

2022

1st Semester Examination

MICROBIOLOGY

Paper : MCB 102

(Diversity and Systematics
of Eukaryotic Microbes)

Full Marks : 40

Time : Two Hours

*The figures in the margin indicate full marks.
Candidates are required to give their answers
in their own words as far as practicable.*

MCB 102.1

(Mycology)

Answer any *two* questions of the following : $2 \times 2 = 4$

1. What is 'Hartig net'?
2. What do you mean by sustainable agriculture?
3. Define secondary metabolite with an example.
4. What is aflatoxin?

Answer any *two* questions of the following : $4 \times 2 = 8$

5. State the roles of mycorrhiza in agriculture.
6. What are the roles of hydrophobins? Mention two applications of hydrophobins. $2+2=4$

P.T.O.

7. Discuss the roles of isozymes in systematics.
8. Discuss the roles in brief of two fungal biopesticides - one acting as mycoinsecticide and the other as myconematicide.

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

9. Write the advantages and disadvantages of RAPD. $4 + 4 = 8$
10. What are polyketides? Discuss the role of two polyketides functioning as mycotoxins. $2 + 3 + 3 = 8$

MCB 102.2

(Phycology)

Answer any *two* questions of the following : $2 \times 2 = 4$

11. What are pyrenoids?
12. What is Gaidukov phenomenon?
13. What is heterotrichous habit of thallus organisation? Give an example.
14. How BGA help to reclaim saline-alkaline land?

Answer any *two* questions of the following : $4 \times 2 = 8$

15. Write the important characteristics of Diatoms.
16. Diagrammatically describe the Triphasic life cycle in algae.
17. Write a short note on algal pigments.

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18. What are phycobiliproteins? State the importance of algal carotenoids in human welfare. 1+3

Answer any *one* question of the following : 8×1=8

19. Discuss the various parameters used to classify algae. Write a short note on algal culturing. 4+4
20. What are microalgae? Name two microalgae having high oil content. State the advantages and disadvantages of microalgae for biodiesel production. 1+1+6
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