

**M.Sc. DEGREE END SEMESTER EXAMINATION - APRIL 2026**  
**SEMESTER 2 : AQUACULTURE AND FISH PROCESSING**

COURSE : 24P2AQCT07/21P2AQCT07 : PHYSIOLOGY AND PATHOLOGY OF FINFISH AND SHELL FISH

*(For Regular 2025 Admission and Improvement/Supplementary 2024/2023/2022/2021 Admissions)*

Time : Three Hours

Max. Weights: 30

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

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|-----|--|------------------------|
| 1.  | What are zymogen?  | (U, CO 5)              |
| 2.  | What is the significance of petasma?   | (U, CO 5)              |
| 3.  | Give an account on the prophylatic measures to be taken to prevent disease outbreak. | (U, CO 2, CO 3, CO 4)  |
| 4.  | What is costiasis?   | (U, CO 1, CO 5)        |
| 5.  | What are the functions of T- suppressor cells?                                       | (An, CO 2, CO 3, CO 4) |
| 6.  | What is Aflatoxin?   | (U, CO 2, CO 3, CO 4)  |
| 7.  | Define Pin heads.  | (An, CO 2, CO 3, CO 4) |
| 8.  | Furunculosis.  | (U, CO 2, CO 3, CO 4)  |
| 9.  | What are the functions of Seratonin?   | (U, CO 5)              |
| 10. | Explain mesovarium.  | (U, CO 1, CO 5)        |
|     |  | <b>(1 x 8 = 8)</b>     |

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

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|-----|--|------------------------|
| 11. | Explain hormonal control in osmoregulation.                | (U, CO 5)              |
| 12. | What are the major steps involved in a vaccine production? | (U, CO 3, CO 4)        |
| 13. | What is LHRH?  | (U, CO 1, CO 5)        |
| 14. | Role of temperature in disease manifestation in fishes.    | (An, CO 2, CO 3, CO 4) |
| 15. | Comment on ICH.  | (U, CO 2, CO 3, CO 4)  |
| 16. | Explain the treatments against white spot disease.         | (U, CO 3, CO 4)        |
| 17. | Give an account on acetone preservation.                   | (U, CO 5, CO 7, CO 8)  |
| 18. | Give a note on abiotic factors in a culture system.        | (U, CO 7)              |
|     |  | <b>(2 x 6 = 12)</b>    |

**PART C**

**Answer any 2 questions**

**Weights: 5**

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|-----|---|----------------------------------|
| 19. | Which are commonly occurring diseases in shrimp farms? explain.                 | (U, CO 3, CO 4)                  |
| 20. | Explain defense mechanism in fish (Non specific and specific immunity).         | (U, CO 3, CO 4)                  |
| 21. | Write an account on the hormonal analogues used for induced breeding in fishes. | (U, CO 5)                        |
| 22. | Effect of temperature on body functioning and metabolism.                       | (U, CO 7)<br><b>(5 x 2 = 10)</b> |

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Understand the basic physiology of fin fish and shell fish and its relation to cultural conditions	U	4, 10, 13	4
CO 2	Identification of pathogens in aquacultural organisms	U	3, 5, 6, 7, 8, 14, 15	9
CO 3	Understand the classification of disease in aquaculture systems	U	3, 5, 6, 7, 8, 12, 14, 15, 16, 19, 20	23
CO 4	Describe the disease control of fin and shellfish, remedial and prophylactic measures	U	3, 5, 6, 7, 8, 12, 14, 15, 16, 19, 20	23
CO 5	Comparative study of physiological characters of fin fish and shell fish	E	1, 2, 4, 9, 10, 11, 13, 17, 21	16
CO 7	Understand the ecophysiology and environmental requirements for the metabolism of aquatic organisms	U	17, 18, 22	9
CO 8	Understand the principles and application of eye stalk ablation and hypophysation in fin fish and shell fish hatcheries	U	17	2

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