

AE-798

M. Sc. (Final)
Term End Examination, 2016-17

MICROBIOLOGY

Paper - IV

Microbial Technology

Time : Three Hours] [Maximum Marks : 100
[Minimum Pass Marks : 36

Note : Answer any **five** questions. All questions carry equal marks.

1. What are the different parameters used for maintaining the efficient and product formation ?
2. Explain how the energy requirement and biomass yield are maximised in a chemical industry.
3. Write an account on stirred tank airlift fermenter with well-labelled diagram.

(2)

4. Explain various types of cultures used in fermentation along with their applications.
5. How is the citric acid produced in industry ?
6. What are the different conditions required for the production of antibiotics in large scale ?
7. Write short notes on :
 - (a) Mushroom products
 - (b) Biopolymers
8. Explain in detail about Biofertilizers and Biopesticides with suitable examples.
9. Describe different types of stains used in industries.
10. How is a recombinant microorganism helped in efficient production in industry ? Explain with suitable examples.