

2103000204026003
EXAMINATION FEBRUARY-MARCH 2024
BACHELOR OF SCIENCE (FOURTH SEMESTER)
MICROBIOLOGY-X (MB-403-MICROBIAL ECOSYSTEMS)

[Time: As Per Schedule]

[Max. Marks:50]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination: **BACHELOR OF SCIENCE (FOURTH SEMESTER)**
- b. Name of the Subject: **MICROBIOLOGY-X (MB-403-MICROBIAL ECOSYSTEMS)**
- c. Subject Code No: **2103000204026003**

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 Give Specific Answers:

8

- A) Why 'axenic culture' is considered as "gold standard"?
- B) State the significance of immobilization in ecosystems.
- C) Which chemicals are formed first from methane in Miller- Urey experiment?
- D) Define: Symbiosis
- E) Write full form: FISH
- F) What is coral bleaching? Which stressor affects the phenomena the most?
- G) What is thermocline?
- H) State in brief about methane hydrates.

Q.2 Explain/Comment on any two of the following: 14

- A) MPN technique plays an important role in quantifying organisms from natural samples - Explain.
- B) Global climate change is responsible for causing imbalance in biogeochemical cycling. – Justify.
- C) Lichens are considered under controlled parasite-host relationship. - Explain.

Q.3 Discuss any two of the following: 14

- A) Discuss any two commonly used methods to isolate single cells from mixed populations.
- B) Describe in detail about negative microbial interactions.
- C) Explain the microbial adaptations in marine and fresh water environments.

Q.4 Write short note on any two of the following: 14

- A) Sulfur Cycle
- B) Attine Ants & Amensalism
- C) SAR 11
