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DEPARTMENT: PHARMACY

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BIO102

### 1) How are fungi important to mankind?

- without fungi, the surface of the earth would have been clogged up with dead materials with all the various elements locked up in them instead of returning into various cycles
- fungi such as yeast are used as rising agents in food industries.
- Many fungi species mediate the spoilage of wood, food, clothes and paper.

### 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

- This occurs when two mating types of hyphae grow in 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 such that many nuclei are isolated in what is called a gametangium

- 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 to produce a fruiting which at maturity liberates the haploid spores.

#### 4)How do Bryophytes adapt to their environment?

- They have definite structures for water and nutrient absorption from the soil.
- The aerial portion being exposed to the atmosphere demands some modifications that prevents 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 gases between the internal parts of the plants and the atmosphere therefore openings are available on the aerial parts of the plant.

#### 5)Describe with illustrations the following

**terminologies a. eusteles:** refers to herbaceous dicotyledonous plants in which the vascular bundles are discrete, concentric collateral bundles of xylem and phloem.

**b. atactostele:** refers to monocotyledonous that have vascular bundles scattered.

**c. siphonostele:** refers other kinds of vascular organization encountered in the flowering plants.

**d. dictyostele:** is associated with leaf gaps and the conducting cylinder is a dissected one.

#### 6)Illustrate the life cycle of a primitive vascular

plant.

