Progressive Education Society's
Modern College of Arts, Science & Commerce Ganeshkhind, Pune – 16
(Autonomous)
End Semester Examination: April 2024
Faculty: Science and Technology

Program: B. Sc. Biotech (04) **Semester: IV** **SET: B**
Program (Specific): Biotechnology **Course Type: Core**
Class: S. Y. B. Sc. **Max. Marks: 35**
Name of the Course: Microbial Biotechnology
Course Code: 23 BBT 406 **Time: 2 Hr**

Instructions to the candidate:

1. ***There are 4 sections in the question paper. Write each section on separate page.***
2. ***All Sections are compulsory.***
3. ***Figures to the right indicate full marks.***
4. ***Draw a well labeled diagram wherever necessary.***

SECTION: A

Q1) Answer any <u>FIVE</u> of the following (5/6) **5**

1. How rancidity affects the quality of food?
2. What is sweet curdling?
3. Define: Bioleaching
4. Write role of normal flora in human health.
5. What is radappertization?
6. Name causative agent of disease leprosy.

SECTION: B

Q2) Answer any <u>FIVE</u> of the following (5/6) **10**

1. What are microbial polysaccharides? Write their industrial applications.
2. Define F value. Give its significance in food preservation.
3. What is the purpose of the confirmed test in the Most Probable Number (MPN) method?
4. Give the significance of biofertilizer in sustainable agriculture.
5. How does dehydration process contribute in food preservation?
6. Write principle of chlorination process?

P.T.O.

SECTION: C

Q3) Answer any <u>TWO</u> of the following (2/4) **8**

1. Enlist various methods of pasteurization. Explain working of plate heat exchanger.
2. With principle give details of presumptive test in determination of safety of drinking water for human consumption.
3. Explain various reactions involved in spoilage of fruits and vegetables.
4. Write a note on staphylococcal food intoxication.

SECTION: D

Q4) Answer any <u>TWO</u> of the following (2/4) **12**

1. Take a brief account on disease Polio w.r.t i) Causative agent ii) Pathogenesis iii) Diagnosis iv) Treatment strategy.
2. With suitable example discuss use of hurdle technology for effective food preservation.
3. With neat labeled diagram describe anaerobic digestion process in treatment of sewage water.
4. Take a detailed account on microbial plant growth promoters and their applications.