

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

Semester	: VI (V Dean)	Academic Year	: 2018-2019
Course No.	: DM – 606	Course Title	: Food & Industrial Microbiology
Credits	: 2+1=3	Total Marks	: 50
Day & Date	: Friday, 21.06.2019	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 a 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)
