



CBCS SCHEME

18BBT21

Second Semester M.Tech. Degree Examination, June/July 2019 Industrial Biotechnology

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Write a note on discovery of microbes and its impact on development of industrial Biotechnology. (12 Marks)
- b. Explain how penicillin discovery gave a way to development in Industrial antibiotic production. (08 Marks)

OR

- 2 a. Explain different methods of strain development for industrially optimal microbes. (12 Marks)
- b. Write a note on different techniques used for preservation of microbes. (08 Marks)

Module-2

- 3 a. Write a detailed account on optimization of fermentation media. (10 Marks)
- b. Explain different methods of sterilization used in industry. (10 Marks)

OR

- 4 a. Explain characteristics of an Ideal production media. (10 Marks)
- b. Explain an note on sterilization of production media. (10 Marks)

Module-3

- 5 a. Explain in detail factors involved in fermentation design and how they impact on various aspects of production. (15 Marks)
- b. Mention different types of fermentations with their principle of design. (05 Marks)

OR

- 6 a. Explain in detail control and measure of ONLINE and OFFLINE parameters in fermentation process. (15 Marks)
- b. Write a note on computer control of fermentation process. (05 Marks)

Module-4

- 7 a. Explain in detail about different Assays and its impact on industrial Biotechnology products. (15 Marks)
- b. Explain Automation of microbiological Assay. (05 Marks)

OR

- 8 a. Explain with example on Microbiological Assay of Antibiotics. (15 Marks)
- b. Mention few advantages and disadvantages of microbiological assay. (05 Marks)

Module-5

- 9 a. Explain with impact of microbes on industrial example. Applications of Food and Enzyme industry. (15 Marks)
- b. Write a note on fermented foods. (05 Marks)

OR

- 10 a. Explain with example of impact of microbes on pharmaceutical industry. (10 Marks)
- b. Write a note on sewage treatment methods. (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.