

M. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2026
SEMESTER 4 : AQUACULTURE AND FISH PROCESSING
COURSE : 24P4AQCT14 : FISH MICROBIOLOGY AND QUALITY ASSURANCE
(For Regular 2024 Admission)

Time: Three Hours

Max. Weights: 30

PART A**Answer any 8 questions****Weight: 1**

1. What is meant by food intoxication? (A)
2. Explain chemical changes taking place during fish spoilage. (An, CO 5)
3. What is 'BIS'? (E)
4. Comment on Inprocess quality control. (E, CO 1)
5. What is SOP? (An, CO 7)
6. What is melanosis ? How it can be prevented? (R, CO 4)
7. Comment on Minamata disease. (An)
8. What is meant by heterotrophic bacteria? (R, CO 3)
9. Explain the cleaning and disinfection procedures practiced in seafood industry. (A, CO 4)
10. What is total residual chlorine? (A, CO 6, CO 7)
(1 x 8 = 8)

PART B**Answer any 6 questions****Weights: 2**

11. Comment on national standards for seafood. (An, CO 5)
12. Comment on EU 98/83 standards. (R, CO 6)
13. Define coliforms and give two examples. (An, CO 3)
14. Briefly describe the chemical indices of fish quality (An, CO 2, CO 6)
6)
15. Commonly used sanitizing agents in seafood industry. (An)
16. Describe the effect of salting on bacteria. (An, CO 3)
17. Comment on Sensory evaluation for prawn. (A, CO 4)
18. Cleaning schedule and its importance in sanitation (An, CO 5)
(2 x 6 = 12)

PART C**Answer any 2 questions****Weights: 5**

19. What are chemical hazards? Explain the chemical hazards commonly associated with seafood and its control measures. (E, CO 3)
20. Write an essay on HACCP. (E, CO 7)
21. Explain the effect of different processing methods on bacteria in Seafood. (An, CO 3)
22. Write different methods available for quality evaluation of fish (U, CO 4, CO 6)
(5 x 2 = 10)

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Understand the trace metals in fins fish and shell fish	U	4	1
CO 2	Understand the general aspects of seafood quality and quality problems	An	14	2
CO 3	Understand the biological hazards in seafoods	U	8, 13, 16, 19, 21	15
CO 4	Analyse the fish spoilage and quality assessments	An	6, 9, 17, 22	9
CO 5	Understand the Good manufacturing practices in seafood processing	R	2, 11, 18	5
CO 6	Understand the Hazard analysis and critical control points in seafood industry	A	10, 12, 14, 22	10
CO 7	Understand the National and international standards for fish and fish products	R	5, 10, 20	7

Cognitive Level (CL): Cr - CREATE; E - EVALUATE; An - ANALYZE; A - APPLY; U - UNDERSTAND; R - REMEMBER;