Reg. No ..... Name **25P133**

M.Sc. DEGREE END SEMESTER EXAMINATION - NOVEMBER 2025

SEMESTER 1 : AQUACULTURE AND FISH PROCESSING

COURSE : **24P1AQCT03 : BIOSTATISTICS AND COMPUTER APPLICATION**

(For Regular - 2025 Admission and Improvement / Supplementary 2024 Admission)

Time: Three Hours Max. Weights: 30

PART A

Answer any 8 questions **Weight: 1**

1. What is internet? What is its role in communication? (U, CO 4, CO 5)
2. Define sampling inspection plans (U, CO 1, CO 2, CO 6)
3. Differentiate between absolute and relative measures of dispersion (E, CO 1, CO2)
4. Define CUI and GUI (U, CO 4, CO 5)
5. Differentiate between simple and multiple regressions (U, CO 1, CO 2)
6. Define simple random sampling (U, CO 1, CO 2)
7. What is the probability of getting '6' when a die is thrown? (An, CO 1, CO 2)
8. Differentiate between population and sample (U, CO 1, CO 2)
9. When do you say two variables are correlated? Explain how will you measure the correlation between two variables (E, CO 1, CO 2)
10. Define Binomial distribution (U, CO 1, CO 2)

(1 x 8 = 8)

PART B

Answer any 6 questions **Weights: 2**

11. Distinguish between 'Z' test and 'F' test. (U, CO 1, CO 2, CO 6)
12. Describe the methods of data collection (E, CO 1, CO 2)
13. Twenty, half litre water filled bottles are taken at random for dissolved oxygen determination. The number of air bubbles (defects) from the bottles is given in the table. Draw a control chart for this data (An, CO 1, CO 2)

Bottle no	1	2	3	4	5	6	7	8	9	10
Defects (c)	4	5	7	3	3	5	6	2	4	8
Bottle no	11	12	13	14	15	16	17	18	19	20
Defects (c)	3	5	4	3	4	5	3	7	6	6

14. Distinguish between MS - Office and MS-Excel and explain the application of each in statistical computation (U, CO 4, CO 5)

15. Explain different types of printers used in the present day computers (U, CO 4, CO 5)

16. Describe normal distribution and its properties (U, CO 1, CO 2)

17. (a) Explain the use of the growth curve in fisheries. Give the form of von Bertalanffy Growth Curve used in the study of population dynamics in fisheries. (b)Explain the precautions to be taken prior to variable selection in fitting regression curve to data (E, CO 1, CO 2)

18. Define addition and multiplication theorems in probability (U, CO 1, CO 2)

(2 x 6 = 12)

PART C

Answer any 2 questions **Weights: 5**

19. Total length and Standard length measurements of 6 specimens of fish are given below (An, CO 1, CO 2)

Total length (Y) (cm)	11.2	12.4	13.5	15.7	17.1	18.5
Standard length (X) (cm)	3.0	3.2	4.0	4.8	4.8	4.9

Fit the two linear regression equations and estimate the total length when the standard length is 4.5 cm. Also find the correlation between X and Y

20. Define dispersion. Explain different measures of dispersion with respective formula (E, CO 1, CO 2)

21. What is a computer? Explain parts of a computer and the organisation of a computer (A, CO 4, CO 5)

22. What are the different methods of data collection? Describe the methods of classifying and presenting a statistical data (U, CO 1, CO 2, CO 6)

(5 x 2 = 10)

OBE: Questions to Course Outcome Mapping

CO	Course Outcome Description	CL	Questions	Total Wt.
CO 1	Application of statistical tools for experimental practices	An	2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 22	35
CO 2	Basic awareness on statistical tools in research and analysis of biological phenomenon	An	2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 22	35
CO 4	Computer knowledge at preliminary level for further studies	U	1, 4, 14, 15, 21	11
CO 5	Appropriate use of internet and communication system	U	1, 4, 14, 15, 21	11
CO 6	Sampling methods useful in estimation of marine fish landings	U	2, 11, 22	8

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