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COURSE CODE : BIO 102

1. How are Fungi important to mankind

Fungi are very important to the terrestrial ecosystem in material cycling and to man

They are responsible for the mediation of decay of organic matter

They are important in food industry e.g. Mushroom are eaten by human societies

Fungi mediate the spoilage of wood, clothes and paper

They are decomposers

They are used to manufacture antifungal

They produce foul smell

They act as parasite to insect they can be used as biological control of insects.

1. THE STRUCTURE OF SACCHAROMYCES CEREVISIAE( YEAST) UNDERGOING ASEXUAL REPRODUCTION.

 

1. Outline the sexual reproduction in a typical filamentous form of a Fungi

Rhizopus Stoloniferis a filamentous form of Fungi, sexual reproduction occurs when two mating types of hyphae grow in the same medium. Chemical interactions in the two mating medium 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 gamatangium. The two gametangia fuse (Plasmogamy) and a zygote is formed which may undergo meiosis independently. The zygote germinates under favourable conditions to produce a fruiting which at maturity liberates the haploid spores.

1. How do Bryophytes adapt to their environment.

(i). They have definite structures for water and nutrient absorption from the soil, the plant body is divided into two (an aerial portion and a subterranean portion).

The subterranean portion is the rhizoid and is not a true root as the case of land plants that are advanced.

(ii). The aerial portion being exposed to the atmosphere demands some modifications that prevents excessive loss of water through the body surface

(iii). Some other modifications that permit elimination of excess water from a plant body and not only exchange of gases between the internal parts of the plant and the atmosphere therefore openings are available on the aerial parts of the plants.

1. Describe with illustration the following terminologies (a) eusteles , (b) atactostele, (C) siphonostele, (d) dictyostele

(a). Eusteles: Eusteles in herbaceous dicotyledonous plants they are vascular bundles that are discrete, concentric collateral bundles of xylem and phloem.

(b). Atactostele: In grasses and many monocotyledonous plants, the atactostele, the vascular bundles are scattered. The nature of vascular supply to leaves is also noteworthy element of the vascular system

(c). Siphonostele: In siphonostele, vascular supply to leaves associated with leaf gaps and the conducting cylinder is dissected on dictyostele

(d). Dictyostele: A stele in which the vascular cylinder is broken up into a longitudinal series of network of vascular strands ground a central path (as many ferns)

6. Illustrate the lifecycle of a primitive vascular plant .

The life cycle of a primitive vascular plant