

Name: Osadebe Antoinete Adaobi

Matric no: 19/MHS01/360

Class no: 416

Course: Bio 102

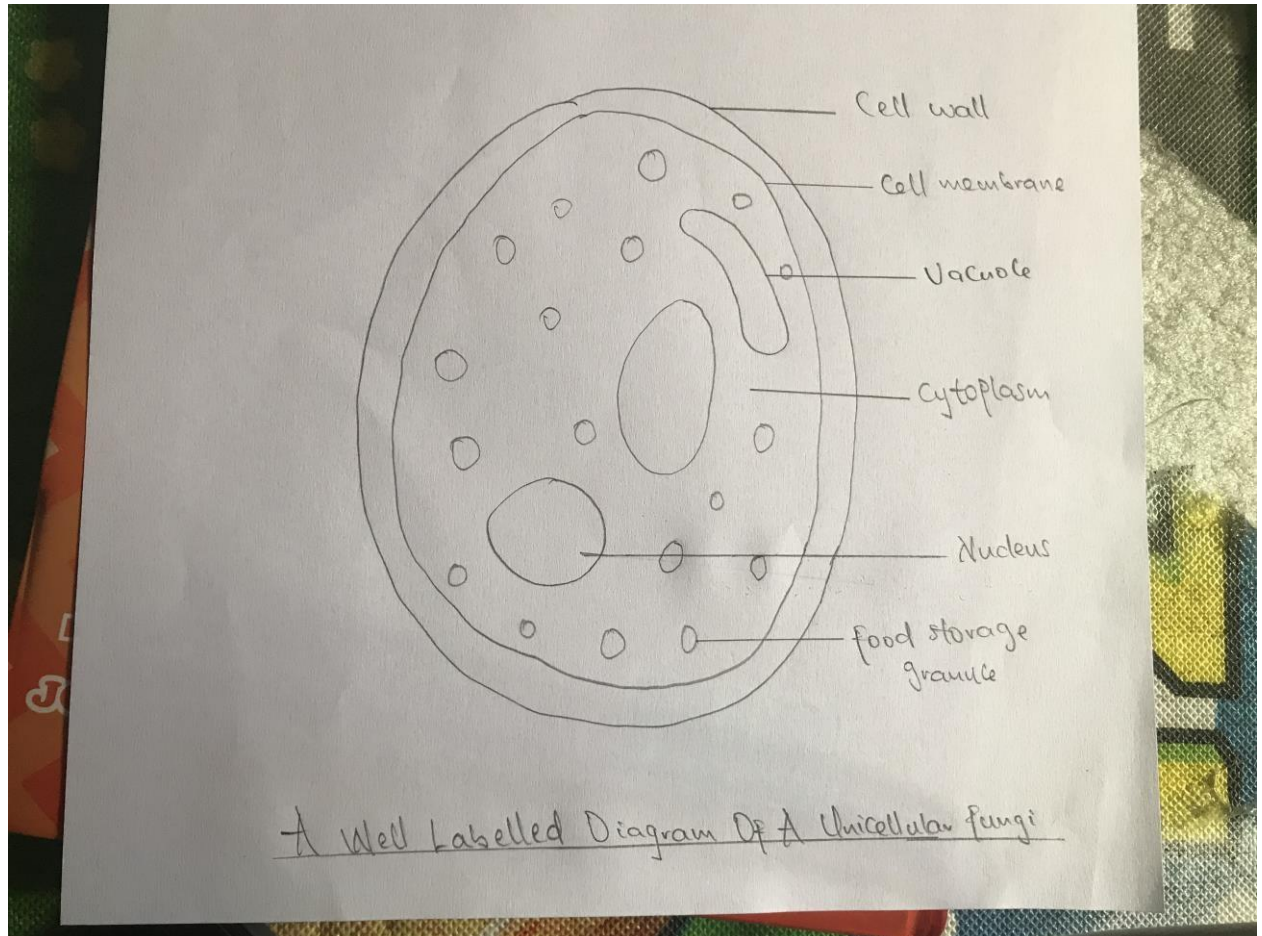
1. Fungi are responsible for mediation of decay of organic matter. ii.

Fungi e.g yeast are important in the food industry.

iii. Without fungi and other microbes, the earth surface would have been clogged up with dead matters with all the various elements locked up in them instead of returning into various cycles.

iv. Some fungi are parasites to some horrible obnoxious pest e.g house flies, grass hoppers and therefore constitutes important biological control agents in regard to such pests. v. Mushrooms are eaten by human society.

2.



3. Sexual reproduction happens when two mating types of fungi grow on the same medium. Chemical interactions in the two mating types of hyphae induces growth perpendicular to the hyphae in opposite directions. These growths are delimited by a wall in such that many nuclei are isolated in what you call a gametangium. The two gametangium fuse (plasmogamy) and a zygote is formed which may undergo prolonged dormancy or resting stage. The nuclei in the zygote fuses in twos and undergoes meiosis independently. The zygote germinates under

favorable conditions to produce a fruiting which at maturity liberates the haploid spores

4. Bryophytes adapt to land in two ways;
 - i. 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). The subterranean portion is the rhizoid and is not a true root as the case of land plants that are advanced.
 - ii. The aerial portion being exposed to the atmosphere requires some modifications that prevent excess loss of water from the body surface (i.e. desiccation) and some other modifications that permit elimination of water from the plant body and not only exchange gases between the internal part of the plant and the atmosphere, therefore openings are available on the aerial portion of the plant.

5. Eustele is a typical of dicotyledonous plants that consists of vascular bundles of xylem and phloem strands with parenchymal cells between the bundles

Actostele is a type of eustele found in monocots, in which the vascular tissue in the stem exists as scattered bundles.

Siphonostele is a stele in which the vascular tissues in form of a cylinder surrounding the pith, as in the stems of most ferns and other seedless vascular plants.

Dictyostele is a stele in which the vascular cylinder is broken up into a longitudinal series of network of vascular strands around a central pith (as in many ferns).

6. In the reproductive cycle of a psilotum, a dominant sporophyte plant bearing trilobed sporangia which are born on the vertical axes, produces homophorous spores that under meiosis to produce haploid gametophytes. The plant is homosporous (spores have the same size and shape). Spores after liberation germinates into a cylindrical dichotomously branched gametophyte which are saprophytic and forms mycorrhizal associations with fungi for nutrition. At maturity, the terminal ends of cylindrical branches bear archegonia while the antheridia are borne on the protuberances lower down on the branches. Sperms having many flagella are released when the antheridia are ripe which swims to the archegonia and the resulting zygote subsequently develops into a sporophyte.