



Seat No. _____

HB-003-1194004

M. Sc. (Micro) (Sem. IV) (CBCS) Examination

April - 2023

MICRO-422 : Fermentation Technology - II
(Elective)

Faculty Code : 003

Subject Code : 1194004

Time : $2\frac{1}{2}$ Hours / Total Marks : 70

- 1 Answer the following (any Seven, each of 02 marks) **14**
- (1) Define Antibiotic.
 - (2) How operation taking place in drum dryer ?
 - (3) Enlist applications of free enzymes.
 - (4) Give disadvantages of drum dryer.
 - (5) Enlist microorganisms used for glutamic acid production.
 - (6) What is rotary atomizer ?
 - (7) Enlist advantages of spray drying.
 - (8) What is dielectric constant ?
 - (9) Briefly explain counter current flow extraction system.
 - (10) Enlist microorganisms used for production of lysine.
- 2 Answer the following (Any Two, each of 07 Marks) **14**
- (a) Write a short note on downstream process.
 - (b) Write a note on microbial cell disintegration.
 - (c) Write an essay on cell separation.
- 3 Answer the following (Each of 07 Marks) **14**
- (a) Write a note on immobilization of enzyme.
 - (b) Write a note on manufactures of single cell protein.

OR

- 3** Answer the following (Each of 07 Marks) **14**
- (a) Explain ethanol production.
 - (b) Write a note on bakers, yeast.
- 4** Answer the following (Each of 07 Marks) **14**
- (a) Write a note on microbial production of penicillin.
 - (b) Explain in detail microbial production of Vitamin B12.
- 4** Answer the following (Any Two, Each of 07 Marks) **14**
- (a) Explain in detail, microbial production of dextran.
 - (b) Discuss in detail the microbial production of Pectinase.
 - (c) Explain in detail microbial production of amylase.
 - (d) Describe in detail, microbial production of Xanthan.
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