

Exam. Code : 107404

Subject Code : 1864

B.Sc. (Biotechnology) 4th Semester

**BT-7 : AGRO AND INDUSTRIAL APPLICATIONS
OF MICROBES—B**

Time Allowed—3 Hours]

[Maximum Marks—40

Note :—(1) Section A is compulsory and the maximum length of each answer can be about $\frac{1}{3}$ of a page. Each question carries 1 mark.

(2) Attempt **FIVE** questions from Section B and the maximum length of each answer can be upto 2 pages. Each question carries 4 marks.

(3) Attempt **TWO** questions from Section C and the maximum length of each question can be upto 5 pages. Each question carries 6 marks.

SECTION—A

1. What do you understand from solvent production ?
2. What is aqua culture ?
3. What are single cell proteins ?
4. What are biofertilizers ?
5. What do you understand from mycoherbicides ?
6. What do you understand from plant microbe interactions ?
7. What do you understand from biochips ?
8. Wine Vs. Beer. Explain.

SECTION—B

1. Discuss briefly the microbes involved in pharmaceutical drugs and surfactants production.
2. Describe briefly vermiculture and composting. Also highlight their advantages.
3. Describe the production of red wine with a flow diagram.
4. Describe the production of two important amino acids.
5. Describe briefly the role of BT gene in BT cotton.
6. What is mycorrhizal fungi ? Describe its applications in agrobiotechnology.
7. Describe the production of citric acid and glutamic acid.
8. Describe the production technology of cheese making.

SECTION—C

1. Discuss herbicides and biopesticide production giving suitable examples.
2. What are biotransformations ? Describe various products produced by biotransformation.
3. What is biological nitrogen fixation ? Describe the role of *Rhizobium* in leguminous plants.
4. Describe the production of important primary and secondary metabolites giving suitable examples of both.