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ANSWERS

1. Importance of fungi to mankind are;

* They are responsible for the mediation of the decay of dead organic matter.
* Yeast is important in food industries like bakeries and yogurt making factories.
* Mushrooms are eaten by man.
* Many fungi plants pathogens causing blights and smuts in cereals
* Some fungi are parasites to obnoxious pests of man.

1. CELL STRUCTURE OF A UNICELLULAR FUNGUS E.g Yeast



1. Sexual reproduction in a filamentous fungi e.g Rhizopus stolonifer undergoes the following steps;

* Firstly, two mating types of hyphae grow in the same medium.
* A chemical interaction between these hyphae induces growths perpendicular to the hyphae in opposite directions, so they can mate with one another.
* These growths are the delimited by a wall just so that many nuclei are isolated in differentiated sex organs called gametangia (plural).
* The two gametangia fuse in a process called plasmogamy and together they form a zygote which may undergo prolonged dormancy or resting stage.
* The nuclei in the zygote fuse in twos and undergo meiosis independently
* The zygote germinates under favourable conditions to produce a fruiting which at maturity liberates the haploid spores.
* In summary, sexual reproduction in fungi consists of three stages; plasmogamy, karogamy and meiosis.

1. Bryophytes adapt in their habitat via the following;

* They possess definite structures for water and nutrient absorption from the soil.
* Their aerial portion when being exposed to the atmosphere demands some modifications that prevents excessive loss of water through the body surface this process is called dessication.
* They possess gametangia that keep the plants gametes from drying out.

5. A. Eusteles: this is a type of stele found in herbaceous dicotyledonous plants 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: this is a type of stele found in grasses and many monocotyledons plants, in which their vascular tissue in the stem exists as scattered bundles.

C. Dictyostele; this is a type of stele found in stems of ferns and higher vascular plants, in which the vascular cylinder is broken up into a longitudinal series or network of vascular strands around a pith.

Diagrammatic illustrations of the different steles.

[](https://www.google.com/url?sa=i&url=https://edurev.in/studytube/Tissue-System-and-Roots--Steam--Leaf-Botany--Class-11/9ff8d58b-e4b4-410e-ac41-7002fa1691a6_t&psig=AOvVaw2a6qTwY0XxT3jbrUikx976&ust=1588926605201000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCIimlOz2iukCFQAAAAAdAAAAABAI)

1. Life cycle of a primitive vascular plant

An example is psilotum

