



RAN - 2103000204026003

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S. Y. B. Sc. (Sem. - IV) Examination April - 2023

Microbiology

MB - 403 : Microbial Ecosystems

Time: 2 Hours]

[Total Marks: 50

सूचना : / Instructions

(1)

नीचे दशावेष निशानीवाणी विगतो उत्तरवही पर अवश्य लभवी.

Fill up strictly the details of signs on your answer book

Name of the Examination:

S. Y. B. Sc. (Sem. - IV)

Name of the Subject :

Microbiology MB - 403 : Microbial Ecosystems

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 labelled diagrams wherever necessary.

Q. 1. Answer the following questions.

[12]

- What is Gaia hypothesis?
- Explain Nitrification and Denitrification with example.
- Define:
 - Ectosymbiont
 - Endosymbiont
- What is SAR11? State the significance of name.
- Which diseases have affected because of climate change?
- What are facultative predators? Give two examples.

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

[12]

- Fraction gene arrays are differing from phylochips.
- There is a connection between green-house gases and microbial cycling of carbon and nitrogen.
- The rhizosphere and rhizoplane support complex microbial communities.

Q. 3. Write any two of the following : [16]

1. Discuss chemical evolution in detail.
2. Explain the microbial adaptations towards nutrient limitation in open ocean.
3. Describe in detail about negative microbial interactions.

Q. 4. Write short note on any two of the followings : [10]

1. Sulfur cycle
 2. Commensalism
 3. Winogradsky Column
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