



RAN - 2103000204026003

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**S. Y.B. Sc. (Micro Biology) (Sem. IV) Examination April - 2025**

**MB 403 - Microbial Ecosystems (Old)**

**Microbiology - X**

**Time: 2 Hours ]**

**[ Total Marks: 50**

**सूचना : / Instructions**

(१)

नीचे दशावलि निशानीवाणी विगतो उत्तरवली पर अवश्य लपवी.

**Fill up strictly the details of signs on your answer book**

Name of the Examination:

**S. Y.B. Sc. (Micro Biology) (Sem. IV)**

Name of the Subject :

**MB 403 - Microbial Ecosystems (Old) Microbiology - X**

Subject Code No.: **2103000204026003**

Seat No.:

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Student's Signature

2. Figures to the right indicate full marks.
3. Draw neat and labeled diagrams wherever necessary

**Q.1 Answer the following questions. (Any SIX)**

**12**

- a. Give full form of: i) FACS ii) FISH
- b. Name any four end products of Miller & Urey experiment.
- c. Define dissimilatory nitrate reduction. Give examples of microbes involve in it.
- d. How peatbog form?
- e. What are facultative predators? Give examples.
- f. What is coral bleaching? Which stressor affects the phenomena most?
- g. Give brief about Winogradsky's column.
- h. State the difference between lentic and lotic systems.

**Q.2 Justify/Comment/Explain :- (ANY TWO)**

**12**

- a. Justify, how PCR is used for a microbial census.
- b. Write your comments on: Interaction amongst microbes is necessary for balancing of biogeochemical cycling.
- c. Lichens are considered under controlled parasite-host relationship. - Explain.

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**[ 1 ]**

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

**P0225**

**Q.3 Long Questions:- (ANY TWO) 16**

- a. Describe MPN technique in detail.
- b. List down negative microbial interactions and explain any two in detail.
- c. Explain about aerobic anoxygenic phototrophy & lithoheterotrophy in open ocean in detail.

**Q-4 Short Notes:- (ANY TWO) 10**

- a. Enrichment culture technique.
  - b. Sulfur Cycle.
  - c. Competition
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