SYLLABUS

STATISTICS

OBJECTIVE

To provide an understanding of statistical and related techniques which are widely applicable in business administration. An elementary knowledge only of quantitative methods is assumed. A purely theoretical approach should be avoided and the emphasis should be on applications concerned with the solution of business problems. The aim is to produce managers who understand statistical concepts and who can interpret statistics.

RECOMMENDED TEXTBOOKS

1.   Applied Business Statistics, Wegner: Juta
                             or
         Statistical Methods & Financial Calculations. Willemse: Juta

2.   Financial Mathematics: A Computational Approach, Young: Juta

Supplementary Reading

Quantitative Techniques for Management Decision Making. Redelinguys er al: Butterworth

SYLLABUS

COLLECTION AND PRESWENTATION OF NUMERICAL INFORMATION:

Questionnaires, interviews, tabulation analysis and interpretations.

Graphs, charts and diagrams. Frequency table, Histograms, Bar Diagrams, Z-curve, Pie Charts.

Mathematical basis of Quantitative Techniques: Arithmetic procedures, Algebraic methods.

BUSINESS CALCULATIONS:

Simple and compound interest;. Depreciation. ;Loan repayments.

NUMERICAL MEASURES OF DESCRIPTION:

Measures of central tendency – mean and median. The understanding of further measures such as percentiles, deciles and quartiles, interquartile range. Relative dispersion, Standard deviation, Coefficient of variation. Measures of shape – skewness, kurtosis and the use of these measures in the commercial environment.

PROBABILITY:

A basic introduction to probability from a practical viewpoint. Equally likely outcomes, Combinations of events, union of events, conditional probability, mutually exclusive events. Binomial distribution. Poisson distribution.

SAMPLING:

An introduction to sampling and statistical inference. Methods of selecting samples, normal distribution.

HYPOTHESIS TESTING:

A hypothesized population mean and its use in business.Population Proportion

THE CHI-SQUARE TEST:

Goodness of fit tests. Independence tests. Testing hypothesis concerning small proportions.

INDEX NUMBERS:

Consumer price index, Paasche, Leysperes and Link index.

REGRESSION ANALYSIS:

Linear regression and correlation analysis

TIME SERIES ANALYSIS:

Trends, moving averages, seasonal variation, exponential smoothing and forecasting.

NOTE:

Candidates will be provided with the necessary specialized tables, if required. Candidates will be provided with a list of formulae. Candidates are expected to be able to use a financial calculator.

<u>**THE EXAMINATION**</u>

There will be <u>one</u> compulsory question and a choice of <u>four</u> out of the remaining six