



UNIVERSITY OF NORTH BENGAL
B.Sc. Programme 5th Semester Examination, 2020

DSE1-STATISTICS
APPLIED STATISTICS

Full Marks: 40

ASSIGNMENT

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

GROUP-A

1. Answer **all** the questions from the following: 2×4 = 8
- (a) What is factorial experiment?
 - (b) What do you mean by Indian Official Statistics?
 - (c) State the three basic principles of design of experiment.
 - (d) Prove that in a life table

$$L_x = l_x - \frac{1}{2} dx, \quad qx = \frac{2m_x}{2 + m_x}$$

GROUP-B

2. Answer any **four** questions from the following: 8×4 = 32
- (a) Describe the construction of control charts for fraction defective from appropriate data when standards are given and when standards are not given. 3+5 = 8
 - (b) Describe the layout and analysis of a randomized block design. 2+6 = 8
 - (c) What do you mean by time series? Write a short note on different components of time series. 1+7 = 8
 - (d) What are the tests to be satisfied by a good index number? Examine how far they are met by Fisher's index number. 3+5 = 8
 - (e) Starting from a suitable assumption regarding the relative growth rate of population, derive the logistic equation. 2+6 = 8
 - (f) Explain what you mean by statistical quality control. Distinguish between Process control and Product control. 4+4 = 8

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