



RAN - 2103000206021104

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**T.Y.B. Sc. (Sem-VI) Examination March - 2025**

**Bioscience (Microbiology)**

**Environmental Microbiology (Paper : BS - 604)**

**Time: 2 Hours ]**

**[ Total Marks: 50**

**सूचना : / Instructions**

(१)

नीचे दृष्टावैल निशानीवाणी विगतो उत्तरवही पर अवश्य लपवी.  
**Fill up strictly the details of signs on your answer book**

Name of the Examination:  
☛ **T. Y. B. Sc. (Sem-VI)**

Name of the Subject :  
☛ **Bioscience (Microbiology) Environmental Microbiology (Paper : BS - 604)**

Subject Code No.: **2103000206021104**

Seat No.:

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Student's Signature

- (2) Figures to the right indicate full marks of the question.  
(3) Draw neat and labeled diagrams whenever necessary.

**Q.1. Multiple choice question:**

**08**

- Which of the following is an example of disinfectant?
  - Chlorine
  - Tincture iodine
  - Ethylene oxide
  - All
- What is the temperature at which MPN test is performed?
  - 35°C
  - 37°C
  - 40°C
  - 45°C
- The guidelines for drinking water quality standard recommended by WHO are \_\_\_\_\_ .
  - Acceptability aspects
  - Microbiological aspects
  - Chemical aspects
  - All
- BOD can be reduced in \_\_\_\_\_ .
  - Primary treatment
  - Secondary treatment
  - Tertiary treatment
  - All

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**[ 1 ]**

**[ P.T.O. ]**

**P0288**

5. Which of the following are nitrogen fixing bacteria?
  - a. Rhizobium
  - b. Azotobacter
  - c. Clostridium
  - d. All
6. Sewage is a waste/used water of a \_\_\_\_\_
  - a. Community
  - b. Industry
  - c. Slaughterhouse
  - d. All
7. Which of the following is the most reliable method of soil remediation?
  - a. Bio-magnification
  - b. Bio-remediation
  - c. Lyophilization
  - d. Chemical method
8. The use of microbes to transform contaminant to non-toxic degradation product is called \_\_\_\_\_.
  - a. Biotransformation
  - b. Biodegradation
  - c. Bioremediation
  - d. All

**Q. 2. [A] Answer as directed: 04**

1. What is secondary sludge?
2. Enlist the various fecal indicator
3. Define: Biofertilizer
4. Enlist the nitrogen fixing bacteria.

**Q.2. [B] Write short notes on: (Any Two) 10**

1. Water quality & standard.
2. Phosphate solubilizer.
3. Membrane filter technique.

**Q.3. Explain - Detection and enumeration of coliforms in detail. 14**

**OR**

**Q.3. Answer of the followings question. 14**

1. Write a note on Anaerobic sludge digester
2. Describe in brief defined substrate test.

**Q.4. Answer the following questions. (Any Two) 14**

1. Write a note on - Phytoremediation.
2. Describe in detail nitrogen cycle and its significance in soil fertility
3. Explain in brief biofertilizer.