

**RAN-2603000506028001**

**T.Y.B.Sc. (NEP) (Sem. VI) Examination March - 2026**  
**Bioscience (Micro) - Major : Environmental Microbiology**

**Time: 1 Hour]****[ Total Marks: 25****મૂલ્યના : / Instructions**

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.  
Fill up strictly the above details on your answer book.
- (2) Sketch neat and labelled diagram wherever necessary.
- (3) Figures to the right indicate full marks of the question.
- (4) All questions are compulsory.

Seat No.:

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Student's Signature

**Q. 1 Multiple Choice Questions. MCQ (Any Five) (05)**

1. Which of the following test best indicates the "total organic pollution load" in sewage water?
  - a. TDS
  - b. BOD
  - c. CODE
  - d. pH
2. The main source of potable water is:
  - a. Seawater
  - b. Rainwater
  - c. Industrial water
  - d. Sewage water
3. In the multiple-tube fermentation test, the confirmed test for coliforms is typically performed using:
  - a. Nutrient broth
  - b. Lactose bile broth
  - c. Alkaline peptone water
  - d. MacConkey agar
4. The region of soil directly influenced by root secretions and microbial activity is called:
  - a. Phyllosphere
  - b. Rhizosphere
  - c. Lithosphere
  - d. Hydrosphere
5. Biodegradation refers to:
  - a. Burning of waste
  - b. Breakdown of substances by microbes
  - c. Chemical neutralization
  - d. Physical removal of waste
6. Which process converts ammonia into nitrate in soil?
  - a. Ammonification
  - b. Denitrification
  - c. Nitrification
  - d. Mineralization

**Q. 2 Define the Coliforms and discuss the various tests and methods used for the detection of Coliforms. (10)****OR****Q. 2 Answer of the following question. (10)**

1. Write a note on the characteristics of sewage.
2. Draw the diagram of waste water treatment process and explain in brief each stage of treatment.

**Q. 3** Define biogeochemical cycles and describe nitrogen cycle with its significance. **(10)**

**OR**

**Q. 3** Answer of the followings question. **(10)**

1. Write a note on various plant growth promoting bacteria.
  2. Write a note on type of Mycorrhizae.
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