

25BMB101

UG PROGRAM (4 YEARS HONOURS) WITH SINGLE MAJOR

AT THE END OF FIRST SEMESTER

MICROBIOLOGY – INTRODUCTION TO MICROBIOLOGY AND MICROBIAL DIVERSITY

(B.Sc. HONOURS-MAJOR)

(w.e.f. Admitted Batch 2025-26)

Time: 3 Hours

Maximum: 70 Marks

Section-A

Answer any Five Questions.

5x4=20

1. Spontaneous Generation vs. Biogenesis.
2. General characteristics of Archaea.
3. Habitat and occurrence of Microalgae.
4. Nutritional requirements of Fungi.
5. Habitat and ecological role of *Amoeba*.
6. Contributions of Alexander Fleming to microbiology.
7. Contributions of Louis Pasteur.
8. Morphology of *Spirulina* and its importance.

Section-B

Answer All Questions.

5x10=50

9. a) Describe Whittaker's Five Kingdom Classification system in detail.

(Or)

b) Discuss the applications and scope of Microbiology in various fields.

10. a) Explain the structure and multiplication process of Bacteriophage T2.

(Or)

b) Discuss the morphology, reproduction, and economic importance of Bacteria.

11. a) Describe the morphology and reproductive mechanisms of *Chlorella*.

(Or)

b) Explain the economic importance of microalgae.

12. a) Provide an outline classification of Fungi and describe fungal cell ultra-structure.

(Or)

b) Explain the morphology, reproduction, and applications of *Saccharomyces*.

13. a) Discuss the general characteristics, nutrition, and reproduction of Protozoa.

(Or)

b) Describe the life cycle and ecological significance of Slime Molds.