



UNIVERSITY OF NORTH BENGAL
B.Sc. Honours 5th Semester Examination, 2020

DSE2-MICROBIOLOGY

Full Marks: 40

ASSIGNMENT

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

**The question paper contains two sections DSE-2A and DSE-2B.
The candidates are required to answer any *one* from *two* sections and
Candidates should mention it clearly on the Answer Book.**

DSE-2A

Answer any *four* questions

10×4 = 40

1. What advantages could be conferred on bacteria growing in a biofilm compared with growth in a flowing stream? How can biofilm complicate treatment of infectious diseases? 5+5
2. What is about the future implications of synthetic biology with respect to bacteria? – Explain it. 10
3. Write short notes on: 5×2 = 10
(i) Horizontal gene transfer
(ii) Core genome pool
4. Write a note on pathogenicity island. Describe various methods involved in transferring pathogenicity island in bacteria. 2+8 = 10
5. Hypersensitive Response (HR) is induced as defense response by plant against pathogen attack. Justify the statement. 10
6. Discuss briefly about the basics of synthesis of poliovirus in laboratory. 10

DSE-2B

Answer any *four* of the following questions

10×4 = 40

1. Discuss about microbial production of Hepatitis B vaccine. 10
2. Write about different types of bio plastics with emphasis on advantages and disadvantages of each type. 10
3. Discuss the importance of RNAi as a gene knockdown technology. 10
4. What is the significance of IPR? Describe the steps in patenting an innovation. 4+6 = 10
5. Describe microbial transformation of steroids. 10
6. Explain how microbial biotechnology is relevant in the field of agriculture. 10

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