

CBCS SCHEME

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18BT822

Eighth Semester B.E. Degree Examination, Dec.2023/Jan.2024

Industrial Microbiology

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Describe the scope of Industrial Microbiology. (10 Marks)
b. Elaborate the methods of preservation of microbes. (10 Marks)

OR

- 2 a. Discuss the era of discovery of microbes. (10 Marks)
b. Describe the strategies for strain improvement. (10 Marks)

Module-2

- 3 a. Elaborate the raw materials used for production. (10 Marks)
b. Discuss the direct methods of monitoring microbial growth in culture. (10 Marks)

OR

- 4 a. Describe the characteristics of an ideal production media. (10 Marks)
b. Discuss the concept of Non – Newtonian fluids. (10 Marks)

Module-3

- 5 a. Analyze the methods of sterilization of air. (10 Marks)
b. Discuss the various sources of carbon in the fermentation media. (10 Marks)

OR

- 6 a. Assess the methods of sterilization of medium. (10 Marks)
b. Discuss the role of buffers in fermentation media. (10 Marks)

Module-4

- 7 a. Write a detailed note on trace elements. (10 Marks)
b. Compare SSF with SmF. (10 Marks)

OR

- 8 a. Discuss the advantages and disadvantages of Microbiological array. (10 Marks)
b. Describe the process of production of cellulose by solid state fermentation. (10 Marks)

Module-5

- 9 a. Discuss the principle and applications of Chromatography. (10 Marks)
b. Describe the role and importance of membrane filtration in downstream processing. (10 Marks)

OR

- 10 a. Elaborate the principle and types of drying. (10 Marks)
b. Explain the principle and stages of crystallization. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.