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= 19/MHS 01/207
= BIO 102 Assignment
∴ MBBS/MHS

1.) Importance of Fungi to Mankind.

Fungi is responsible for the medium of decay of organic matter without fungi and other microbes, the surface of the earth would have clogged up with dead matters with all the various element locked up instead of returning into various cycles. 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.

Many fungi species mediate the spoilage of wood, food, clothes and paper, Many fungi species. Many are plant pathogens causing blights and smut in cereals (*Helminthosporium maydis* and *Ustilago Zeae* respiration).

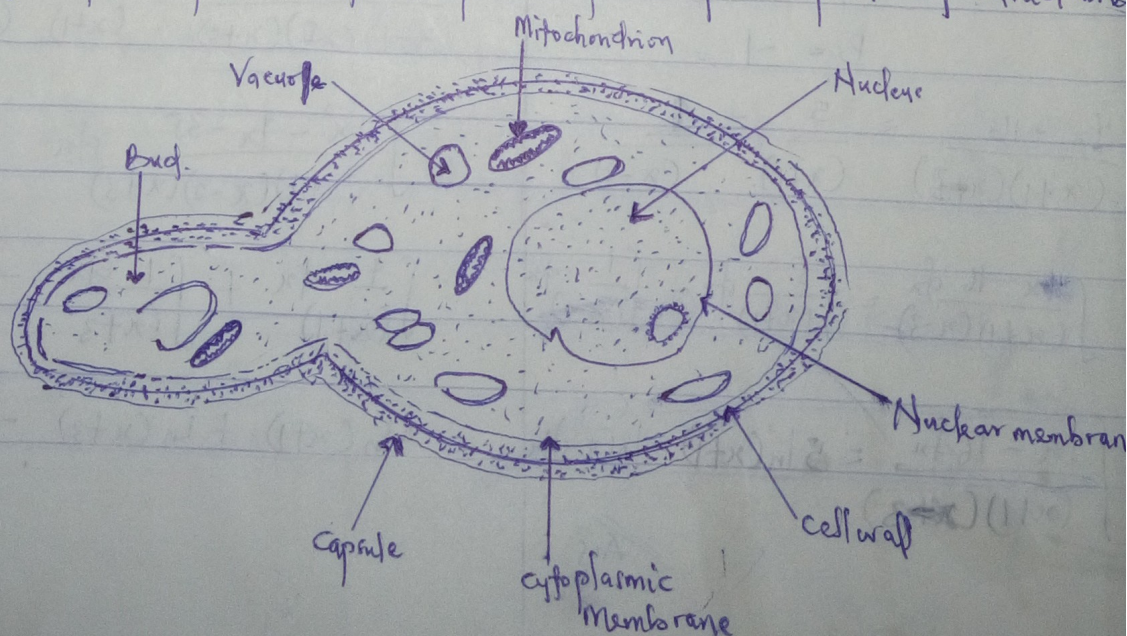
Some fungi are parasites to some certain horrible Obnoxious (Offensive, Unbearable) pests and therefore constitutes important biological control agent in regard to such pests.

Medical and Veterinary Mycology deals with fungal diseases and infection in human beings and animals. Skin disease e.g ringworm and dermatitis, used by fungal agents.

2.) Cell structure of a unicellular fungus with a well labelled diagram.

Brewer's yeast is one of the best known e.g of unicellular forms in fungi (Bread yeast *Saccharomyces cerevisiae*, (Bakers' yeast)).

The cell structure is very simple, though the organism is one of the more advanced fungal forms from the point of view of its spore-producing structures.



- 3.) Sexual reproduction in a typical filamentous form of fungi
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 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 pairs and undergoes meiosis independently.

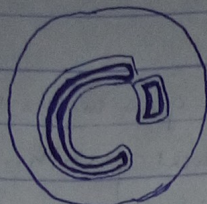
The zygote germinates under favourable conditions to produce a fruiting which at maturity liberates the haploid spores.

4. Ways in which bryophytes adapt to their Environment.

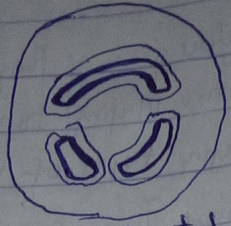
- a.) They have ~~aplous~~ definite structures for water and nutrients absorption from the soil. Therefore the plant body is divided into two (an aerial portion and a subterranean portion). The subterranean portion is the rhizoid and is not a true root as the case of land plants that are advanced.

- b.) Some other modification that permit elimination of excess water from the plant body and not only exchange of gases between the internal parts of the plant and the atmosphere therefore openings are available on the aerial parts of the plant.

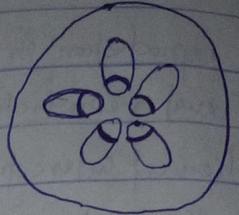
- c.) The aerial portion being exposed to the atmosphere demands some modifications that prevents excessive loss of water through the body surface (i.e. desiccation) and Bryophytes are similar to higher plants in that the fertilized egg develops into an embryo, a cell mass dependent on the gametophyte (the sexual plant). These embryos however, develop into sporophytes (asexual plants) which unlike those of higher plants remain almost entirely dependent on the gametophyte and have no true leaves, stems or roots. True conductive tissues such as those in ferns and higher vascular plants, are not found in bryophytes.



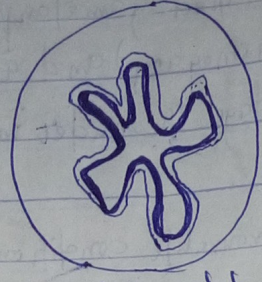
Siphonostele



Dictyostele



Eustele



Actinostele

G. Illustration of the life cycle of a primitive vascular plant.

