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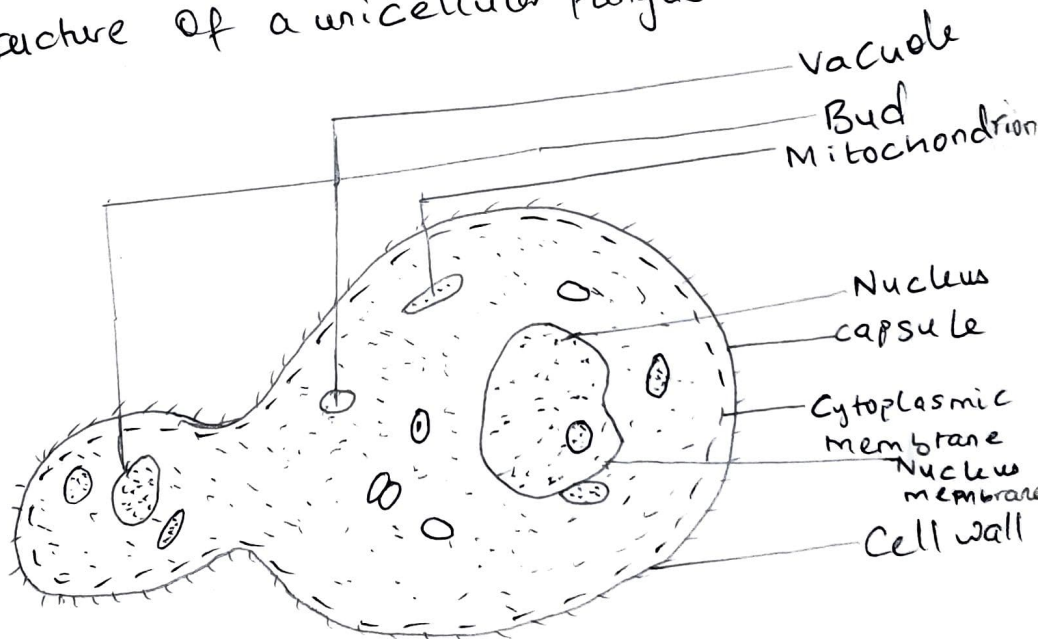
Course code: Bio 102

## Assignment

① How fungi are important to mankind

Fungi are very important to the entire terrestrial ecosystem in material cycling and to man. Fungi are responsible for the decomposition or decay of organic matter. Without the presence of fungi the surface of the earth would have been clogged up with dead matters. Fungi play a role in human nutrition in the form of mushroom, and also as agents of fermentation in the production of bread, cheese, alcoholic beverages, etc.

② Cell structure of a unicellular fungus



### ③ The sexual reproduction of a filamentous form in fungi

It 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 direction.

Gametangium occurs (growths are delimited by a wall such that many nuclei are isolated). The two gametangia fuse (plasmogamy) and a zygote is formed which may undergo prolonged dormancy or resting stage. The nuclei in the zygotes fuse in twos and undergo meiosis independently.

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

### ④ How does bryophytes adapt to their environment?

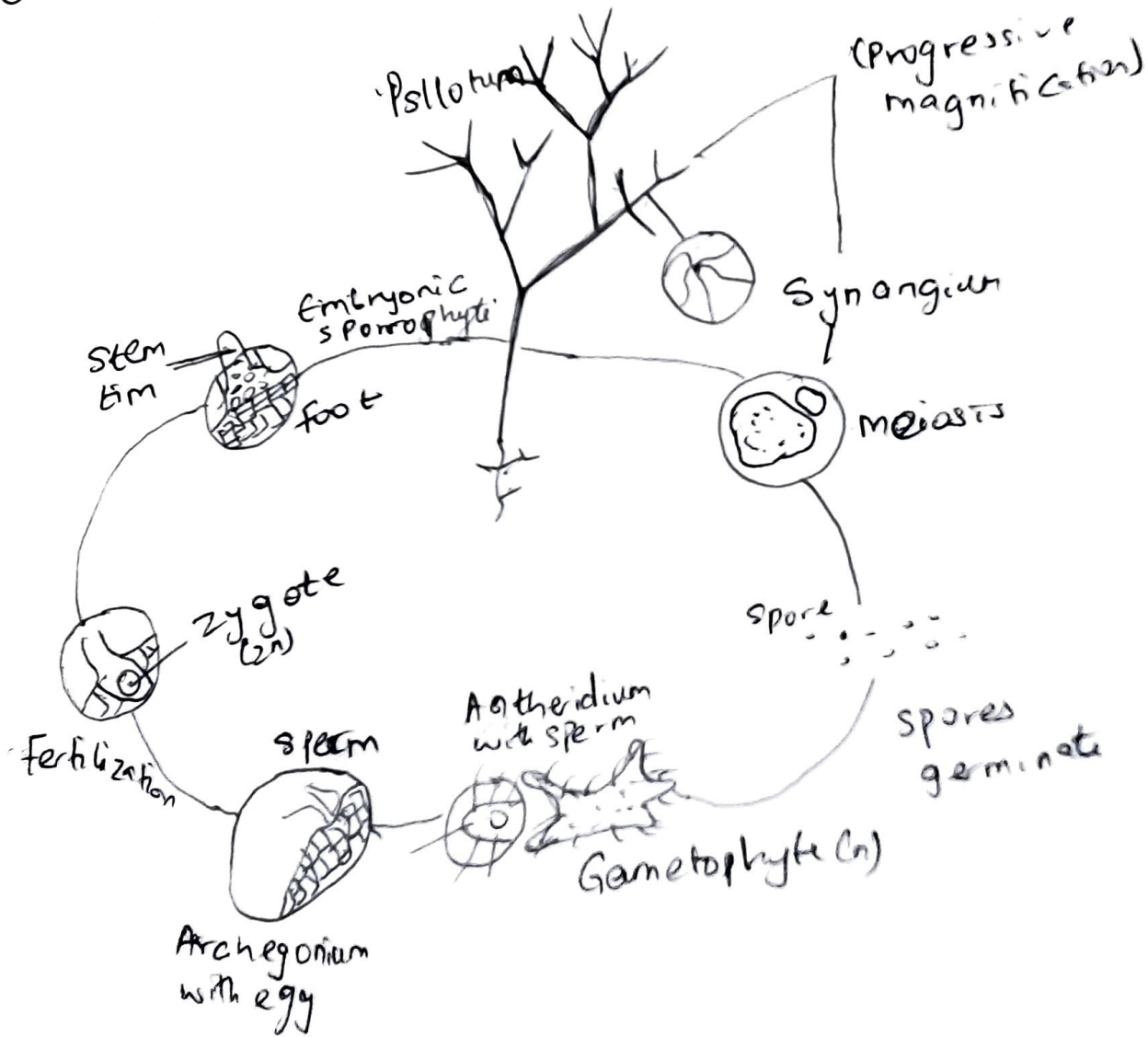
They have definite structure for water and nutrient absorption for the soil; therefore the plant body is divided into two (aerial and subterranean portion).

→ Subterranean portion is the rhizoid and is not a true root as the case of land plants that are advanced

→ An aerial portion is exposed to the atmosphere demands some modifications that prevent excessive loss of water through the body surface

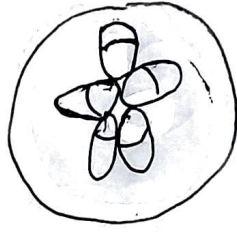
Some other modifications that permit elimination of excess water from the plant body and not only exchange of gasses between the from internal parts of the plant and the atmosphere therefore openings are available on the aerials part of the plant.

6) Illustrate the life cycle of a primitive vascular plant



(E) Illustrate the following terminologies

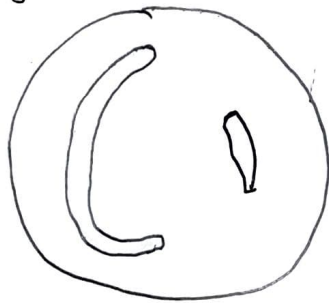
(a) Eusteles. The vascular bundles are discrete, concentric collateral bundles of xylem and phloem



(b) Atactostele: A type of eustele, found in monocots, in which the vascular tissue in the stem exists as scattered bundles



(c) Siphonostele: A stele consisting of a core of pith surrounded by concentric layers of xylem and phloem



(d) Dictyostele: It is in siphonosteles, vascular supply of the leaves is associated with conduction cylinder is a dissected one.

