

B.Sc. Semester - 1 (NEP-2020) Examination**OCT/NOV-2025****MIC: Basics of Microbiology (Minor)****Time: 2:00 Hours****Marks:50****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1 1) Describe the germ theory of disease and its importance in microbiology. (05)
2) Write short notes on the contributions of Louis Pasteur, Robert Koch, and Joseph Lister. (05)

OR

- Que.1 1) Discuss the distribution of microorganisms in nature and their ecological significance. (05)
2) Classify and describe the major groups of microorganisms with suitable examples. (05)
- Que.2 1) Describe the physiochemical characteristics of microorganisms. (05)
2) Discuss the Baltimore classification of viruses with examples. (05)

OR

- Que.2 1) Compare Whittaker's five-kingdom system and Carl Woese's three-domain system. (05)
2) Explain wall-less forms of microorganisms — mycoplasma and spheroplasts (05)
- Que.3 1) Explain the significance of zooplankton in aquatic ecosystems. (05)
2) Describe the general characteristics and structure of actinomycetes. (05)

OR

- Que.3 1) Describe the general characteristics, structure, and reproduction of protozoa. (05)
2) Define phytoplankton and describe their general characteristics. (05)
- Que.4 1) Discuss the physical conditions required for bacterial growth. (05)
2) Explain the gaseous requirements of microorganisms and oxygen toxicity. (05)

OR

- Que.4 1) Describe selective methods used to isolate specific bacteria. (05)
2) Write short notes on enrichment and differential media used in microbiology. (05)
- Que.5 Write the short note on: (10)
1) Define microbiology and explain its position as a field of biology.
2) Explain binomial nomenclature and its significance in microbiology.

OR

- 1) Explain the occurrence and economic importance of protozoa.
2) Define bacteriological media and classify its types.
