

Seat No: _____

Enrollment No: _____

PARUL UNIVERSITY
FACULTY OF AGRICULTURE
B. Tech FOA Winter 2019-20 Examination

Semester: 3
Subject code: 20104209
Subject Name: Microbiology of Fluid Milk

Date: 09/12/2019
Time: 10:30 to 12:30pm
Total Marks: 50

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q. 1. A). Fill in the blanks(Each of 0.5 marks) (05)

- i)bacteria can spoil the refrigerated milk.
- ii) is the prime causative organism for mastitis.
- iii) is combination of time and temperature for LTLT pasteurization,
- iv) is responsible for sweet curdling.
- v)is pasteurization efficiency test.
- vi)..... is indicator of faecal contaminant.
- vii)..... test is used to detect typhoid.
- viii).....is price indicator for milk in India.
- ix).....is most predominant spoilage organism in UHT milk.
- x)..... is based on centrifugal process to remove microbes from milk.

B). Multiple choice Question (Each of 0.5 marks) (10)

- i).....is Psychotropic bacteria.
a) *Bacillus* b) *Pseudomonas* c) *Streptococcus* d) None of the above
- ii)..... is the causative for Tuberculosis.
a) *Bacillus spp* b) *Mycobacterium spp* c) *Streptococcus spp* d) None of the above
- iii)..... is temperature is used in UHT Milk
a) 40- 60° C b) 70-90° C c) 130-140° C d) None of the above
- iv) *Alcaligenes viscolactis* is responsible for
a) Souring b) Ropiness c) Sweet curdling d) Discoloration
- v)..... is optimum temperature for Mesophiles incubation.
a) 25° C b) 37° C c) Above 45° C d) None of the above
- vi)..... is optimum pH for PDA.
a) 7.0 b) 8.5 c) 3.5 d) 6.8
- vii).....is also known as cold Sterilization.
a) Radiation b) Thermization c) Pasteurization d) None of the above
- viii)..... is present in low quantity in Mastitis Milk.
a) Potassium b) Sodium c) Chloride d) None of the Above
- ix)..... Media used for coliform.
a) Nutrient Agar b) Mac-Conkey Agar c) Potato Dextrose Agar d) None of the Above
- x).....action is irreversible damage to bacterial cell.
a) Bacteriostatic b) Bactericidal c) Bacteria-inhibitor d) None of the Above
- xi) There is no Growth in -----
a) Stationary phase b) Log Phase c) both in a & b d) None of the Above
- xii) Following is non-cultured rapid test.....
a) SPC b) Coliform test c) MBRT d) None of the above
- xiii) is Gram positive aerobes and spore forming bacterium.
a) *Lactobacillus* b) *Clostridium* c) *Bacillus* d) *Staphylococcus*

- xiv) Ropiness defect is due to Production in milk.
 a) Protein b) lipid c) Mucins d) all of the Above
- xv)index organisms of Sterilization.
 a) *Bacillus stearothermophilus* b) *Bacillus subtilis* c) *Bacillus coagulans* d) None of the above
- xvi) The enterotoxin is affecting.....
 a) Stomach b) Respiratory track c) Brain d) Skin
- xvii) The following is defect is due to lipase enzyme
 a) Ropiness b) Souring c) Rancidity d) bitterness
- xviii) The COB test is positive at,,,,,, acidity
 a) 0.11 b) 0.14 c) 0.22 d) All of the Above
- xix) The CAMP test use for detection of
 a) Listeriosis b) Anthrax c) Mastitis d) Brucellosis
- xx) Following is gram positive Bacteria.....
 a) *Salmonella* b) *Shigella* c) *Listeria* d) *E. Coli*

Q. 2. A) Define the following terms (Any five out of seven) (05)

- 1) Bactofugation
- 2) Zoonotic Diseases
- 3) Thermophillic
- 4) Mastitis
- 5) Sanitizer
- 6) Thermoturics
- 7) Sanitization

B). Answer the following terms (Any five out of seven) (05)

- 1) State the significance of pasteurization,
- 2) State the parameter used for grading the microbiological quality of milk,
- 3) Importance of chilling in milk storage .
- 4) Role of hygienic practices in milk processing.
- 5) Microbial flora associated with post milk processing contamination.
- 6) Legal standards for UHT milk.
- 7) Spoilage of refrigerated milk.

Q.3. A) Write short notes (Any five out of six) (10)

- 1) Bitty cream
- 2) Listeriosis
- 3) Immunoglobulin
- 4) Public health aspects of fluid milk
- 5) Importance of hygienic practices.
- 6) Compositional changes in Mastitis Milk.

Q 4) Long questions (any three out of four) (15)

- 1) State various types of microbiological spoilage of milk.
- 2) State the preventive measures for mastitis control.
- 3) Describe in brief natural inhibitor system in milk.
- 4) Food poisoning and its preventive measures.