GENERAL BIOLOGY I

ORU FENADO JEROME

19/MHS01/359

1. How are fungi important to mankind

(1) Fungi are important decomposer in most ecosystems.

(2) Food Source (but can be poisonous.

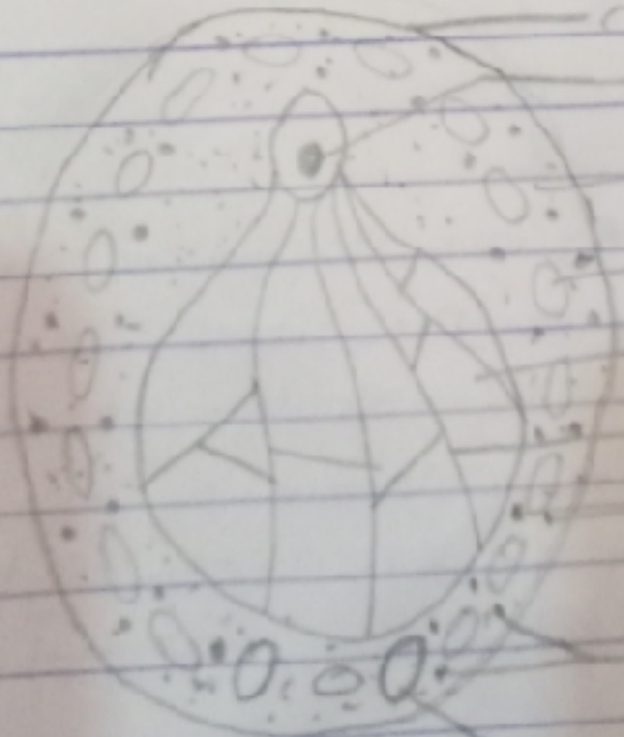
(3) Yeasts are used in Bakery

(4) Decompose organic materials and return nutrients to soil

(5) Can cause diseases that destroys crops or affect humans (athlete's foot, ringworm).

(6) Used to make cheese.

2. Illustrate the cell structure of a unicellular fungus with a well labelled diagram



STRUCTURE OF YEAST CELL

(3.) Outline the sexual reproduction in a typical filamentous fungi

(i.) plasmogamy

(ii.) karyogamy

(iii.) meiosis

(4.) How do Bryophytes adapt to their environment

(i.) To adapt on land and water Bryophytes possess the waxy cuticle; This protects the plants tissue from drying out and the gametangia provides further protection against drying out specifically for the plant gametes.

(5.)

(a.) eusteles – They are found in stems, eusteles appear in the roots of monocot flowering plants. The vascular bundles in a eustele can be collateral (with the phloem on only one side of the xylem) or bicollate (with phloem on both sides of the xylem).

(b) actinostele – A dicto-stele type of siphonost

typical of monocotyledoneae, in which the meristeles are radially distributed ectophloic Siphonosteles.

(c.) Siphonostele - They are the more highly developed form, being characterized by a cylinder of xylem and phloem surrounding a pith. Siphonostes can be subdivided into amphiphloic siphonostele and ectophloic siphonostele.

(d.) dictyostele - A stele that is divided into several strands, called meristeles. A dictyostele may consist of protosteles (polystele and plectostele) or siphonosteles (eustele and actinostele).

6. Illustrate the life cycle of a primitive vascular plant

Pteridophyte is a primitive vascular plant. Reproductive process is dominated by the sporophyte (sexual). firstly Spores are catapulted into the air, and the spores develop into heart-shaped haploid gametophyte that contain both male and female sex organs. Meiosis occurs within sporangia, located on the underside of the sporophyte leaf. After the spores are released they germinate, divide by mitosis and grow into simple heartshaped gametophytes. On the gametophyte

Cells in the archegonium and antheridium form the eggs and sperm. The sperm swim to the egg and fertilize it, forming the zygote. The embryo develop into the sporophyte, still attached to the gametophyte