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(20425) Roll No. ....  
B.Sc. (Bio-Tech.) 1-Year

**3458**

**B.Sc. (Biotechnology)  
Examination, April - 2025**

**MICROBIOLOGY**

**(B-104)**

**(B.Sc. Biotech)**

*Time : Three Hours ] [Maximum Marks : 50*

**Note :** Attempt any **five** questions. Each question carries equal marks.

1. Describe the history of microbiology and write the contribution of five scientists in the field of microbiology.

**P.T.O.**

2. Describe the different methods of Sterilization in details along with examples.
3. Define the cell wall of Gram-negative bacteria in detail.
4. What do you understand by nutritional classification? Elaborate the nutritional classification of microorganisms.
5. What is role of nitrogen fixing microbes in agriculture?
6. Write a short note on the following :
  - (a) Microbial growth curve
  - (b) Microbial agent of diseases
7. What is the microbial assay for vitamins and antibiotic production?

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8. What is the role of flagella in motility?

Explain different types of flagella in details.

9. What is the difference between:

(i) Symbiosis and antibiosis

(ii) SEM and TEM

(iii) Gram-negative and Gram-positive cell wall

10. What is SCP? How do microbes contribute to its production?