



RAN-2103001106020003

M.Sc. Integrated Biotechnology (Sem. -VI)

Examination September - 2025

Microbial Biotechnology (Paper - BT-19)

Time: 2 Hours]

[Total Marks: 50

સૂચના : / Instructions

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the details of signs on your answer book

Name of the Examination:

M.Sc. Integrated Biotechnology (Sem. -VI)

Name of the Subject :

Microbial Biotechnology (Paper - BT-19)

Subject Code No.: **2103001106020003**

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. Write answers to Any Four:

[08]

- a) Give two examples of penicillin producing microorganisms.
- b) Define fermentation technology with an example.
- c) Name two common methods for preserving microbial cultures.
- d) Name the scientist who first discovered antibiotic and in which year.
- e) Give definition of biotechnology.

Q-2. Attempt Any Two:

[14]

- a) Describe in detail various range of fermentation processes.
- b) Compare and contrast aerobic and anaerobic fermentation with suitable examples
- c) Evaluate the importance of fermentation in pharmaceutical industry.

Q-3. Explain in detail Any Two: [14]

- a) Describe the methods used for isolation of microorganisms without using desired characteristics.
- b) Give an outline of methods used for isolation of microbial mutants. Describe Replica Plating technique in detail.
- c) What are the major challenges and future prospects of microbial screening?

Q-4. Attempt Any Two of the following: [14]

- a) Explain the basic functions of a fermenter and its role in industrial fermentation.
 - b) Describe in detail the criteria used for designing industrial scale fermenter.
 - c) Write a note on: Typical batch fermenter.
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