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DEPT: MEDICINE & SURGERY (MBBS)

COURSE: BIOLOGY 102

ASSIGNMENT

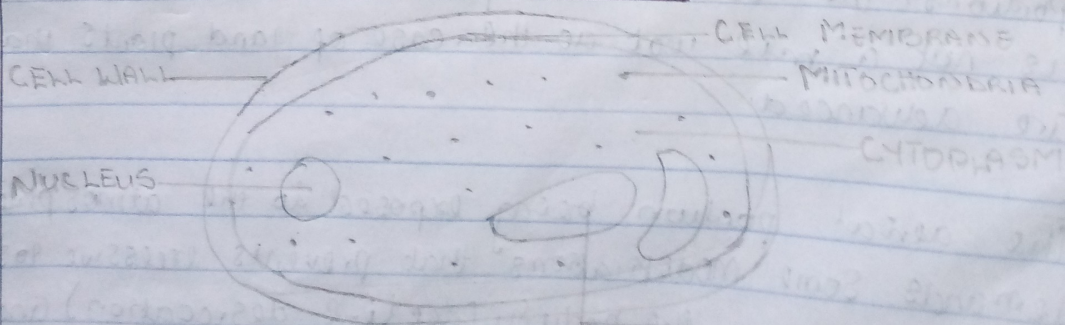
1) How are fungi important to mankind?

Answer

- a) Fungi are very important to the entire terrestrial ecosystem in material cycling and to man.
- b) Fungi are responsible for the mediation of decay of organic matter.
- d) Fungi e.g yeast are important in food industry. Many fungi species mediate the spoilage of wood, food, clothes and paper.
- d) Without fungi and other microbes, the surface of the earth would have been clogged up with dead matter with all the various elements locked up in them. Instead of returning into various cycles.
- e) Some fungi are parasites to some certain noxious obnoxious pest e.g housefly, grasshoppers and therefore constitute important biological control agent in regard to such pest.

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

Answer



3) Outline the Sexual reproduction in a typical filamentous form of fungi

Answer

- In fungi, Sexual reproduction often occurs in response to adverse environmental conditions.
- Two mating types are produced.
- When both mating types are present in the same mycelium, it is called Homothallic, or self-fertile.
- Heterothallic mycelia require two different, but compatible, mycelia to reproduce sexually.
- Although, there are many variations in fungal sexual reproduction, all include the following three stages.
- First, during plasmogamy (literally, "marriage or union of cytoplasm"). two haploid cells fuse, leading to a dikaryotic stage where two haploid nuclei coexist in a single cell.
- During karyogamy ("nuclear marriage"), the haploid nuclei fuse to form a diploid zygote nucleus.
- Finally, meiosis takes place in the gametangia (singular, gametangium) organs, in which gametes of different mating types are generated.
- At this stage, spores are disseminated into the environment.

4) How do Bryophytes adapt to their environment?

Answer

- a) They have definite structures for water and mineral absorption from the soil, therefore the plant body is divided into two (an aerial portion and subterranean portions). 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 (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 plants and the atmosphere therefore openings are available on the aerial parts of the plant.

Q Describe with illustration the following terminology
 (a) EUSTELES ATACTOSTELE

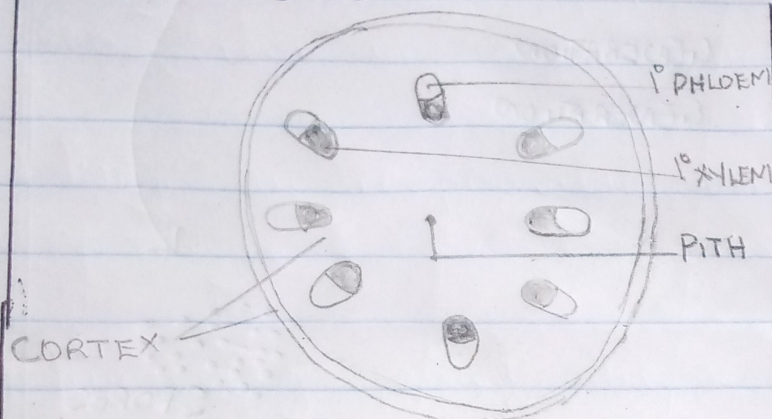


DIAGRAM OF AN EUSTELE

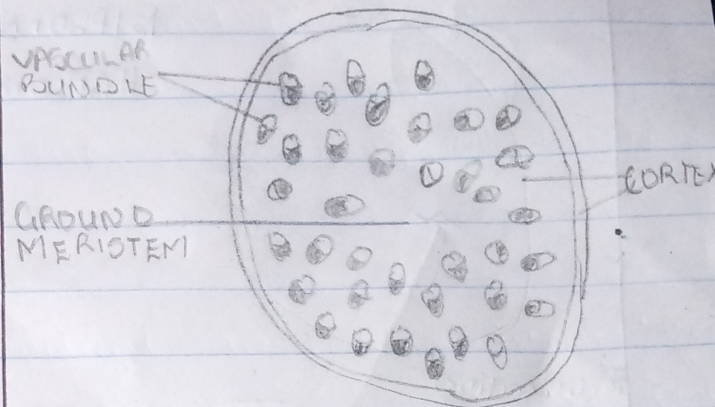


DIAGRAM OF ATACTOSTELE

(c) SIPHONOSTELE

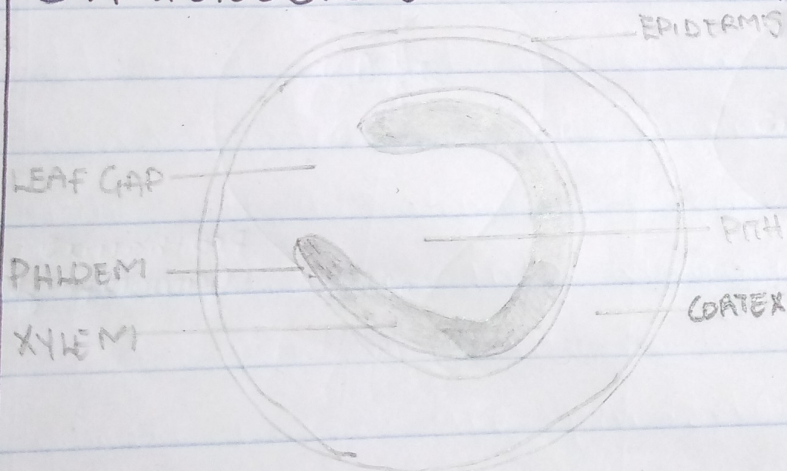


DIAGRAM OF SIPHONOSTELE

(d) DICTYOSTELE

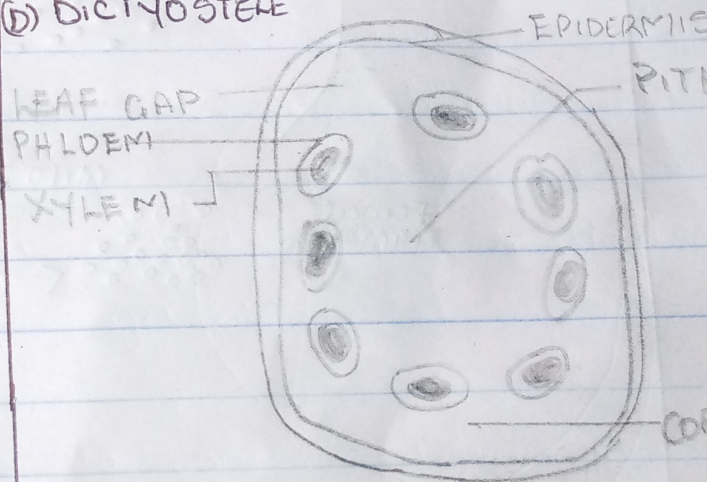


DIAGRAM OF DICTYOSTELE

(6) Illustrate the life cycle of a primitive vascular plant

