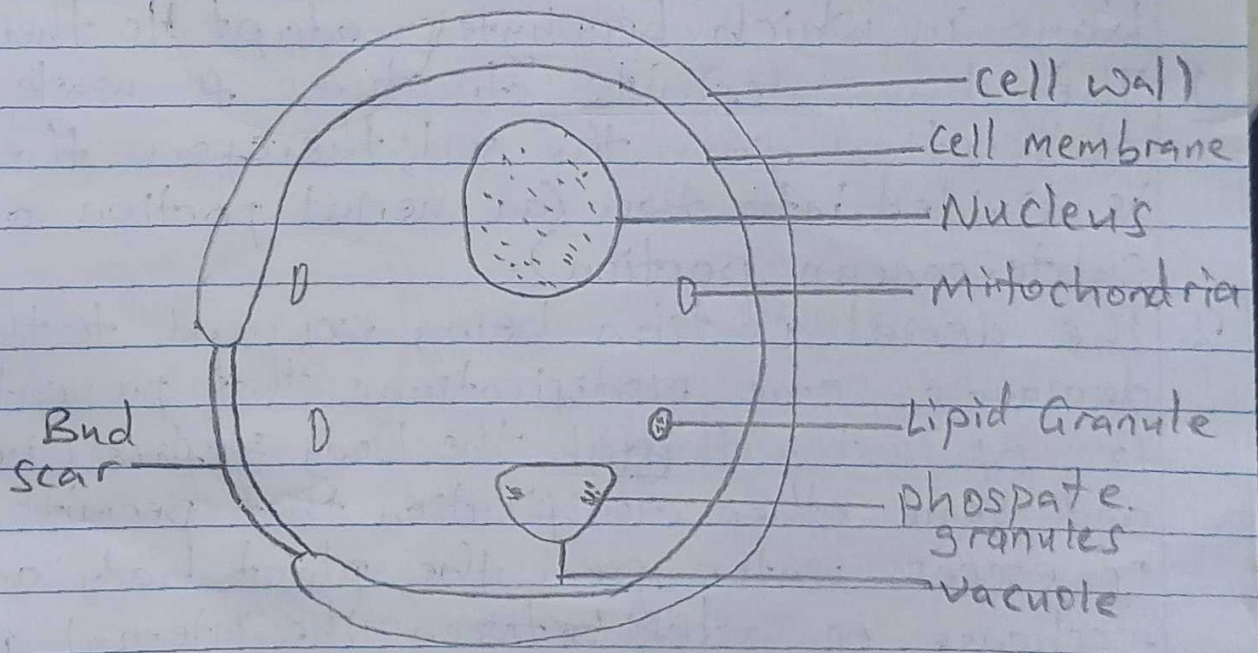
DEPARTMENT: MBBS

QUESTION 1

Ways fungi are important to mankind are;

1. Fungi eg yeast are important in food industry
2. Some fungi are parasites to some certain horrible obnoxious pests and therefore constitute important biological control agents in regard to such pests
3. Fungi are responsible for the mediation of decay of organic matter.
4. 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.

QUESTION 2



CELL STRUCTURE OF A BREWER'S YEAST.

QUESTION 3

Rhizopus stolonifer

Sexual reproduction: This 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 and undergoes meiosis independently. The zygote germinates under favourable conditions to produce a fruiting which at maturity liberates the haploid spores.

QUESTION 4

Ways in which bryophytes adapt to their environment;

1. 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).
2. The aerial portion being exposed to the atmosphere demands some modifications that prevents excessive loss of water through the body surface (i.e desiccation) and some other modification that permits elimination of excess water from the plant 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.

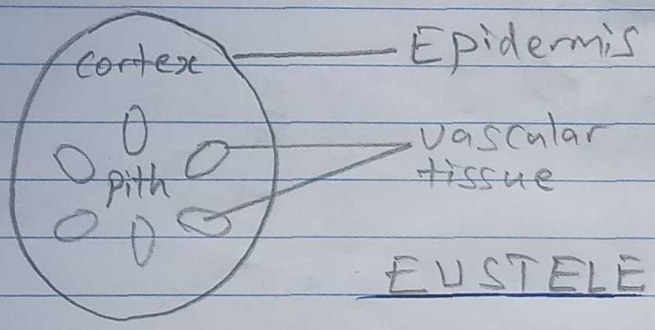
QUESTION 5.

eusteles: This is a herbaceous dicotyledonous plant in which the vascular bundles are discrete, concentric collateral bundles of xylem and phloem.

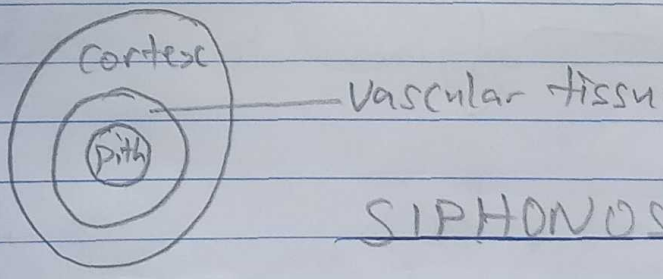
atactostele: These are grasses and monocotyledonous plants in which the vascular bundles are scattered.

siphonostele: These are advanced vascular systems in which the stele is a cylinder enclosing a parenchymatous pith.

dictyostele: This is when the vascular supply to leaves are associated with leaf gaps and the conducting cylinder is a dissected one.



EUSTELE



SIPHONOSTELE

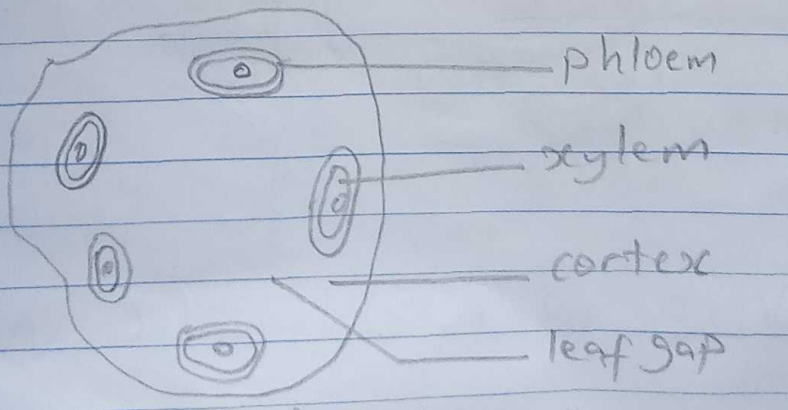
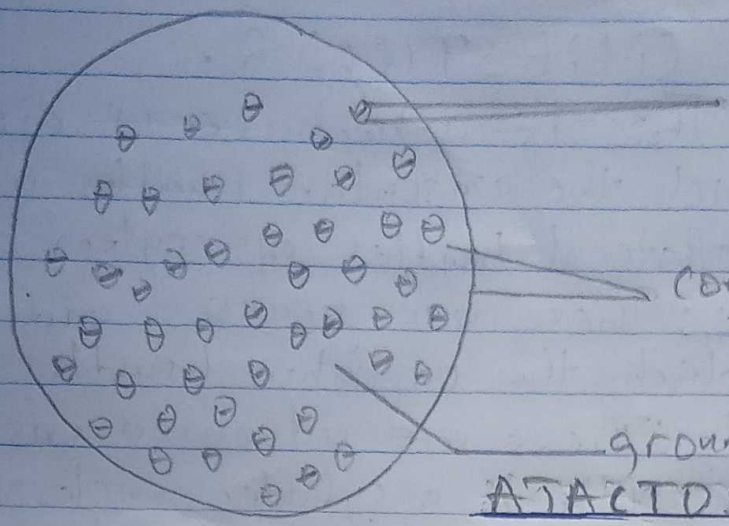
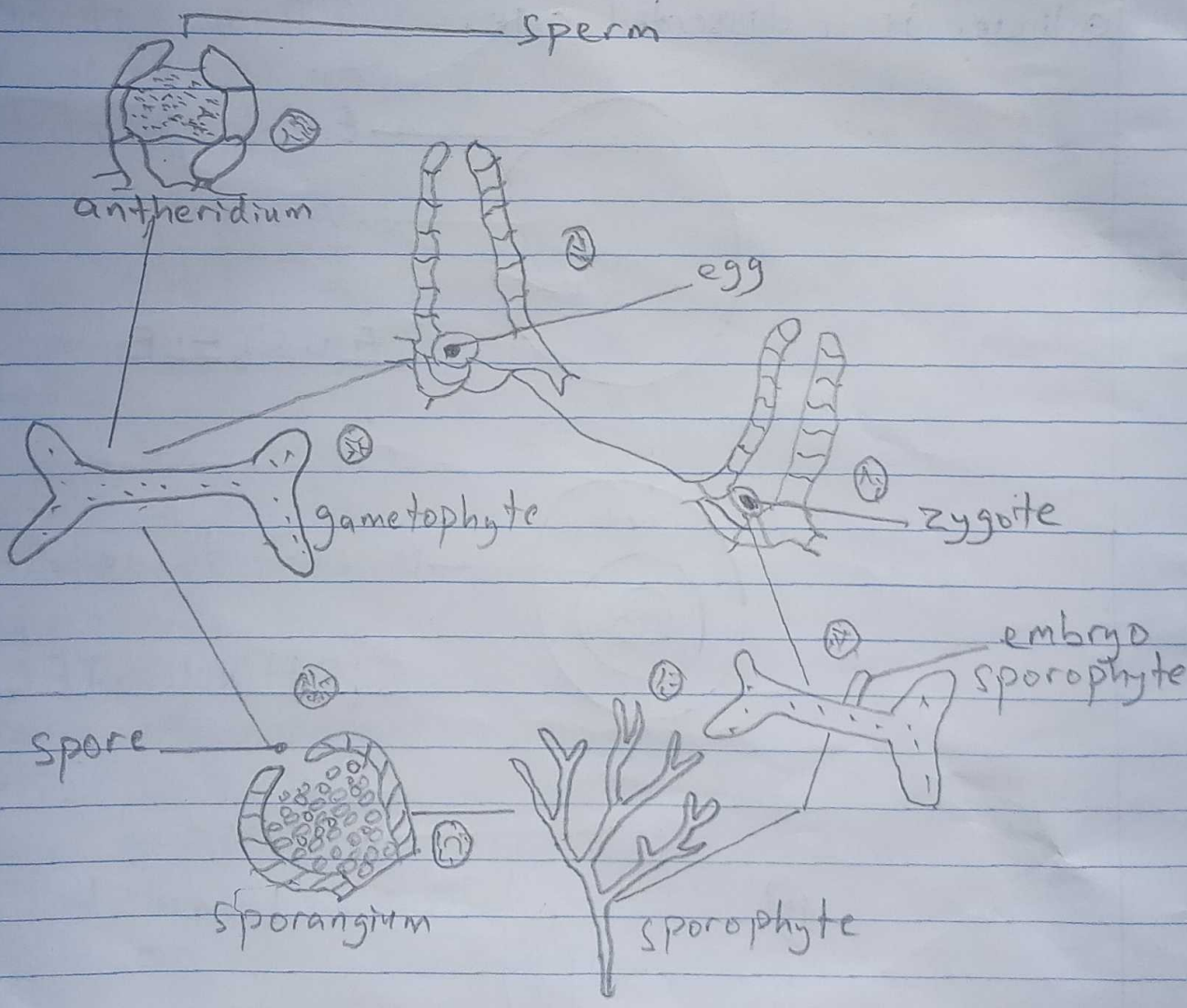


DIAGRAM OF A DICTYOSTELE



ATACTOSTELE

QUESTION 6



LIFE CYCLE OF A PRIMITIVE VASCULAR PLANT