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Mesquite & Sugar

BIO 102

1) Fungi are important to the entire ecosystem cycling and to man. They are also responsible for the process of decay of organic matter. They are also important in the food industry e.g yeast

2)

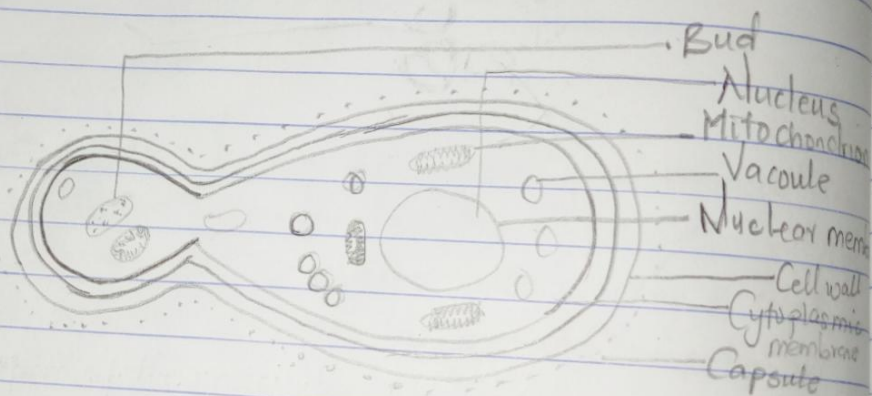
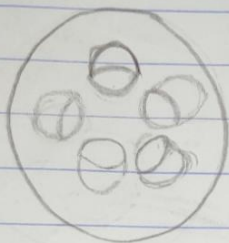


Diagram of the unicellular form of fungi (yeast)

3) Sexual reproduction in fungi occurs when two mating types of hyphae grow in the same medium. Chemical interactions between the two hyphae induce a perpendicular growth 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 and a zygote is formed which may undergo a prolonged dormancy stage. The nuclei in the zygote fuse into two and undergo meiosis independently. The zygote germinates under favourable conditions to produce a fruiting body which at maturity liberate the haploid spores.

4) Bryophytes adapt to their environment by the possession of definite structure for water and nutrient absorption from the soil. Their plant body also has two portions i.e. aerial portion and subterranean portion. The subterranean portion is the rhizoid and not the true root. Their body which is flattened and dichotomously branched also helps in their adaptation.

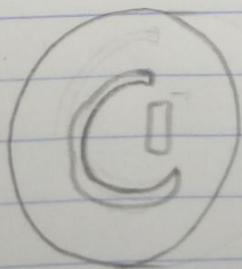
5a) Eustele are herbaceous dicotyledonous plant in which the vascular bundles are discrete, concentric collateral bundles of xylem and phloem.



5b) Atactostele are, also known as grasses and monocotyledonous plant with scattered vascular bundles. The nature of the vascular supply to the leaves is also note worthy element of the vascular system. It may be present (Lycopodium) or absent (Psittacium).



c) Siphonostele are more advanced vascular system of higher plant in which the stele is a cylinder enclosing a parenchymatous pith.



d) **Diclyostele**: This has to do with the vascular supply of leaves with is associated with leaf gaps and the conducting cylinder is a dissected one.

