

A (Printed Pages 3)
(20622) Roll No.
B.Sc. Bio-Tech. - III Yr.

NS-3478
B.Sc. Bio-Technology
Examination, June-2022
Industrial Bio-Technology
(B-306)
B.Sc. (Bio-Tech.)

Time : Three Hours] [Maximum Marks : 75

Note : Attempt any **five** questions.

1. What do you understand by fermentation?
Describe applications of fermentation
technology. 15
2. Write notes on the following : $7.5 \times 2 = 15$
 - (a) Downstream processing
 - (b) Product recovery

P.T.O.

3. Give a detailed account on fermenters
vs. bioreactor. 15
4. Give a detailed account on commercial
production of penicillin. 15
5. Give a detailed account on commercial
production of cellulases. 15
6. Write note on the following : $5 \times 3 = 15$
 - (a) Batch culture
 - (b) Continuous culture
 - (c) Solid state culture
7. Write an essay on enzyme immobilization
and its application. 15
8. Write notes on the following : $7.5 \times 2 = 15$
 - (a) Lactose utilization
 - (b) Food adulteration

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9. Give a detailed account on commercial production of acetic acid. 15
10. Describe about stability analysis of bioreactors. 15