



RAN-2303080603020003

M.Sc. Microbiology (Sem. - III) Examination October - 2025

Industrial Microbiology (MB 3002)

Time: 3 Hours]

[Total Marks: 70

સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book
- (2) Figures to the right indicate full marks of the question.
- (3) Draw neat and labeled diagrams whenever necessary.

Seat No.:

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Student's Signature

- Q. 1 Answer the following (any two): 18**
- A. Discuss fermentative production of stimulant beverages.
 - B. Write about microbial production of vanillin.
 - C. Describe soy sauce production in detail.
- Q. 2 Answer the following (any two): 18**
- A. Explain industrial production and recovery of Monoclonal antibodies.
 - B. Discuss microbial fermentation and downstream processing of Cephalosporin.
 - C. Describe microbial transformation of steroids and sterols with reference to the Microbial mediated chemical modifications.
- Q. 3 Answer the following (any two): 18**
- A. Write a detailed note on: PHA
 - B. Discuss microbial synthesis and recovery of beta carotene.
 - C. Explain microbial production medium, fermentation and applications of Proteases.
- Q. 4 Answer the following (any two): 16**
- A. Write a detailed note on: CRISPER-CAS system
 - B. Justify: Siderophores enables organisms to survive in iron-limited habitats
 - C. Explain technological aspects of large-scale production of microalgae.