

CBCS Scheme

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16/17BBT21

Second Semester M.Tech. Degree Examination, June/July 2018 Industrial Biotechnology

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Write a detailed note on Pasteur and the history behind fermentation technique. (08 Marks)
b. Summarize the steps behind preservation and preparation of inoculums of microorganisms. (08 Marks)

OR

- 2 a. Recall the history behind the production of Antibiotics. (08 Marks)
b. Write short notes on: i) Strain development ii) Screening techniques. (08 Marks)

Module-2

- 3 a. Explain the production of different medias and their properties. (08 Marks)
b. Compare chemical sterilization method with the physical methods. (08 Marks)

OR

- 4 a. Recall the raw materials used in media production and their significance. (08 Marks)
b. Break down the methods used for sterilization of air. (08 Marks)

Module-3

- 5 a. What are the factors involved in the design of fermentor, explain the answers with suitable examples. (08 Marks)
b. Comment on the role of computational fluid dynamics in large scale fermentation operations. (08 Marks)

OR

- 6 a. Recall various operational characteristics of fermentors. (08 Marks)
b. Compare the types of fermentation operations. (08 Marks)

Module-4

- 7 a. What are microbiological assays and their importance in modern life science? (08 Marks)
b. Break down the advantages and disadvantages of microbiological assays. (08 Marks)

OR

- 8 a. Recall the trace elements used and their significance in microbiological assays. (08 Marks)
b. Summarize the history behind microbiological assays. (08 Marks)

Module-5

- 9 a. Write a detailed note on pharmaceutical applications of microbiology. (08 Marks)
b. Comment on the positive impacts of microbiology in food and enzyme industry. (08 Marks)

OR

- 10 a. What is the role of microbiology in the process of wastewater treatment? (08 Marks)
b. Explain any two fermented foods in detail. (08 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.