

**M.Sc. DEGREE END SEMESTER EXAMINATION - APRIL 2026****SEMESTER 2 : AQUACULTURE AND FISH PROCESSING****COURSE : 24P2AQCT05/21P2AQCT05 : ECOLOGY OF CULTURE SYSTEMS AND AQUATIC BIOLOGY***(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.  | Comment on Laminar Flow Chamber.                        | (U, CO 7, CO 8)                    |
| 2.  | Define Abyssobenthic zone.                              | (U, CO 4)                          |
| 3.  | Define Food chain.                                      | (R, CO 1, CO 2)                    |
| 4.  | What is meant by heterotrophic bacteria?                | (U, CO 7, CO 8)                    |
| 5.  | Define Eutrophication.                                  | (U, CO 1, CO 2)                    |
| 6.  | Define Periphyton.                                      | (U, CO 1)                          |
| 7.  | Viable bacterial count reduces during death phase. Why? | (E, CO 7, CO 8)                    |
| 8.  | Define plankton, nekton and benthos.                    | (An, CO 1, CO 2, CO 3, CO 7, CO 8) |
| 9.  | What is a Negative Estuary?                             | (U, CO 4)                          |
| 10. | Define flocculation and coagulation.                    | (An, CO 1, CO 2, CO 8)             |
- (1 x 8 = 8)**

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

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|-----|--|-----------------------|
| 11. | What are Mud Banks? what is its relation to Fisheries?                 | (E, CO 3, CO 4, CO 5) |
| 12. | What is carrying capacity of a Pond ecosystem?                         | (U, CO 1, CO 2)       |
| 13. | Biochemical tests for the identification of bacteria.                  | ( )                   |
| 14. | What is lotic ecosystem ? Briefly explain its characteristics?         | (U, CO 1)             |
| 15. | Describe three-class attribute plan.                                   | (E, CO 7, CO 8)       |
| 16. | Write short note on "Global environmental issues regarding mangroves". | (U, CO 4)             |
| 17. | Effect of Organic fertilizer on pond productivity.                     | (U, CO 1, CO 2)       |
| 18. | Explain the effect of monsoon on aquaculture systems.                  | (U, CO 1, CO 2)       |
- (2 x 6 = 12)**

**PART C**

**Answer any 2 questions**

**Weights: 5**

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|-----|---|------------------|
| 19. | Describe the role of physical and chemical characteristics for open sea farming.                      | (E, CO 1, CO 4)  |
| 20. | Marine ecosystem health can be measured through zooplankton grazing and abundance. Explain in detail. | (E, CO 3, CO 4)  |
| 21. | Explain the methods used for the Identification of bacteria.  | (An, CO 7, CO 8) |
| 22. | Importance of organic farming.  | (U, CO 1, CO 2)  |
- (5 x 2 = 10)**

OBE: Questions to Course Outcome Mapping

| CO   | Course Outcome Description   | CL | Questions                              | Total Wt. |
|------|--|----|--|-----------|
| CO 1 | Understand the basic ecology and aquatic biology as applicable to aquaculture organisms in captivity and controlled conditions | U  | 3, 5, 6, 8, 10, 12, 14, 17, 18, 19, 22 | 23        |
| CO 2 | Evaluate the ways and means of circumventing, ecological imbalances for production of better aquaculture yield                 | U  | 3, 5, 8, 10, 12, 17, 18, 22            | 15        |
| CO 3 | Understanding the basic features of fisheries oceanography   | U  | 8, 11, 20                              | 8         |
| CO 4 | Understanding the physico-chemical characteristics of marine environment   | U  | 2, 9, 11, 16, 19, 20                   | 16        |
| CO 5 | Describing mud banks in capture fisheries  | E  | 11                                     | 2         |
| CO 7 | Enumeration different types of major groups of microbes from culture ecosystems  | U  | 1, 4, 7, 8, 15, 21                     | 11        |
| CO 8 | Understand the growth and reproduction of microbes in relation to different physico-chemical conditions in pond                | U  | 1, 4, 7, 8, 10, 15, 21                 | 12        |

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