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24-MB-24

**M.Sc. II SEMESTER [MAIN/ATKT] EXAMINATION
JUNE - JULY 2024**

MICROBIOLOGY
Paper - IV
[Fermentation Technology]

*[Max. Marks : 75]**[Time : 3:00 Hrs.]**[Min. Marks : 26]*

Note : Candidate should write his/her Roll Number at the prescribed space on the question paper.
Student should not write anything on question paper.
Attempt five questions. Each question carries an internal choice.
Each question carries **15 marks**.

Q. 1 Describe the strategies for strain improvement. (15 Marks)

OR

Write short notes on -

i) Media for industrial fermentations. (7½ Marks)

ii) Screening of Industrially important Microorganisms. (7½ Marks)

Q. 2 Explain chromatographic methods for product purification. (15 Marks)

OR

Write short notes on -

i) Drying devices. (7½ Marks)

ii) Centrifugation. (7½ Marks)

Q. 3 Describe types of fermenter in detail. (15 Marks)

OR

Write short notes on -

i) Basic design of fermenter. (05 Marks)

ii) Monitoring and control of fermentation parameters. (10 Marks)

Q. 4 Describe Ethanol production in detail. (15 Marks)

OR

P.T.O.

Explain the production of citric acid in detail.

(15 Marks)

Q. 5 Discuss the Microbial assay of Antibiotics (growth inhibitors).

(15 Marks)

OR

Write short notes on -

i) MIC.

(7½ Marks)

ii) Lysine Production.

(7½ Marks)

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