

B.Sc. Part I - Botany (Honours)

Fungi = Kingdom

General characters :-

- ⇒ The study of fungi is known as mycology. (Mykes = mushroom; Logos = study)
- ⇒ The plant body consist of a thallus, made up of hyphae which together form mycelium.
- ⇒ There are about 5,100 genera and more than 50,000 species of fungi are known which grow in variety of habitats where life is possible.
- ⇒ Fungi are Cosmopolitan in distribution like fresh ~~and~~ marine water, others are terrestrial, air borne, parasitic on plant and animal.
- ⇒ The plant body consist of branched and filamentous hyphae which form a net like structure known as mycelium.
- ⇒ Hyphae are aseptate and coenocytic or septate and uni bi or multinucleate. Septa may be <sup>with</sup> simple pore or delipore (pore cap). Septate pores form a valve like structure.
- ⇒ The main component of cell wall is the fungus cellulose (chitin). In some lower fungi cell wall only have cellulose and glucan.

⇒ Fungal cell have not any type of chloroplast where hyphae contain colourless vacuolated cytoplasm with endoplasmic reticulum, mitochondria, golgi bodies and many non living substances like reserve food.

⇒ The higher fungi have non motile reproductive cells but in lower fungi the reproductive cells are uni or bilagellate.

⇒ Flagella are two types whiplash (eukaryotic) arrangement with 9+2 and Tinsel (prokaryotic) with numerous minute hair like mastigonemes on surface.

⇒ Majority of fungi forms special structure with their hyphae like - prosenchyma, pseudoparenchyma, Rhizomorph, sclerotium, Appressorium, Haustoria, hyphal traps and stromata.

⇒ The fungi are heterotrophic in nature so the mode of nutrition may be grouped into three categories -

(a) Parasitic (b) saprophytic (c) symbiotic

⇒ Those group of fungi which obtain nutrition from other live plant or animals are known as parasitic mode of nutrition. eg. Ravenelia, Ustilago

⇒ Those fungi which obtain their nutrition from the dead decaying organic matter known as saprophytes. e.g. Mucor mucedo, a obligate parasite which have capacity to obtain their food only from dead organic substances, Fusarium a facultative parasite which have capacity to obtain their food from dead organic material as well as living organism.

⇒ Symbionts / symbiotic fungi grow on other living organisms and both mutually benefited. e.g. lichens and mycorrhiza are common example of symbionts.