

MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR
SEMESTER END THEORY EXAMINATION, B. Tech Dairy Technology 2018-19

Semester	: II (New Syllabus)	Academic Year	: 2018-2019
Course No.	: DM- 202	Course Title	: Introductory Dairy Microbiology
Credits	: 2+1=3	Total Marks	: 50
Day & Date	: Tuesday, 25.06.2019	Time	: 11.00 to 13.00 Hrs.

- Note :**
- 1) All questions from **Section 'A'** are compulsory.
 - 2) Solve **Any Five** 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) Scarlet fever is caused by
 - a) *Staphylococcus aureus*
 - b) *Streptococcus pyogenes*
 - c) *Salmonella typhi*
 - d) *Clostridium botulinum*
- ii) *Cl. botulinum* toxins are
 - a) Neurotoxins
 - b) Nephrotoxins
 - c) Mycotoxins
 - d) Enterotoxins
- iii) Indicator organism for pasteurization is
 - a) *Coxiella burnetii*
 - b) *Salmonella typhi*
 - c) *Staphylococcus aureus*
 - d) *Shigella dysenteriae*
- iv) The group of organisms that exhibit growth and causes defect at low temperature are
 - a) Psychrotrophs
 - b) Mesophiles
 - c) Thermophiles
 - d) Thermodurics
- v) The iron binding protein that has antimicrobial activity is
 - a) Lysozyme
 - b) Lactoperoxidase
 - c) Lactoferrin
 - d) Lactanins

B) Define the following. (05)

- i) Food poisoning
- ii) Thermodurics
- iii) Mastitis
- iv) Phagocytosis
- v) Antagonism

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

- i) Why mastitis milk is not pooled in raw milk during preparation of market milk?
- ii) Why milk stored at low temperature for longer duration not preferred for preparation of UHT milk?
- iii) Define : Thermization
- iv) What do you mean by toxicoinfection?
- v) Elaborate GHP

(P.T.O)

B) Write the name of microorganism responsible for the following defects in milk. (05)

- i) Fruity flavour
- ii) Malty flavour
- iii) Pink discolouration
- iv) Blue discolouration
- v) Putrid flavour

SECTION - 'B'

Q. 3 Define hygienic milk production & explain the package of practices followed for it. (06)

Q. 4 Explain in detail various spoilages in raw milk. (06)

Q. 5 Discuss in detail various sources of microbial contamination at farm level. (06)

Q.6 Differentiate between the following.

- A) Thermotolerant and Thermophilic. (02)
- B) Food infection and Food intoxication. (02)
- C) Sweet curdling and Sour curdling. (02)

Q.7 A) List out the microorganisms associated with raw milk. (02)

B) Enlist the various flavour defects in milk. (02)

C) Discuss the significance of different group of bacteria in milk. (02)

Q. 8 A) Comment on public health significance of pathogens present in milk. (03)

B) Explain in detail direct and indirect rapid technique used for assessing the microbial quality of milk. (03)

Q.9. A) Enlist various test used to detect the mastitic milk. (02)

B) Discuss in details antimicrobial substance present in milk. (04)
