

Exam. Code : 107403

Subject Code: 1843

B.Sc. Biotechnology 3rd Semester

**AGRO AND INDUSTRIAL APPLICATIONS OF
MICROBES—A**

Paper—BT-7

Time Allowed—3 Hours]

[Maximum Marks—40

Note :— Section A (1×8 marks) is compulsory. Section B (5 × 4 marks) : Attempt any **FIVE** questions. The answer should not exceed **TWO** pages. Section C (6 × 2 marks) : Attempt any **TWO** questions. The answer should not exceed **5** pages.

SECTION—A

(Compulsory)

Write a brief account of the following.

- I. (a) How to select an enzyme producer bacterium ?
- (b) Name two microbes applied for alcohol production.
- (c) Which processes are used in a baking industry ?
- (d) What is a fermentor ?
- (e) Mutations as improver of a desired strain of microbe. Comment.
- (f) *Bacillus thuringiensis*.
- (g) What are the identification features of *Rhizobium* nodules on the roots ?
- (h) Azobacter importance in Agro industry.

SECTION—B

Attempt any **FIVE** questions.

- II. How to Identify the lactic acid producing bacteria ?
- III. Which tests are formed to confirm coliform bacteria ?
- IV. Give the protocol for maintenance of yeasts important in industry.
- V. Write down briefly the methods and need of preservation desired microorganism.
- VI. Which types of processes need to be optimized for the agro industrial microbes ?
- VII. Describe the factors which can improve the product formation in a microbe.
- VIII. Give the mechanism of nitrogen fixation by microbes.
- IX. The soil microorganisms are important in agriculture. Comment.

SECTION—C

Attempt **TWO** questions.

- X. Describe the various microbial processes and the instrumentation required for these processes in a dairy industry.
- XI. Which chemical processes are applied in an industry of bakery products ?
- XII. Which methods can be used to revert back the higher yielders of products ?
- XIII. Write notes on : Growing Azospirillum and Agrobacterium.