

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

Semester	: III(V Dean)	Academic Year	: 2023-2024
Course No.	: DT-301	Course Title	: Market Milk
Credits	: 2+1=3	Total Marks	: 50
Day & Date	: Saturday, 11/05/2024	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) D Value
 - ii) Z value
 - iii) Thermization
 - iv) Filled milk
 - v) Flavoured milk
- B) Answer in one line (05)
- i) Which are the common adulterants generally found in milk?
 - ii) What are the fat and SNF standards for full cream milk?
 - iii) What is function of Flow Diversion Valve?
 - iv) As per FSSAI, standard plate count limit in pasteurized milk.
 - v) Who invented the Toned milk?
- Q. 2 A) State whether True or False. If false, rewrite the statement after making necessary corrections in the underlined word (s). (05)
- i) Can immersion is the most commonly used chilling method in dairy industry.
 - ii) The process used to remove off-flavours from milk is thermization.
 - iii) Skim milk is having 8.7% Solid not fat.
 - iv) The heat stability of milk as a result of developed acidity is checked by MBRT Test.
 - v) By addition of water in milk, density of milk increases.
- B) Choose the most appropriate answer from the options given below. (05)
- i) The most constant physical property of milk is.....
 - a) Colour
 - b) Freezing point
 - c) Boiling point
 - d) Viscosity
 - ii) Boiling point of milk is °C.
 - a) 105.17
 - b) 100.17
 - c) 99.87
 - d) 95.97
 - iii) Homogenized milk is more susceptible to enzymatic activity.....
 - a) Lipase
 - b) Lactase
 - c) Protease
 - d) Oxidase

- iv) Yellow colour in cow milk is due to.....
- | | |
|---------------|--------------|
| a) Tocopherol | b) Vitamin K |
| c) Vitamin A | d) Carotene |
- v) Water soluble vitamins present in milk are.....
- | | |
|--------------|--------------|
| a) Vitamin A | b) Vitamin B |
| c) Vitamin D | d) Vitamin K |

SECTION –‘B’

- Q. 3 A) What is LP System? Explain in short different other milk preservation methods. (05)
B) List the various methods of pasteurization. Explain HTST pasteurization of milk along with flowchart. (05)
- Q. 4 A) Calculate the quantity of whole milk (6% fat/9% SNF) and skimmed milk powder (1% fat and 96% SNF) required for the preparation of 1000 kg toned milk containing 3.0% fat and 8.5% SNF. (05)
B) Define Homogenization of milk and describe in detail its effect on physical properties of milk. (05)
- Q. 5 A) Discuss in brief the manufacture of flavoured milk. (03)
B) What is homogenization efficiency and How to calculate it? (03)
C) What is recombined milk and reconstituted milk? How it can be prepared? (04)
- Q. 6 Write short notes on.
A) Distribution systems for fluid milk (03)
B) Platform tests. (03)
C) Cleaning and sanitization of dairy equipment's. (04)
- Q. 7 Discuss in detail UHT processing of milk along with its shelf life. (10)
