NAME: IBENEME CHIOMA SARAH

DEPT: MBBS

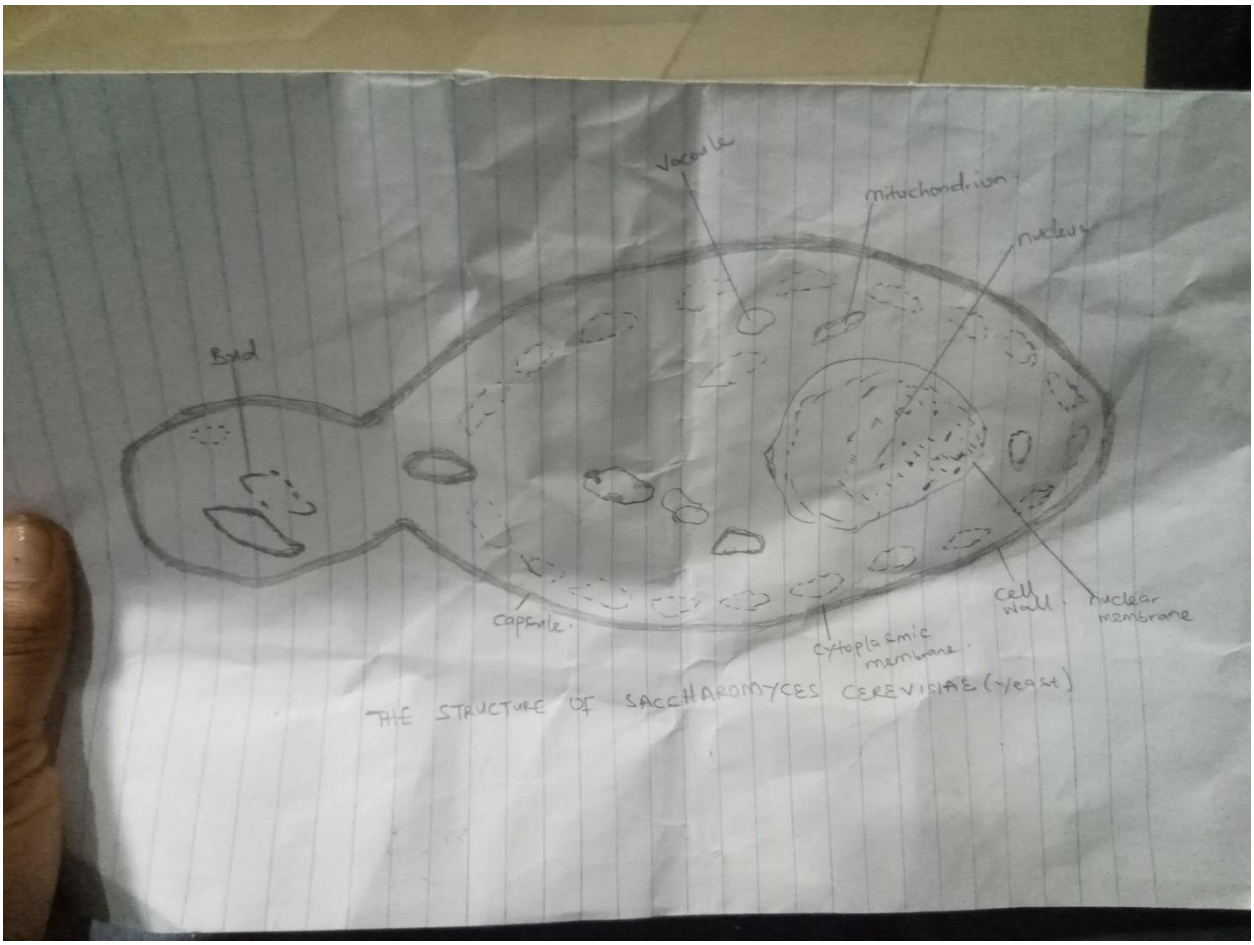
COLLEGE: MHS

MATRIC NO: 19/MHS01/188

COURSE CODE: BIO 102

ASSIGNMENT

1. How are fungi important to man-kind
   a. They are used in the food industry e.g yeast.
   b. Mushroom are eaten by many human societies.
   c. Species like penicillium notatum produce important antibiotics.
2. Illustrate the cell structure of a unicellular fungus with a well labelled diagram.



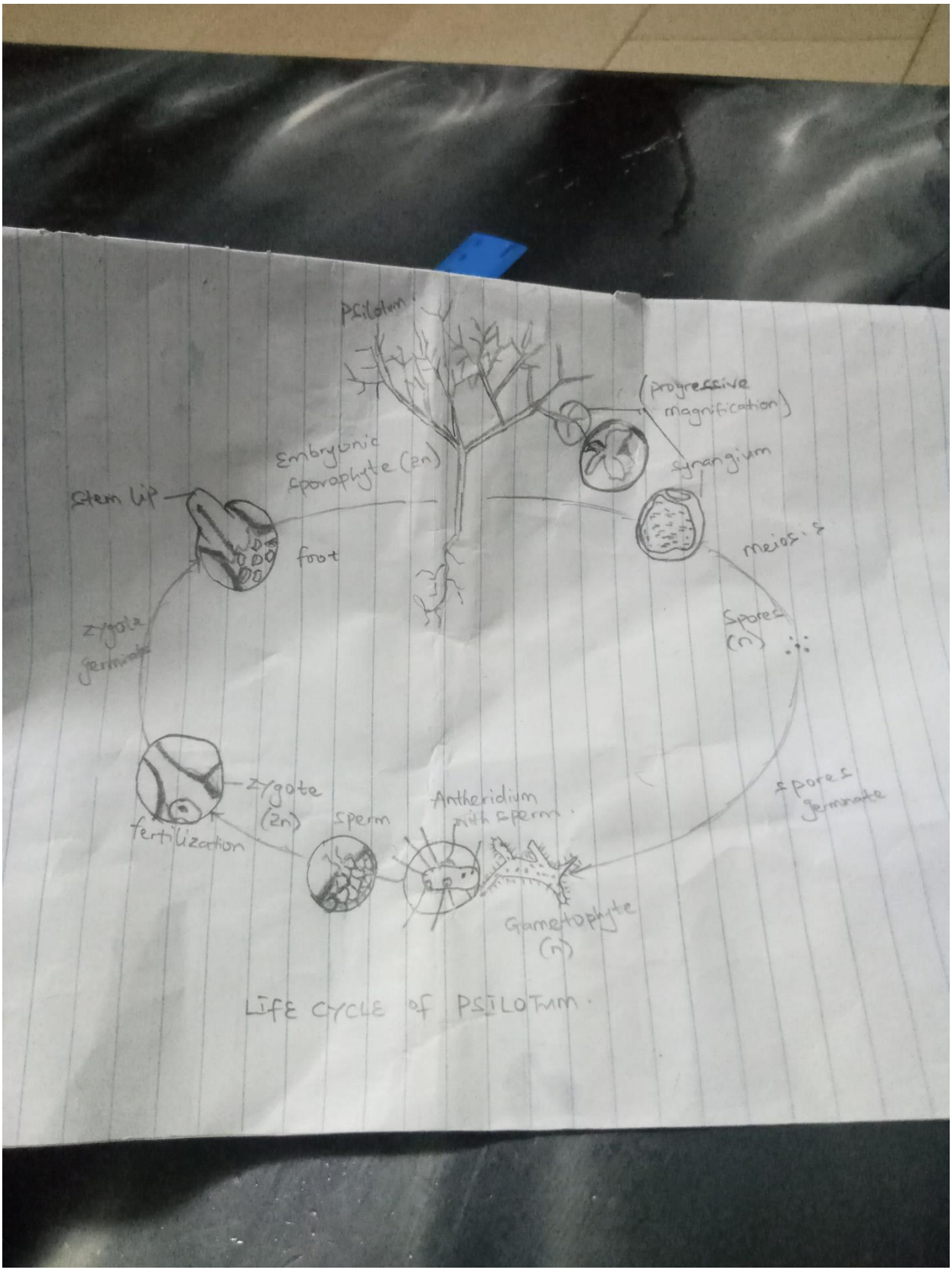
3. Outline the sexual reproduction in a typical filamentous form of fungi.
   Rhizopus stolonifer (sexual reproduction)
   Sexual reproduction occurs when two mating types of hyphae grow in the same medium. Chemical interaction in the two mating types of hyphae induces growths are delimited by a wall such that many nuclei are isolated in what is called a gametangium. The two gamentangia fuse (plasmogamy) and a zygote is formed which may undergo prolonged dormancy or resting stage. The nuclei in the zygote fuse into twos and undergo meiosis independently. The zygote germinates under favourable conditions to

produce a fruiting which at maturity liberates the haploid spores.

4. How do bryophytes adapt to their environment?
   a. They possess definite structures for water and nutrient absorption from the soil so therefore their 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. The aerial portion being exposed to the atmosphere demands some modifications that prevents excessive loss of water through the body surface and some of the modification that permits elimination of excess water from the plant's 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 plants.
5. Describe with illustration the following terminologies: (a)eusteles (b)atactostele (c)siphonostele (d)dictyostele.
   a. Eusteles: they are herbaceous dicotyledonous plants in which their vascular bundles are discrete, concentric collateral bundles of xylem and phloem.
   b. Atactostele: the vascular bundles are scattered, the nature of the vascular supply to leaves is also a note worthy element of the vascular system.
   c. Siphonostele: the stele is a cylinder enclosing a parenchymatous pith.

d. Dictyostele: vascular supply to leaves associated with leaf gap and the conducting cylinder.

6. Illustrate the life cycle of a primitive vascular plant.



LIFE CYCLE of PSILOTUM.