



RAN-2103000206021105

T.Y.B.Sc. (Sem - VI) Examination September - 2025

Bioscience (Microbiology)

BS - 605 : Fermentation Technology

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:

T.Y.B.Sc. (Sem - VI)

Name of the Subject :

Bioscience (Microbiology) BS - 605 : Fermentation Technology

Subject Code No.: **2103000206021105**

Seat No.:

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Student's Signature

(2) Figures to the right indicate full marks of the question.

(3) Draw neat and labeled diagrams whenever necessary

Q. 1 Multiple choices Questions. (MCQ)

08

- _____ are the secondary metabolites.
 - Antibiotics
 - Organic acids
 - Enzymes
 - Alcohols
- Crowded plate technique is the technique used for screening of _____ producing microbes:
 - Antimicrobial substances
 - Organic acids
 - Enzymes
 - Alcohols
- Which of the following is a crude medium?
 - Blackstrap Molasses
 - Corn steep liquor
 - Sugarcane bagasse
 - All
- Which of the following is a defined media?
 - Synthetic media
 - Complex media
 - Natural media
 - Crude media

5. Compressed sterile air is passed into bioreactor through the device known as
 (A) Baffles (B) Sparger
 (C) Impeller (D) Sensor
6. _____ is the part of a bioreactor helping in maintaining the homogeneity of the contents of the bioreactor.
 (A) Agitator (B) Fan
 (C) Baffles (D) Sparger
7. Which of the following is a down stream process?
 (A) Product recovery (B) Screening
 (C) Media formulation (D) Sterilization of media
8. _____ may interfere with down stream process steps and product analysis .
 (A) Antifoams (B) Fermentation by-products
 (C) Media impurities (D) All of the above

Q. 2 (A) Give Specific answers 04

1. Write any two examples of primary screening method.
2. Give the composition of black strip molasses.
3. What is sparger?
4. Name any two mechanical methods used for cell disruption.

(B) Write short notes on any two of the following 10

1. Recombination methods for strain improvement.
2. Devices for pH and temperature
3. Crude fermentation medium

Q. 3 (a) Write in detail about the sterilization of media. 14

- (b) Describe the Principles of media formulation.

OR

Q. 3 Write an essay on body construction & basic functions of stirrer bioreactor. 14

Q. 4 Explain any two of the followings. 14

1. Screening of antibiotic producing microorganism.
2. Bioreactors for specialized purposes.
3. Stages of downstream processing.