

MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR
SEMESTER END THEORY EXAMINATION, B.Tech. (D. T.)

Semester : II (V Dean)	Academic Year : 2024-2025
Course No. : DM-202	Course Title : Microbiology of fluid milk
Credits : 1+1=2	Total Marks : 50
Day & Date : Tuesday; 05/08/2025	Time : 2.00 hrs.

- Note : 1) All questions from **Section 'A'** are compulsory.
2) Solve **Any Three** questions from **Section 'B'**.
3) Draw neat and well labelled diagram wherever necessary.

SECTION - 'A'

Q. 1 A) Define the following. (05)

- i) Clean milk
- ii) Bactofugation
- iii) Immunoglobulins
- iv) Food infection
- v) Mastitis milk.

B) Answer in one line/ Expand the following/Match the pairs. (05)

- i) UHT
- ii) MBRT
- iii) LP system
- iv) HTST
- v) SLST

Q. 2 A) State whether True or False. If false, rewrite the statement after making necessary corrections. (05)

- i) Psychrotrophs can grow in the range of 0 to 7°C or below,
- ii) Rancid flavor in milk is due to the production of protease enzyme.
- iii) Most Streptococci are Oxidase and Catalase negative.
- iv) Brucellosis that is a Zoonotic disease.
- v) Nutrient agar is the specific media for *E.coli* growth.

B) Choose the most appropriate answer from the options given below. (05)

- i) The most frequent group of bacteria found in milk are
 - a) *Streptococci*
 - b) *Micrococci*
 - c) *Bacillus*
 - d) *Corynebacterium*
- ii) Which of the following bacteria is Psychotrophs?
 - a) *Lactococcus lactis*
 - b) *E.coli*
 - c) *Pseudomonas*
 - d) *Lactobacillus*
- iii) The coat of Cow may contain which of the following bacteria?
 - a) *Lactobacillus*
 - b) *Streptococcus*
 - c) *Bacillus*
 - d) *Achromobacter*
- iv) Which of the following test is used for the detection of Mastitis in bovine?
 - a) MBRT Test
 - b) Strip cup test
 - c) Resazurin Test
 - d) Simple Staining
- v) Which is the most important quality requirement a milk should possess?
 - a) Longer Shelf life
 - b) Proper nutrition
 - c) Normal Taste
 - d) Free from pathogens

(P.T.O.)

SECTION - 'B'

- Q. 3 A) What is Mastitis milk? Classify mastitis according to symptom. Write down the public health significance of mastitis. (05)
B) Define hygienic Milk. What are the various measures to obtain clean milk? (05)
- Q. 4 A) Enlist various types of spoilages in milk. (05)
B) Define Psychotrophs. What is the significance of Psychotrophs in dairy industry? (05)
- Q. 5 A) LP system of milk. (03)
B) Difference between Pasteurization and Sterilization. (03)
C) Discuss the microbial changes occurred during storage of milk. (04)
- Q. 6 A) Air borne contamination in milk. (03)
B) Write down the significance of thermophilic organism in milk. (03)
C) Write down the significance of *Listeria monocytogens* in dairy industry. (04)
- Q. 7 Write down the various antimicrobial systems in aseptically drawn milk with their significance. (10)
