

**MAHARASHTRA ANIMAL AND FISHERY SCIENCES UNIVERSITY, NAGPUR**  
**SEMESTER END THEORY EXAMINATION, B.Tech. (DT)**

Semester	: V (V Dean)	Academic Year	: 2023-2024
Course No.	: DC-506	Course Title	: <b>Chemical Quality Assurance</b>
Credits	: 1+1=2	Total Marks	: 50
Day & Date	: Tuesday, 30/04/2024	Time	: 2.00 hrs.

- Note :**
- 1) All questions from **Section 'A'** are compulsory.
  - 2) Solve **Any Three** questions from **Section 'B'**.
  - 3) Draw neat and well labeled diagram wherever necessary.

**SECTION – 'A'**

- Q. 1    A) Define the following. (05)
- i) Soft water
  - ii) Critical control point
  - iii) Total quality management
  - iv) Antibiotics
  - v) Secondary standard reagent
- B) Write about the following in one or two line. (05)
- i) Hazard
  - ii) Quality assurance
  - iii) Legal standards
  - iv) ISO
  - v) Pesticide
- Q. 2    A) State whether True or False. If false, rewrite the statement after making necessary corrections in underlined words. (05)
- i) The number of moles of solute dissolved per litre of the solution is called normality.
  - ii) The S.S. consists of 12 parts of chromium and 6 parts of nickel.
  - iii) AGMARK standards for ghee and butter are mandatory.
  - iv) Permanent hardness is also known as carbonate hardness.
  - v) SML means the minimum permitted amount of a given substance released from a material or article into food or food simulants.
- B) Choose the most appropriate answer from the options given below. (05)
- i) Fat estimation of milk and milk products is done by.....
    - a) Gerber method
    - b) Rose-Gottlieb
    - c) Majonier method
    - d) All of these
  - ii) BIS is a .....organization.
    - a) Government
    - b) Non-Government
    - c) Co-operatives
    - d) All of these
  - iii) Which among the following is the primary standard reagent?
    - a) NaOH
    - b) KOH
    - c) HCl
    - d) None of these

(P.T.O.)

- iv) DDT is a .....
- |               |                 |
|---------------|-----------------|
| a) Fungicide  | b) Insecticides |
| c) Herbicides | d) Nematicide   |
- v) Internal volume of the graduated stem of the milk butyrometer corresponding to each 1% fat range is .....
- |             |             |
|-------------|-------------|
| a) 1.35 ml  | b) 0.135 ml |
| c) 0.125 ml | d) 1.25 ml  |

**SECTION –‘B’**

- Q. 3 A) Describe the importance of chemical quality control in dairy industry. (05)  
B) Differentiate between quality control and quality assurance. (05)
- Q. 4 A) What is sampling? Describe the sampling procedure for milk from can and tanker. (05)  
B) Discuss the principles of HACCP in detail. (05)
- Q. 5 A) Discuss the importance of calibration of laboratory glassware. (03)  
B) Describe the calibration of milk butyrometers. (03)  
C) Discuss the methods of softening of hard water. (04)
- Q. 6 A) Write the methods for detection of formalin and sugar in milk. (03)  
B) Briefly discuss the role of FSSAI. (03)  
C) Describe the working principle of milk-o-tester. (04)
- Q. 7 Classify dairy laboratories. Discuss in brief the general requirement for category A dairy laboratory. (10)

\*\*\*\*\*