

MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR
SEMESTER END THEORY EXAMINATION, B.TECH. (D.T.) DEGREE COURSE 2018-19

Semester	: III (V Dean)	Academic Year	: 2018-2019
Course No.	: DT-301	Course Title	: Market Milk
Credits	: 3+T-4	Total Marks	: 50
Day & Date	: Saturday, 05/01/2019	Time	: 15.00 to 17.00 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) Choose the most appropriate answer from the options given below. (05)
- i) Which physical property of milk is used to detect adulteration of water in milk?
 - a) Boiling point of milk
 - b) Melting point of milk
 - c) Freezing point of milk
 - d) None of the above
 - ii) As per FSSAI Buffalo milk in Maharashtra should contain % Fat and SNF.
 - a) 6.5/8.5
 - b) 6.0/9.0
 - c) 6.0/8.5
 - d) 6.5/9.0
 - iii) In which form fat is present in milk?
 - a) True solution
 - b) Colloidal
 - c) Emulsion
 - d) None of the above
 - iv) In bottle sterilization process, milk is usually sterilized at
 - a) 110 to 118 °C for 15-25 min
 - b) 110 to 118 °C for 15-25 sec
 - c) 110 to 118 °F for 30 min
 - d) 135 °C for 10 min
 - v) Strength of iodophor solution as a sanitizing agent used to sanitize dairy equipment is
 - a) 5 ppm
 - b) 10 ppm
 - c) 25 ppm
 - d) 150 ppm
- B) Explain the following terms. (05)
- i) Pasteurization
 - ii) Difference between separator and clarifier.
 - iii) D value
 - iv) Q_{10} value
 - v) Thermal death time
- Q. 2 A) Give reasons for the following. (05)
- i) PHE is advantageous over batch pasteurizer for pasteurization of milk.
 - ii) Alkaline Phosphatase test is carried out for the pasteurized milk.
 - iii) Milk freezes at temperatures slightly lower than water.
 - iv) Copper and its alloys are not used for milk processing.
 - v) Bactofugation removes 99% of bacterial but still there is need to pasteurize the milk.

(P.T.O.)

- B) State whether True or False. If false, rewrite the statement after making necessary corrections in underline words. (05)
- i) Presence of māstitis milk is determined by Alizarin alcohol test.
 - ii) The specific gravity of skim milk is decreasing with the addition of cream in it.
 - iii) The milk appears turbid and opaque owing to light scattered by fat globules and casein micelles present in milk.
 - iv) The lactoperoxidase system can be used to preserve the milk.
 - v) Detergents are used to sanitize the milk processing plant.

SECTION –‘B’

- Q. 3. A) Discuss market milk industry in India. (05)
B) Explain the collection and transportation of milk. (05)
- Q. 4. A) What is lactoperoxidase system? (05)
B) Write down procedure for preparation of flavored milk with flow diagram. (05)
- Q. 5. A) State the importance of homogenization of milk. (05)
B) Write about different methods of thermal processing. (05)
- Q. 6. A) Write advantages of bactofugation. (03)
B) Write the different methods of milk chilling. (03)
C) Define sterilization and UHT. (04)
- Q. 7 Explain in detail aseptic packaging of milk. (10)
