

**MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR**  
**SEMESTER END THEORY EXAMINATION, B.Tech. (D.T.) Degree Course 2016-17**

|            |                         |               |                              |
|------------|-------------------------|---------------|------------------------------|
| Semester   | : II (V Dean)           | Academic Year | : 2016-2017                  |
| Course No. | : DM-202                | Course Title  | : Microbiology of Fluid Milk |
| Credits    | : 1+1=2                 | Total Marks   | : 50                         |
| Day & Date | : Wednesday, 14.06.2017 | 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) In the Resazurin Reduction Test the formation of resorufin imparts ..... colour to milk
    - a) Blue
    - b) Pink
    - c) Lilac
    - d) White
  - ii) Mastitis milk has higher ..... content
    - a) Chloride
    - b) Casein
    - c) Beta-lactoglobulin
    - d) All of these
  - iii) The blue discoloration in milk held at low temperatures is caused by .....
    - a) *Ps.putida*
    - b) *Serratia marcescens*
    - c) *Ps.synxantha*
    - d) *Ps.syncyanea*
  - iv) Pseudomonas are .....
    - a) Catalase Negative & Oxidase positive
    - b) Catalase positive & Oxidase Negative
    - c) Catalase positive & Oxidase positive
    - d) Catalase Negative & Oxidase Negative
  - v) An incident in which two or more persons experience a similar illness usually gastro intestinal after ingestion of a common food is termed as .....
    - a) Epidemiology
    - b) Outbreak
    - c) Aetiology
    - d) None of these
- B) Define the following. (05)
- i) Mastitic milk
  - ii) Antibiotic
  - iii) Pathogen
  - iv) Spoilage
  - v) Thermotolerant

(P.T.O.)

- Q. 2    A) Give reasons for the following. (05)
- i) Ropiness is less frequent in pasteurized milks.
  - ii) Raw milk and its products are not safe for human consumption.
  - iii) Hygiene in the milk packaging section is a must.
  - iv) Boiled milk spoils when kept at ambient temperature.
  - v) Subclinical mastitic milk has decreased yield of milk products.
- B) State whether True or False. If false, rewrite the statement after making necessary corrections. (05)
- i) Subclinical mastitis in milch animals is easy to detect.
  - ii) Staphylococcal poisoning is because of enterotoxin.
  - iii) Mastitic milk is suitable for fermented milk manufacture.
  - iv) Molds are responsible for mycotoxicosis.
  - v) Bactofugation can replace pasteurization of milk.

### SECTION –‘B’

- Q. 3    A) Discuss in detail microbiological aspects of milk. (05)
- B) Explain the microflora of pasteurized milk and raw milk. (05)
- Q. 4    A) Define Sterilizing effect. (05)
- B) Discuss the microflora of UHT milk and sterilized milk. (05)
- Q. 5    Differentiate the following.
- A) Pasteurized milk and sterilized milk. (03)
  - B) Genus of streptococcus and staphylococcus. (03)
  - C) Thermoduric and thermophilic microorganisms. (04)
- Q. 6    Briefly explain the following defects with their characteristics, causative agents and preventive measures.
- A) Gassiness (03)
  - B) Bitty cream (03)
  - C) Abnormal flavour (04)
- Q. 7    Explain in detail antimicrobial substances present in milk and their significance. (10)

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