

# BIO 102 ASSIGNMENT

NAME: TOBI FAVOUR EBIMOBOR

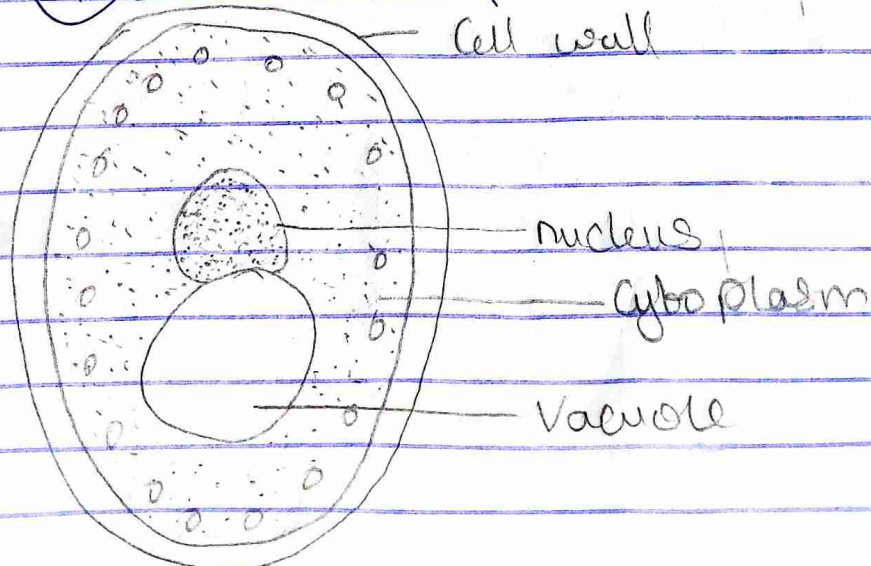
MATRIC NO: 19/MHS01/1407

DEPARTMENT: Medicine & Surgery.

Fungi figure prominently in the human diet. Morels, shiitake mushroom, Chanterelles, and truffles are considered delicacies. The meadow mushroom, *Agaricus campestris*, appears in many dishes. Molds of the genus *penicillium* ripen many cheeses. They originate in the natural environment such as the caves of Roquefort, France, where wheels of sheep milk cheese are stacked to capture the molds responsible for the blue veins and pungent taste of the cheese. Fermentation of grains to produce beer and of fruits to produce wine is an ancient art that humans in most cultures have practiced for millennia.

Fungi naturally produce antibiotics to kill or inhibit the growth of bacteria, limiting their competition in the natural environment. Important antibiotics, such as penicillin and the cephalosporins, can be isolated from fungi. Valuable drugs isolated from fungi include the immunosuppressant drug cyclosporin.

~~Sexual reproduction occurs when two mating types of hyphae grow in the same medium. Sexual reproduction~~



A Single Yeast Cell

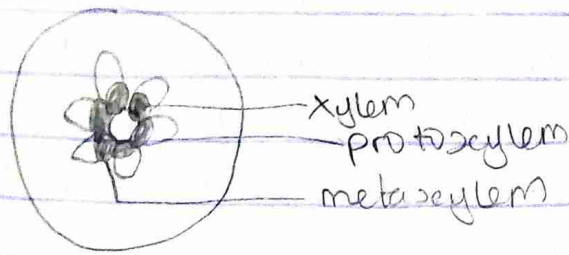
3. Sexual reproduction in the fungi consists of three sequential stages: plasmogamy, karyogamy and meiosis. The diploid chromosomes are pulled apart into two daughter cells, each containing a single set of chromosomes (a haploid state). Plasmogamy, the fusion of two protoplasts (the contents of the two cells), brings together two compatible haploid nuclei. At this point, two nuclear types are present in the same cell, but the nuclei have not yet fused. Karyogamy results in the fusion of these haploid nuclei and the formation of a diploid nucleus (i.e., a nucleus containing two sets of chromosomes, one from each parent). The cell formed by karyogamy is called the zygote. In most fungi the zygote is the only cell in the entire life cycle that is diploid. Once karyogamy has occurred, meiosis (cell division that reduces the chromosome number to one set per cell) generally follows and restores the haploid phase. The haploid nuclei are generally incorporated in spores called meiospores.

4a, The aerial portion being exposed to the atmosphere demands some modifications that prevent excessive loss of water through the body surface.

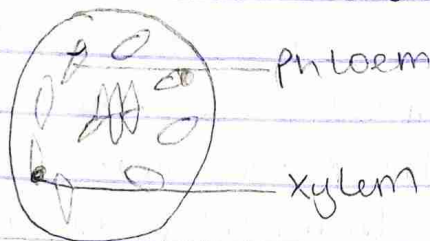
b) They have definite structures for water and nutrient absorption from the soil. Therefore the plant is divided into two: an aerial portion and a subterranean portion.

c) Other modifications 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.

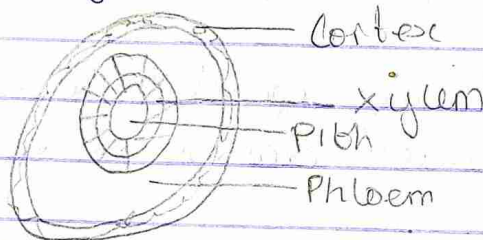
5a) **Eusteles**: These are stele typical of dicotyledonous plants that consists of vascular bundles of xylem and phloem strands with parenchymal cells between the bundles.



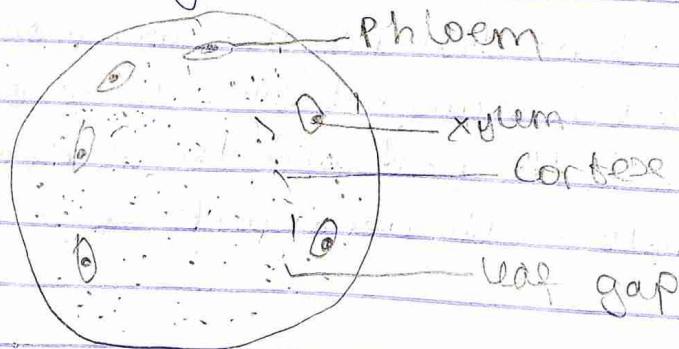
b) **Atactostele**: This is a type of eustele, found in monocots, in which the vascular tissue in the stem exists as scattered bundles.

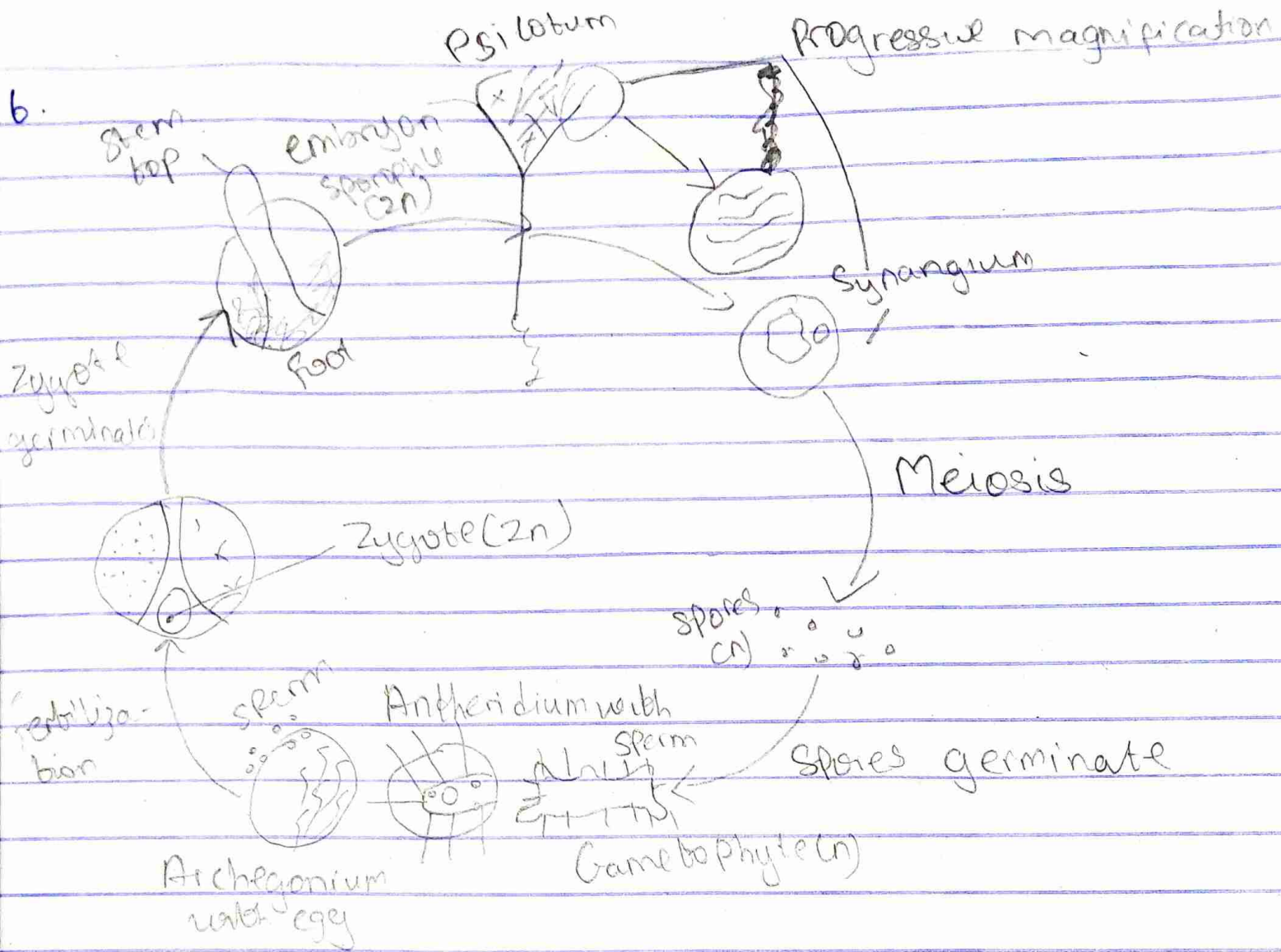


c) **Siphonostele**: is a stele consisting of a core of pith surrounded by concentric layers of xylem and phloem.



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





A life cycle of primitive vascular plant