



UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 4th Semester Examination, 2021

GE4-MICROBIOLOGY (3 & 4)

Full Marks: 40

ASSIGNMENT

The figures in the margin indicate full marks.

The question paper contains PAPER-3 & PAPER-4. The Candidates are required to answer any *one* from the *two* papers. Candidates should mention it clearly on the Answer Book.

PAPER-3: BACTERIOLOGY AND VIROLOGY

Answer any *four* of the following

10×4 = 40

1. Describe the stages of lytic cycle by T-even phage. 10
2. Describe the salient features of one plant and one human virus. 5+5
3. Draw the structure of gram negative bacterial flagella with proper labeling. Differentiate capsule and slime layer. 6+4
4. Differentiate bacteria and archaea on the basis of their cell wall and cell membrane structure. Describe the outer membrane structure of gram negative bacteria. 5+5
5. Describe the salient features of *Pseudomonas* and *Agrobacterium*. 5+5
6. Write a note on amphotericin and amantadine. 5+5

PAPER-4: MEDICAL MICROBIOLOGY AND IMMUNOLOGY

Answer any *four* of the following

10×4 = 40

1. What do you understand by primary and secondary lymphoid organs? List the primary lymphoid organs and summarize their functions in immune response. 4+6
2. Describe the immunoelectrophoresis technique. 10
3. Give a concise account of the normally occurring microflora in the human body. 10

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| 4. | Describe cell-mediated immunity with the help of suitable illustrations. | 10 |
| 5. | Discuss in details with illustration the mechanism of delayed type hypersensitivity. | 10 |
| 6. | Write a note on bacterial virulence. Differentiate between exo and endo toxins. | 5+5 |

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