

Exam. Code : 107404

Subject Code : 2247

**B.Sc. Bio-Technology Semester—IV**  
**AGRO AND INDUSTRIAL APPLICATIONS OF**  
**MICROBES-B**

**Paper—BT-7**

Time Allowed—3 Hours] [Maximum Marks—40

**SECTION—A****Attempt All Questions.**

Answer the following :

1. Feed-batch culture
2. Cry proteins
3. Citric acid
4. Bio-pesticides
5. Biotransformation
6. Synthetic medium
7. Myco-herbicides
8. Secondary metabolites. 1×8=8

**SECTION—B****Attempt any five questions.**

1. Describe the process of masting for the production of beer. 4
2. Describe the process of microbial production of glutamic acid. 4

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3. Discuss various strategies for the optimization of phenylalanine production. 4
4. Describe various stages of composting. 4
5. Describe various nitrogen sources used in microbial medium. 4
6. Discuss the role of fungi as bio-pesticides. 4
7. What do you understand by fed batch culture also write the advantages of fed batch culture ? 4
8. Describe the process of vinegar production. 4

### SECTION—C

**Attempt any two questions.**

1. What are microbial pesticides ? Discuss their importance in pest management. 6
2. Describe the design and operation of conventional fermenter used for alcoholic fermentation. 6
3. What are single cell proteins ? Describe the process for the production of single proteins. 6
4. What are bio-fertilizers and their uses ? Describe the process of mass production of algal bio-fertilizers. 6