

No. of Printed Pages : 03

Roll No.

AA-222

M. Tech. EXAMINATION, Dec. 2017

(First Semester)

(B. Scheme) (Main & Re-appear)

(BT)

BT-503-B

INDUSTRIAL BIOTECHNOLOGY-II

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

(3-52/18)M-AA-222

P.T.O.

Unit I

1. What are the commonly used culture media used for cultivation and maintenance of industrially significant microbes ? Elaborate. **15**
2. Discuss the various methods used for isolation preservation and improvement of industrially important microorganisms. **15**

Unit II

3. Discuss the microbial growth kinetics in relation to the production of various microbial products. **15**
4. Elaborate the microbial production of the industrial enzymes amylase and cellulase and various applications of these enzymes. **15**

Unit III

5. Explain the microbial production of the antibiotics penicillin and tetracycline industrially. **15**

6. What do you understand by single cell protein ? Elaborate. How can SCP be produced from CO₂, carbohydrates and hydrocarbons ? **15**

Unit IV

7. How can the microbes be used as biosensors and as microbial fuel cells ? Explain giving suitable examples. **15**
8. Write notes on the following : **15**
 - (a) Cancer Therapy
 - (b) Biomineralization.