

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

Semester	: III (V Dean)	Academic Year	: 2021-2022
Course No.	: DT-301	Course Title	: Market Milk
Credits	: (3+1=4)	Total Marks	: 50
Day & Date	: Tuesday, 05/04/2022	Time	: 02 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) The ..... is known to be the best milk yielding breed among buffaloes.
  - a) Sahiwal
  - b) Murrah
  - c) Gir
  - d) Kankrej
- ii) National Dairy Development Board was established in the year .....
  - a) 1947
  - b) 1960
  - c) 1965
  - d) 1990
- iii) Viscosity of the whole milk at 25°C is about ..... centipoises.
  - a) 2.0
  - b) 3.0
  - c) 1.0
  - d) 2.5
- iv) The bacteria, that can survive exposure to temperatures considerably above their maximal temperature for growth .....
  - a) Thermophilic
  - b) Thermotolerant
  - c) Psychrotrophic
  - d) Mesophilic
- v) Density of skim milk is .....
  - a) 1.036
  - b) 1.030
  - c) 0.93
  - d) 1.040

B) Explain or define the following. (05)

- i) Clean milk
- ii) Platform tests
- iii) Pre-heating
- iv) Bactofuge
- v) Homogenization

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

- i) Transportation of milk in tankers is better as compared to in cans.
- ii) Centrifugal separation of milk fat is better as compared to gravity separation.
- iii) Pasteurization improves the hygienic quality of milk and achieves a certain level of preservation.
- iv) UHT milk has a long storage life and greater consumer acceptability than pasteurized milk.
- v) Milk into steam infusion technique causes difficulty to control the holding time exactly.

(P.T.O.)



- B) State whether True or False. If false, rewrite the statement after making necessary corrections in the underlined words. (05)
- i) The causative microorganism for Septic sore throat disease is Shigella dysenteriae.
  - ii) The amount of LP required for preservation of milk is 0.05-0.1 mg/l.
  - iii) Lactose is a disaccharide made up of two monosaccharides, glucose and fructose.
  - iv) Farrall index is a widely accepted microscopic method for determining the homogenization efficiency.
  - v) HTST Pasteurization was first developed by A.P.V. Co. in the United Kingdom in 1922.

### SECTION - 'B'

- Q. 3 A) Describe different methods of chilling of milk. (05)  
B) Explain bactofugation with a neat and labelled diagram. (05)
- Q. 4 Write a short note. (05)  
A) Effect of LP system against bacteria. (05)  
B) Self desludging separator. (05)
- Q. 5 A) Describe the factors affecting clarification of milk. (03)  
B) State the importance of pasteurization of milk. Also explain its drawbacks. (03)  
C) Describe the defects in UHT milk. (04)
- Q. 6 A) Write the flow diagram for preparation of standardized and sterilized milk. (03)  
B) Describe any three common detergents used in a dairy plant. (03)  
C) Explain the D Value and  $Q_{10}$  value. (04)
- Q.7 Describe the theories of Homogenization and explain the merits and demerits of Homogenization. (10)

\*\*\*\*\*