

2025

M.Sc. 1st Semester Examination

MICROBIOLOGY

Paper : MCBC401X1

(Microbial Diversity and Systematics)

Full Marks : 25

Time : One Hour

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

Group - A

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

1. How cell wall of bacteria varies from archaea?
2. Name two antibiotics obtained from fungi.
3. What are prions?
4. How flagellates differs from ciliates?

Group - B

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

5. Write a short note on Bergey's manual of Systematic Bacteriology.

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(2)

6. Describe asexual reproduction process of fungi.
7. With suitable examples discuss the economic importance of algae.
8. State the significant role of virus in biotechnological application.

Group - C

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

9. Give two evidences supporting the endosymbiotic origin of mitochondria and chloroplast. Describe the developmental stages of heterocyst in cyanobacteria. What is crenarchaeol? $3+3+2$
10. How do you differentiate between *Escherichia* and *Enterobacter*? What is numerical taxonomy? Write a short note on "Molecular methods" used in classification of bacteria. $2+2+4$

Internal Assessment : 5 marks
