

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

Semester	: IV (V Dean)	Academic Year	: 2021-2022
Course No.	: DM-404	Course Title	: Microbiology of Dairy Products
Credits	: (1+1=2)	Total Marks	: 50
Day & Date	: Saturday, 27/08/2022	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 labelled diagram wherever necessary.

SECTION –‘A’

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

- i) Ropiness is caused by
 - a) *Ps. aureginosa*
 - b) *Alkaligens viscolactis*
 - c) *Staph aureus*
 - d) *St. pyogens*
- ii) Yeasts are
 - a) Gram negative unicellular non motile ovoid elliptical cells
 - b) Gram positive unicellular non motile ovoid elliptical cells
 - c) Gram positive multi cellular non motile ovoid elliptical cells
 - d) Gram positive unicellular motile ovoid elliptical cells
- iii) Aflatoxin is produced by
 - a) Bacteria
 - b) Virus
 - c) Yeast
 - d) Mold
- iv) Rancid flavor in butter is due to
 - a) Microbial degradation
 - b) Enzymatic degradation
 - c) Chemical degradation
 - d) All of these
- v) Method based on centrifugal force used to reduce the bacterial load
 - a) Bactofugation
 - b) Tyndalization
 - c) Thermization
 - d) Homogenization

B) Answer in one line. (05)

- i) Mold button
- ii) Bloating
- iii) Sweet curdling
- iv) Fishy flavour
- v) Rancidity

Q. 2 A) Do as directed. (05)

- i) Write the importance of pre-heating of milk intended to use for preparation of concentrated milk.
- ii) Why micrococci are more prevalent in SCM?
- iii) What do you mean by bio-preservation?
- iv) Name the organism responsible for early blowing.
- v) Enlist the discoloration of milk caused by bacteria.

(P.T.O.)

- B) State whether True or False, If False, rewrite the statement after making necessary corrections. (05)
- i) Bacteriological quality of spray dried milks is better than that of roller dried milk.
 - ii) Coconuts used for ice-cream making may be responsible for *salmonella* infection.
 - iii) The 'working' of butter discourages microbial growth by finer and uniform moisture distribution.
 - iv) *Pseudomonas putrefaciens* causes defects for surface taints in butter.
 - v) *Leuconostoc* is a member of *lactococci* family.

SECTION - 'B'

- Q. 3 A) Write short notes on 'Bacteriological deterioration in concentrated milk 'due to leaky cans. (05)
- B) Write a short note on the Active packaging concepts. (05)
- Q. 4 A) Discuss in brief about factors influencing the microbial quality of *khoa*, *burfi* and *peda*. (05)
- B) Discuss in brief about factors affecting the microbiological quality of cream and their control. (05)
- Q. 5 A) Discuss the microflora of *chhana* and *Paneer*. (03)
- B) Write a short note on regulatory bodies of offering microbiological standard for milk and milk products. (03)
- C) Discuss in brief about microbiological quality of ice-cream ingredients. (04)
- Q. 6 A) Discuss in detail sweet curdling of milk. (03)
- B) Enlist various defects in butter and discuss any one. (03)
- C) Write in brief about the 'Microbial quality of condensed milk'? (04)
- Q. 7 Discuss about the microflora of dried milk along with difference between roller and spray dried methods. (10)
