MIDNAPORE CITY COLLEGE
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PG/2nd Sem /AQC/26/Pr.

2026

2nd Semester Examination

M.F.Sc. in Aquaculture

Paper : STAT 501-P

(Statistical Methods for Applied Sciences)

(Practical)

Full Marks : 30 Time : Two Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

1. Answer any ***one*** question : 8×1=8

(a) The following supplied data are the body weights (g) of five fishes from two culture treatments:

Treatment A : ——, ——, ——, ——, ——

Treatment B : ——, ——, ——, ——, ——

Using an appropriate test of hypothesis, determine whether the mean body weights of fish differ significantly at the 5% level. State the null hypothesis and conclusion.

P.T.O.

(b) The provided data represent fish length (cm) and body weight (*g*) :

Calculate the Pearson's correlation coefficient and interpret the result.

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Fish	Length(X)	Weight(Y)
1		
2		
3		
4		
5		

2. Answer any *one* question : 12×1=12

(a) The following data show the weight gain (*g*) of fish under four different diets after a culture period. Calculate a one-way ANOVA to determine whether the diets have a significant effect on fish weight gain at the 5% level.

Diet A	Diet B	Diet C	Diet D
20	25	30	28
22	27	32	30
21	26	31	29
23	24	29	31
24	28	33	32

(b) A survey of 100 students records whether they use a particular statistical software and whether they are undergraduate or postgraduate students. The observed frequencies are :
Undergraduate : Use = 35, Do not use = 25

Postgraduate : Use = 30, Do not use = 10

Perform a chi-square test of independence at the 5% level of significance. Calculate the expected frequencies, chi-square statistic, degrees of freedom, and conclusion.

3. Submission of Laboratory Notebook. 4

4. Viva-voce. 6

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