



CBCS SCHEME

18BBC/BBT32

Third Semester M.Tech. Degree Examination, Jan./Feb. 2021 Environmental Biotechnology

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Discuss the sources and ecological effects of water and soil pollution on living and nonliving systems. (10 Marks)
- b. What is Acid rain? Briefly explain the sources and consequences of acid rain. (10 Marks)

OR

- 2 a. Discuss briefly the microbial desulphurisation of coal. (10 Marks)
- b. Give an account on the role of Biotechnology in providing solutions to environmental problems. (10 Marks)

Module-2

- 3 a. Briefly explain the waste management in food processing and pharmaceutical industries. (10 Marks)
- b. Discuss the kinetics of nitrification and denitrification in the nitrogen removal from waste water. (10 Marks)

OR

- 4 a. Give an account on the sources and dispersion of atmospheric pollutants. (10 Marks)
- b. Explain the methods involved in the control of air pollutants and noxious pollutants. (10 Marks)

Module-3

- 5 a. Discuss briefly the various aerobic treatment methods of wastes. (10 Marks)
- b. What is Bioremediation? How is it applied to contaminated land? Discuss. (10 Marks)

OR

- 6 a. What are Hazardous wastes? Explain the various process involved in handling hazardous wastes from bioprocess industries. (10 Marks)
- b. Write short notes on :
 - i) Biological Nutrient removal. (10 Marks)
 - ii) Stoichiometry of anaerobic digestion. (10 Marks)

Module-4

- 7 a. Explain the principle of atomic absorption spectrometry. Add a note on its application in environmental sensing. (10 Marks)
- b. Give an account on the various contaminants of water. (10 Marks)

OR

- 8 a. Explain the principle and construction of GCMS. (10 Marks)
- b. Explain the principle and application of potentiometry in Environmental sensing. (10 Marks)

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.

Module-5

- 9 a. What is ISO and ISO 14000 series? Discuss its role in environment management. (10 Marks)
b. Give an account on the risk evaluation and decision analysis of the environmental policies. (10 Marks)

OR

- 10 a. What is Environmental Auditing? Discuss the objectives and merits of environmental auditing. (10 Marks)
b. What is EIA? Explain briefly the steps involved in EIA process. Add a note on the uncertainties in EIA. (10 Marks)
