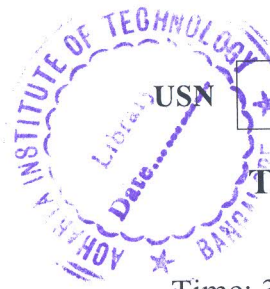


CBCS SCHEME

18BBT32



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Third Semester M.Tech. Degree Examination, Dec.2019/Jan.2020 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. Describe causes and effects of acid rain. (10 Marks)
b. Explain in detail the types of water pollution. (10 Marks)

OR

- 2 a. What is biodegradation? Add a note on the factors affecting biodegradation. (10 Marks)
b. Define Phytoremediation. Explain in detail the types of Phytoremediation. (10 Marks)

Module-2

- 3 a. Explain the principle and procedure for estimation of BOD in a given sample. (10 Marks)
b. Describe the chemical and biological characteristics of industrial waste water. (10 Marks)

OR

- 4 a. Write an overview of waste management in a Pharma Industry. (10 Marks)
b. Explain in detail the methods of Solid Waste Management. (10 Marks)

Module-3

- 5 a. Describe in detail the Stoichiometry of Anaerobic digestion process. (10 Marks)
b. What is bioremediation? Write in detail the modes of bioremediation. (10 Marks)

OR

- 6 a. Explain in detail the mechanism involved in bioremediation of contaminated lakes. (10 Marks)
b. Describe the methodology for the management of hazardous waste. (10 Marks)

Module-4

- 7 a. Explain the working principle of UV-vis-Spectrophotometer, with a neat block diagram and add a note on its applications in environmental engineering? (10 Marks)
b. Write the principle and technique of GCMS. Add a note on its applications in environmental sample analysis. (10 Marks)

OR

- 8 a. Describe the principle and instrumentation of HPLC. Explain briefly its environmental applications. (10 Marks)
b. Write in detail the Remote sensing techniques involved in sensing the human dimension? (10 Marks)

Module-5

- 9 a. Describe in detail the evolution of water policies in India. (10 Marks)
b. Explain about the environmental management systems in detail. (10 Marks)

OR

- 10 a. Write the principles of EIA? Add a note on steps involved in EIA process. (10 Marks)
b. Define environmental auditing. Write an explanatory note on its types. (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.