

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

Semester : VI (V Dean)  
Course No. : DM – 606

Academic Year : 2018-2019  
Course Title : Food & Industrial  
Microbiology

Credits : 2+1=3  
Day & Date : Friday, 21.06.2019

Total Marks : 50  
Time : 11.00 to 13.00 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) Sodium diacetate is used in bread and cakes to prevent .....
  - a) Yeast
  - b) Coliform
  - c) Mold
  - d) None of these
- ii) Food poisoning is caused by .....
  - a) Gram negative spore forming bacteria
  - b) Gram negative spore forming bacteria
  - c) Gram negative spore forming bacteria
  - d) Gram negative spore forming bacteria
- iii) Which is the following *Staphylococci* species can produce coagulase.
  - a) Gram negative spore forming bacteria
  - b) *S. lentus*
  - c) *S. cohnii*
  - d) *S. sciuri*
- iv) Red rots of egg is caused by .....
  - a) *Pseudomonas spp.*
  - b) *Serratia spp.*
  - c) *Proteus spp.*
  - d) *Cladosporium spp.*
- v) Nisin is used in food that act as .....
  - a) Antibiotics
  - b) Antifungal
  - c) Preservative
  - d) Buffer

B) Define the following. (05)

- i) F Value
- ii) Z Value
- iii) Protease
- iv) Bacteriocin
- v) Redurization

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

- i) How freezing process affect the growth of microorganisms.
- ii) Bio-preservation is preferred over other preservation methods.
- iii) Spores are more heat resistant than vegetative cell.
- iv) Pshychrotropic bacteria able to grow at low temperature.
- v) Natural Antimicrobial Compounds found to be more suitable than chemical compounds.

(P.T.O.)

B) State whether True or False, If False, rewrite the statement after making necessary corrections. (05)

- i) Fermented whey beverages contain Alcohol.
- ii) Ropy bread defect is caused by *Bacillus cereus*.
- iii) Idli is not a fermented type of food product.
- iv) Curamin is an antimicrobial compound present in garlic.
- v) Citric acid is an inorganic acid.

### SECTION – 'B'

- Q. 3 A) Write short notes on 'Scope of Food Microbiology'. (05)  
B) Write a short note on microbial spoilages of vegetables. (05)
- Q. 4 A) What are the intrinsic parameters of food and their affect for microbial growth? (05)  
B) Discuss in brief about 'Spoilage of Egg'. (05)
- Q. 5 A) What is the Gun Spry Method? (03)  
B) Comment on preservation of food by PEF method. (03)  
C) Differentiate between radurization Vs Radicidation. (04)
- Q. 6. A) Explain in detail food poisoning. (03)  
B) What is Alarm Water? (03)  
C) Briefly explain role of predictive microbiology in food preservation. (04)
- Q. 7 Write in detail about 'Functions, design and control of "Fermentor"' and draw neat labeled diagram of fermentor. (10)

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