

**H.N.G.UNIVERSITY PATAN**  
**S.Y.B.A. Semester: 4 ECONOMICS**  
**Core Compulsory. 210 -D(Main-Optional)**  
**Investigation -2**

**Objective:-The main objective of this paper is to train the students to use the techniques of mathematical and statistical analysis, which are commonly applied to understand and analyze economic problem.**

Unit. 1 Measures of Central Tendency and Dispersion:

Central tendency: meaning, functions of average, characteristics of good average, various measures of average, mean, median, mode.

Measures of Dispersion: meaning and definitions. Range, Quartile deviation, Average deviation, standard deviation.

Unit. 2 Correlation and Regression:

Meaning of correlation and regression, Types of correlation, Methods of studying correlation-(1)Scatter diagram (2) Karl Pearson's (3) Spearman's rank correlation. Interpretation of correlation coefficient. Equations of lines of regression, calculation of regression coefficients.

Unit. 3 Time Series:

Meaning of time series, Utility of study of time series, Analysis of time series, Components of time series, Trend, seasonal and random components.

Unit. 4 Index Number:

Meaning of index number, uses of index number, construction of Index Number. Laspeyres's, Paasche's and Fisher's Index number, Fisher's ideal index number, Limitations of index number

Basic Reading:-

1. Bhardwaj R.S., Business statistics, Excel Books, New Delhi.
2. Business statistics, Sudhir Prakashan, Ahmedabad.
3. Allen R.G.D., Mathematical Analysis for Economists, Macmillan Press And ELBS, London.
4. Chiang A.C., Fundamental Methods of Mathematical Economics, McGraw Hill, New York.
5. Asthana B.n., Elements of Statistics, S, Chand & co Ltd. New Delhi.