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

Semester: V

Program: BScGen03 **SET: A**
Program (Specific): Microbiology **Course Type: DSE**
Class: T.Y B.Sc. **Max.Marks: 35**
Name of the Course: Dairy Microbiology
Course Code: 24-MB-3511 **Time: 2Hr**
Paper: VIII

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 labelled diagram wherever necessary.***

SECTION: A

Q1) Attempt the following **(5 marks)**

1) Which of the following methods is used to separate bacteria from milk by centrifugal force?
   A) Thermisation
   B) Pasteurization
   C) Bactofugation
   D) Sterilization

2) What is the primary purpose of pasteurization in milk processing?
   A) To enhance the flavor
   B) To kill harmful microorganisms
   C) To increase the fat content
   D) To remove harmful nutrients

3) Which of the following is **NOT** part of Good Manufacturing Practices (GMPs)?
   A) Regular equipment maintenance
   B) Personal hygiene of workers
   C) Labeling of products
   D) Adding preservatives without regulation

4) Enlist any two physicochemical properties of milk.
5) Define sterilization.

Q2) Answer <u>any four</u> of the following (4/6) **(4 marks)**

1) Criticize the function of GMPs in dairy industry.
2) What does SOP stand for?
3) State the role of bacteriocin.
4) Give the full form of HACCP.
5) Define sweet curdling.
6) Name one method to control biofilm formation on dairy equipment.

SECTION: B

Q3) Answer <u>any four</u> of the following (4/6) **(8 marks)**

1) Discuss the principle of MBRT.
2) Describe different types of milk.
3) Explain ropiness.
4) Give any two examples of preservatives used in the dairy industry.
5) Match the following

Name of the disease	**Causative agent**
1. Tuberculosis (TB)	a. *B. abortus*
2. Brucellosis	*b. Coxiella burnetii*
3. Salmonellosis	*c. Mycobacterium bovis*
4. Q Fever	*d. S. enterica*
	e. *Leptospira*

6) State the role of Hydrogen peroxide in LP system.

SECTION: C

Q4) Answer <u>any four</u> of the following (4/6) **(8 marks)**

1. Discuss the importance of preservatives in milk and milk products.
2. Justify: A HACCP plan requires regular verification activities.
3. Elaborate the process of LTLT.
4. Enlist types of milk spoilage.
5. Explain Irradiation.
6. Discuss homogenization.

SECTION: D

Q5) Answer <u>any two</u> of the following (2/4) **(10 marks)**

1. Define milk and discuss the physicochemical properties of milk.
2. Explain the principles of SOP.
3. Describe biofilm formation on dairy equipment surfaces and their control measures.
4. Discuss the common sources of contamination in milk.