



NORTH - EASTERN HILL UNIVERSITY
Permanent Campus, Shillong – 793 022 (Meghalaya)

No. F.1-6/EX-Con/RCP/2016- 1235

7th Sept., 2021

To

- ✓ 1. The Principal, St. Anthonys College, Shillong
- 2. The Principal, Shillong College, Shillong
- 3. The Principal, Sankardev College, Shillong

Sub: Revised Syllabus in Statistics (Syllabus-2019).

Sir,

In continuation, to my earlier letter No.1228, dt.30.4.2021, regarding revised syllabus of Statistics which is to be implemented from the current Academic Session 2021-22, I am sending herewith one page containing portion of the 1st yr practicals and portion of the 2nd yr. theory which may be attached to the main syllabus.

Yours faithfully,

(F. L. Marbaniang)
Section Officer(Confidential)
Examinations

UNIT - III

15. Problem on interpolation using Newton's Forward & Backward interpolation formulae.
16. Problem on interpolation using Lagrange's formulae.
17. Problem on interpolation using divided difference formulae.
18. Problem on Integration using Trapezoidal, Simpson's one-third & three-eighth formulae.

Books

1. Gupta, S. C. & Kapoor, V. K. (2000), 'Fundamentals of Mathematical Statistics', Sultan Chand and Sons, ND.
2. Goon, A.M., Gupta, M. K. & Dasgupta, B. (1999), 'Fundamental of Statistics', Volume 1, World Press Kolkata.
3. Goon, A.M., Gupta, M. K. & Dasgupta, B. (2003), 'Basic Statistics', World Press Kolkata.
4. Singh, R. (2012), 'An Introduction to Probability & Probability Distributions', Books & Allied (P) Ltd., Kolkata.
5. Hogg, R. V. & Tanis, E. A. (2003), 'Probability and Statistical Inference', Pearson Education, ND.
6. Bruce, P. (2017), 'Practical Statistics for Data Scientists', Shroff.

SECOND SEMESTER (Elective and Honours)

STE-2 (Theory)

PROBABILITY DISTRIBUTIONS AND STATISTICAL INFERENCE

Marks: 75

Duration of Exam.: 3 Hours

Lectures: 75

Two questions will be set from each Unit and One question to be answered from each Unit.

UNIT - I

Discrete Distributions: Definition & Derivation of properties including mgf, pgf & cgf of (i) Bernoulli, Binomial, Poisson, Geometric and Multinomial Distributions. Derivation of Mean, Variance and other properties and related problems.

Lectures: 15

UNIT - II

Continuous Distributions: Definition & Properties of Uniform, Exponential and Normal Distributions. Bivariate Normal Distribution with mean, variance, median, mode, mgf and cgf with related problems. Ideas of Box-plot, QQ plot and PP plot.

Lectures: 15

UNIT - III

Sampling Distribution Theory: Random Sample from a Probability Distribution, Statistic and its sampling distribution. Distribution of functions of Random Variables.

Distribution of sums of independent random variables, Distribution of Sample mean from Normal Population. Chi-Square, t- and F- distributions – definition and properties only. Law of Large Numbers; Tschebyshev's Inequality and its applications. Statement and application of Weak Law of Large Numbers (WLLN). Concept of Central Limit Theorem.

Lectures: 15