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I Semester M.Sc. Degree (C.B.C.S.S. – OBE-Reg./Supple./Imp.) Examination, October 2024 (2023 Admission Onwards) BOTANY

MSBOT01C02: Phycology, Mycology and Plant Pathology

Time: 3 Hours Max. Marks: 60

PART - A

Answer any five questions.

 $(5 \times 3 = 15)$

- 1. Outline the role of diatoms in aquatic ecosystems.
- 2. Describe the significance of alginates derived from algae.
- 3. Explain the concept of homothallism in fungi.
- 4. Describe the association of arbuscular mycorrhizal fungi with plant roots.
- 5. What are PR proteins? Explain their role in plant immunity.
- 6. Identify common environmental factors that lead to fungal infections in plants.

PART - B

Answer any three questions.

 $(3 \times 6 = 18)$

- 7. During a workshop on marine ecosystems, suggest a sustainable way to use algae for carbon capture.
- 8. Differentiate the structural and reproductive features of Cyanophyta and Rhodophyta.

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- 9. Discuss the economic impact of fungal contamination in stored grains.
- 10. Advise a farmer on managing nematode attacks in root crops.
- 11. Your pumpkin plants display powdery patches on leaves. Identify possible diseases and control methods.

PART - C

Answer any three questions.

 $(3 \times 9 = 27)$

- 12. Discuss the ecological implications of algae as indicators of water quality.
- 13. Compare structural and reproductive adaptations among Chlorophyta, Rhodophyta and Phaeophyta.
- 14. Explain the life cycle of Ascomycota and its impact on agriculture.
- 15. Analyze the role of lichens in the nitrogen cycle and soil formation.
- 16. Discuss the benefits and challenges of using biological control in agricultural pest management.

