



RAN-2103001106020004

B.Sc. (Biotech: Old) (Sem.- VI) Examination March - 2026

Core I Course I : BT 20 Environmental Biotechnology

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી. Fill up strictly the above details on your answer book	Seat No.: <table border="1"> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> Student's Signature						

Q.1. Write specific answers (Any four): [08]

- A. Define Bioleaching. Enlist factors affecting Bioleaching.
- B. Explain the term: Photostabilisation.
- C. Explain the term : 'Phytovolatilization '
- D. Which tests are usually used to assess the organic matter content in waste water?
- E. Mention the Precautions of Vermicompost.
- F. Define Bioleaching. Name two Compounds for which commercial bioleaching is performed.
- G. What should be the ideal C:N ratio for composting?
- H. Give examples of organisms which are used for Bioleaching.

Q.2. Attempt Any Two: [14]

- A. Explain in detail the role of hydrogenase and nitrogenase enzyme in biohydrogen production.
- B. What are the major steps for biogas production? Discuss each in detail..
- C. What is biodiesel? How can it be obtained from Jatropha plants?
- D. Give an account on principles and factors responsible for bioremediation.

Q.3. Explain in detail Any Two: [14]

- A. Write a detail note on Ex situ bioremediation.
- B. State different methods of bioleaching.
- C. Explain Bio scrubbers and Bio filters with labelled diagram.
- D. Explain Anaerobic Biological treatment of waste water.

Q.4. Attempt Any Two of the following: [14]

- A. Elaborate:-Types of bioleaching.
- B. Define 'Composting'. Explain alternative types of composting processes.
- C. Applications of PHA.
- D. Strategies for reducing air pollution.