

School of Biological and Life sciences**Bachelor of Science Honours in Microbiology
Semester End Examination - Jun 2024****Duration : 180 Minutes
Max Marks : 100****Sem II - P1UC203B - Phycology and Mycology**General Instructions*Answer to the specific question asked**Draw neat, labelled diagrams wherever necessary**Approved data hand books are allowed subject to verification by the Invigilator*

- 1) What is epiphytic algae? K1(2)
- 2) Describe Isogamy and Anisogamy in Fungi. K2(4)
- 3) Briefly describe the various types of Life-Cycle in Algae with suitable example. K2(6)
- 4) Compare and contrast the somatic structure and life cycle of two distinct groups of fungi: Zygomycetes (using Mucor as an example) and Ascomycetes (with a focus on Saccharomyces). Highlight the key morphological features, reproductive structures, and stages in their life cycles. Discuss the ecological roles and adaptations of these fungi based on their life cycle characteristics. K3(9)
- 5) Examine the ecological roles of cellular slime molds, true slime molds, and Oomycetes (Saprolegnia and Phytophthora). Discuss how their somatic structures contribute to their respective life cycles and ecological functions. Evaluate their impact on nutrient cycling, decomposition, and interactions with other organisms in their habitats. K3(9)
- 6) Provide an in-depth analysis of the structure and life cycle of Chytridiomycetes, with a focus on Neocallimastix. K5(10)
- 7) Discuss the ecological roles and environmental contributions of algae in aquatic ecosystems. Consider factors such as nutrient cycling, oxygen production, and the impact of algal blooms. Provide specific examples and explain the implications of algae on water quality and biodiversity. K4(12)
- 8) Describe the general characteristics of diatoms, focusing specifically on the morphological features that distinguish centric diatoms. Discuss the significance of the silica cell wall in their structure and ecology. K5(15)
- 9) Provide an overview of the general characteristics of Xanthophyceae, emphasizing their pigments, cell structure, and ecological adaptations. K5(15)
- 10) Examine the multifaceted aspects of biodeterioration, with a focus on its impact on wood, paper, textile, and leather. K6(18)