

2015  
**BOTANY**  
Paper : 101

**PHYCOLOGY, MCOLOGY AND LICHEN**

Full Marks : 80

Time : 3 hours

*The figures in the margin indicate full marks for the questions*

1. Answer the following questions: 1x8=8
- i. Who is known as the Father of Indian Mycology?
  - ii. What are polymorphic fungi? Give one example of polymorphic fungi.
  - iii. Mitosporic and Anamorphic fungi are given to which group of Fungi.
  - iv. In which group of Fungi the sterile hyphae of fruiting bodies is called cystidium?
  - v. What is the economic importance of *Chlorella*?
  - vi. Name the Lichen which is used as food by Reindeers in Arctic Tundra and North Pole
  - vii. The name of an endophyte in *Taxus wallachina* which is responsible for the production of taxol which is of much known for its medicinal benefits is.....

2. Answer the following short questions
- What is heterotrichous habit? Give one example. 2
  - What is Hydrogenosome and where it is found? Mention its important function. 2
  - Conceptacles and Receptacle in Fucus. 3
  - Affinities of Vaucheria. 3
  - Give reason why Oomycota is placed in Chromista according to modern trends of fungal classification 3
3. Write explanatory notes: (any four)
- Discuss the phylogeny and systematic position of Charales. 5
  - Distinguish between diphasic and triphasic life cycle of Rhodophyta with suitable diagram. 5
  - Distinguish between Agaricales and Aphylliphorales. 5
  - What are the different types of mycorrhizae? Explain how they help the higher plants in uptake of nutrients from the soil? 5
  - Define the following:  
(a) Isidia (b) Cephalopodia (c) Stratification in lichen  
(d) Breathing pores (e) Leprose Lichen 5

4. Answer the following questions: (Any three)

- What is isomorphic alternation of generation? Describe its significance in the Life history of Ectocarpus. 2+5=9
- What are pyrenoids and eye spot? What are their functions? Write a note on the range of structure of Plastids and Chromatophore found in algae. 3+6=9

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P.T.O.

- Discuss the phenomenon of parasexuality in Fungi. How parasexuality does helps in genetic recombination in anamorphic Fungi. 4+5=9
  - Describe the various components of fungal cell wall. What are the types of septum found in different groups of fungi? 6+3=9
5. What are the salient features of Cynophyta that distinguishes it from other groups of Algae? What are its affinities? Mention its significance as potential bio-fertilizers. 4+4+4=9
- OR
6. Answer the following: (any three) 4x3=12
- Algae as important resource of Bio-fuel.
  - Discuss about the algal distribution in various habitats.
  - Wood decaying Fungi
  - Economic and ecological importance of Lichen.

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