

**M.Sc. 1st Semester Examination, 2023**

**MICROBIOLOGY**

*( Diversity and Systematics of*

*Eukaryotic Microbes)*

**PAPER – MCB-102**

*Full Marks : 50*

*Time : 2 hours*

**Answer all questions**

*The figures in the right hand margin indicate marks*

*Candidates are required to give their answers in  
their own words as far as practicable*

**UNIT –MCB-102.1**

*( Mycology )*

**GROUP – A**

*Answer any two questions from the following :*

2 × 2

*( Turn Over )*

1. Name one fungal terpene and the fungus that produces it.
2. Distinguish between Class-I and Class-II Hydrophobins.
3. What do you mean by sustainable agriculture ?
4. What is 'Hartig net' ?

GROUP—B

Answer any two questions from the following :

4 × 2

5. State the applications of mycorrhiza.
6. Discuss aerobiosis and anaerobiosis of yeast.
7. Differ between primary and secondary metabolites. Name two alkaloids obtained from fungi.

2 + 2

8. Write notes on – fungal biopesticides.

GROUP – C

Answer any **one** question from the following :  $8 \times 1$

9. Discuss two mechanisms of controlling nematodes by myconematicides.  $4 + 4$

10. Discuss the role of two polyketides functioning as mycotoxins.  $4 + 4$

UNIT – MCB-102.2

( *Phycology* )

GROUP – A

Answer any **two** questions from the following :

$2 \times 2$

11. What is heterocyst ?

12. Name two symbiotic algae and their host organisms.
13. Which dominant pigment produce golden brown colour in Phaeophyceae ?
14. What is auxospore ?

GROUP – B

Answer any **two** questions from the following : 4 × 2

15. Write a short note on algal thallus organisation.
16. Diagrammatically describe different chloroplast structure found in eukaryotic algae.
17. State the asexual reproduction of Protozoa.
18. How bioluminescence occur in dinoflagellate ?

GROUP—C

Answer any **one** question from the following:  $8 \times 1$

19. Briefly describe Diplohaplontic life cycle.

Write a short note on algal biofertilizer.  $4 + 4$

20. Write the important characteristic of red algae. Euglenoids have both plant and animal characteristics.—Justify.  $6 + 2$

[ Internal Assessment — 10 Marks ]

---