

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

Semester	: II (V Dean)	Academic Year	: 2021-2022
Course No.	: DM-202	Course Title	: Microbiology of Fluid Milk
Credits	: 1 + 1 = 2	Total Marks	: 50
Day & Date	: Saturday, 12/11/2022	Time	: 02.30 Hrs.

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

SECTION – 'A'

Q. 1 A) Choose the most appropriate answer from the options given below. (05)

- i) Microorganism responsible for summer mastitis is
 - a) *E.coli*
 - b) *S. aureus*
 - c) *Corynebacterium pyogenes*
 - d) *B. cereus*
- ii) Milk Carbohydrate is called
 - a) Lactose
 - b) Sucrose
 - c) Maltose
 - d) Fructose
- iii) As per FSSAI the value of "M" for standard plate count in pasteurized milk is
 - a) 5,00,000/ml.
 - b) 2,00,000/ml.
 - c) 50,000/ml.
 - d) 20,000/ml.
- iv) Aflatoxicosis is a type of intoxication caused by microorganism.
 - a) *C. botulinum*
 - b) *A. flavus*
 - c) *Sal. typhi*
 - d) None of the above
- v) The pH fresh raw milk is about
 - a) 4.5 – 4.7
 - b) 5.5 – 5.7
 - c) 6.5 – 6.7
 - d) 7.5 – 7.7

B) Define the following. (05)

- i) Sweet Curdling
- ii) Lypolysis
- iii) Mesophiles
- iv) Souring
- v) Mastitis

Q. 2 A) Give the Reason for the following. (05)

- i) Proteolysis in milk.
- ii) Purpose of chilling in milk.
- iii) Purpose of sanitization.
- iv) Purpose of sterilization in milk.
- v) Discoloration in milk.

(P.T.O.)

- B) State whether True or False. If false, rewrite the statement after making necessary corrections. (05)
- i) Lactose content is more in mastitis milk.
 - ii) Phosphates test is done to find the effectiveness of chilling.
 - iii) Bacteriophages are the fungi.
 - iv) HTST method of pasteurization is a batch process.
 - v) Violet red bile agar is the selective growth media for yeast and mold.

SECTION - 'B'

- Q. 3 A) Describe in detail the fact that 'milk act as vehicle of pathogens'. (05)
B) Why special care is required for control of psychrotrophes? (05)
- Q. 4 A) Describe the different sources of microbial contaminants in raw milk. (05)
B) Describe about 'cleaning and sanitation of utensils, equipment's and dairy farm environment'. (05)
- Q. 5 A) What are the types of the Mastitis? (03)
B) Describe in details the causative microflora of Mastitis. (03)
C) Discuss in detail microbiological spoilages occur in milk. (04)
- Q. 6 A) What do you understand by 'Clean and Safe milk'? (03)
B) What is biofilm? Write its control measures. (03)
C) Write a short note on food intoxication and toxi-infection. (04)
- Q. 7 Enlist different natural antimicrobial substance present in milk. Explain the role of LP system for preservation of raw milk. (10)
