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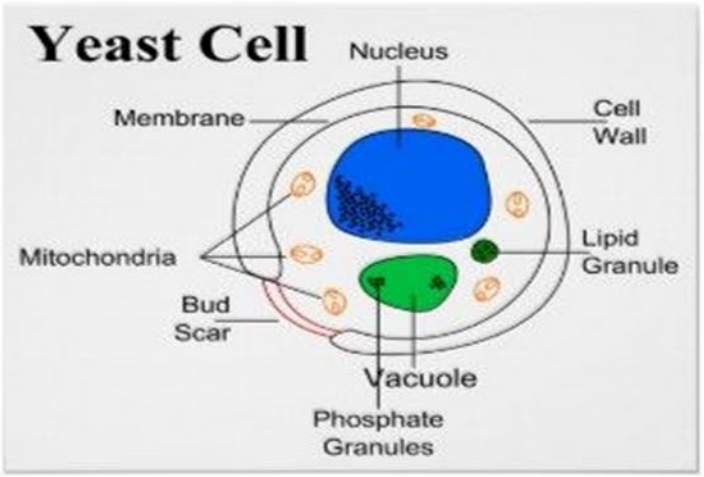
Matric Number: 19/MHS09/008

Title: BIOLOGY ASSIGNMENT

1. How are fungi important to mankind.
    - Yeast is important in food industries like bakeries and yogurt making factories
    - Mushrooms are eaten by man.
    - They are responsible for the mediation of the decay of dead organic matter.
    - Some fungi are parasites to pests of man.
2. Illustrate the cell structure of a unicellular with a well labelled diagram.



3. Outline the sexual reproduction in atypical filamentous form of fungi.
   Sexual reproduction in a filamentous fungi like Rhizopus stolonifer undergoes the following steps;
    i. First, two mating types of hyphae grow in the same medium.
    ii. A chemical interaction between them causes growth perpendicular to the hyphae in opposite directions, so they can meet with one another.
    iii. The growths are the delimited by a wall just so the nuclei are isolated in differentiated sex organs called gametangia (plural).
    iv. The gametangia fuse in a process called plasmogamy and together they form a zygote which may undergo dormancy for a period.

v. The nuclei in the zygote fuse in twos and undergo meiosis independently, it then moves on to germinating under favorable conditions to liberate haploid spores at maturity through the production of a fruiting.

vi. In summary, sexual reproduction in fungi consists of three stages; plasmogamy, karyogamy and meiosis.

4. How do Bryophytes adapt to their environment.

i. They possess definite structures for water and nutrient absorption from the soil.

ii. They also possess a waxy cuticle that keeps them from drying out through the process of desiccation

iii. They possess gametangia that keep the plants gametes from drying out.

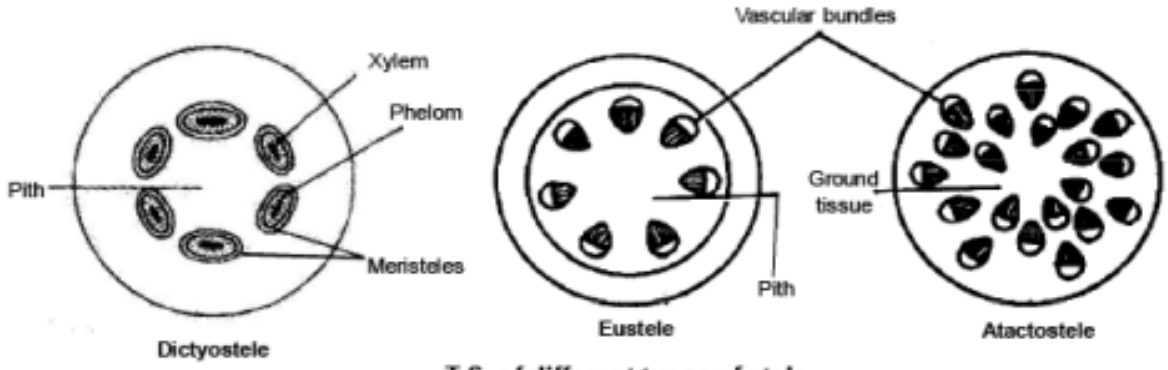
5. Describe with illustrations the following terminologies.

A. Eusteles; a type of stele in which the vascular tissue in the stem forms a central ring of bundles around a pith. The vascular bundles are discrete, concentric collateral bundles of xylem and phloem.

B. Atactostele; a type of stele found in monocots, in which the vascular tissue in the stem exists as scattered bundles.

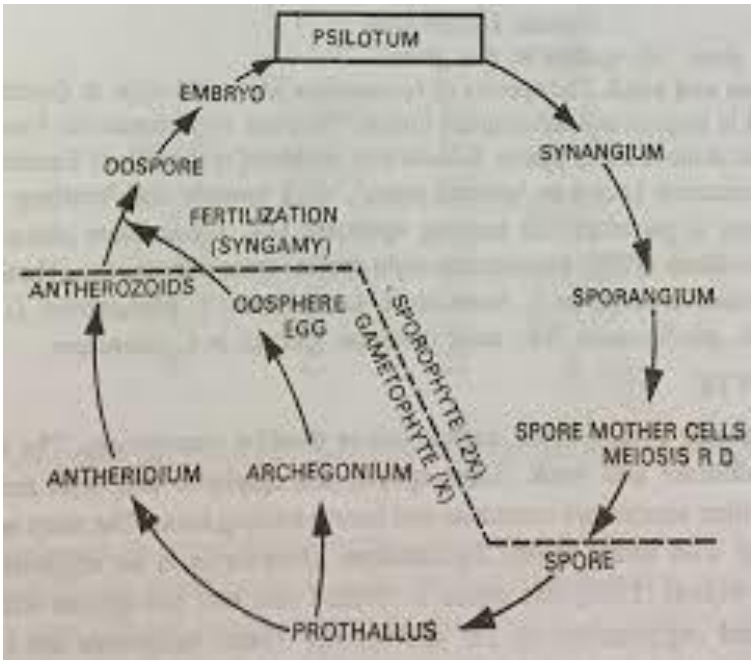
C. Dictyostele; a type of stele in which the vascular cylinder is broken up into a longitudinal series or network of vascular strands around a pith.

Diagrammatic illustrations



T.S. of different types of stele

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


PSILOTUM
EMBRYO
OOSPORE
FERTILIZATION
(SYNGAMY)
ANTHEROZOIDS
OOSPHERE
EGG
SPOROPHYTE (2X)
GAMETOPHYTE (X)
SYNANGIUM
SPORANGIUM
SPORE MOTHER CELLS
MEIOSIS R D
SPORE
ANTHERIDIUM
ARCHEGONIUM
PROTHALLUS