



QUANTITATIVE METHODS

MODULE CODE: BIT 125



WELCOME



DEEPAK BASTOLA

LECTURER

TEXAS COLLEGE MANAGEMENT AND IT

COURSE CONTENTS



CHAPTER 01

NATURE AND SCOPE OF STATISTICS

- ☐ Definitions of statistics
- ☐ Descriptive and inferential statistics
- ☐ Scope of statistics
- ☐ Limitations and distrusts of statistics

3 Lecture Hours

COURSE CONTENTS



CHAPTER 02

DATA AND ITS COLLECTION

- ☐ Primary and secondary data
- ☐ Sources of primary and secondary data
- ☐ Methods of various data collection
- ☐ Compilation of administrative records

4 Lecture Hours

COURSE CONTENTS



CHAPTER 03

CLASSIFICATION AND DISTRIBUTION OF DATA

☐ Classification procedure:

qualitative and quantitative classification

☐ Tabulation of data

3 Lectures Hours

COURSE CONTENTS



CHAPTER 04

DIAGRAMMATIC AND GRAPHIC PRESENTATION OF DATA

- ☐ Importance and limitations
- ☐ Types of diagrammatic representations: bar diagram, pie diagram; pictogram
- ☐ Types of graphical representations: histogram, frequency polygon, frequency curve, cumulative frequency curve (Ogive)

5 Lecture Hours

COURSE CONTENTS



CHAPTER 05

MEASURE OF CENTRAL TENDENCY

- ☐ Arithmetic mean
- ☐ Geometric mean
- ☐ Harmonic mean
- ☐ The median: quartiles; deciles and percentiles
- ☐ The mode
- ☐ Relation between mean, median and mode

5 Lectures Hours

COURSE CONTENTS



CHAPTER 06

MEASURE OF DISPERSION

- ☐ Absolute and relative measures
- ☐ The range
- ☐ Inter-quartile range
- ☐ Quartile deviation
- ☐ Mean deviation
- ☐ Standard deviation
- ☐ Coefficient of variation
- ☐ Skewness and Kurtosis

5 Lecture Hours

COURSE CONTENTS



CHAPTER 07

PROBABILITY

- ☐ Preliminaries
- ☐ Classical, empirical, axiomatic approaches of probability theory
- ☐ Conditional probability (Baye's Theorem)
- ☐ Inverse probability
- ☐ Probability distribution
- ☐ Mathematical expectation
- ☐ Variance of random variable

6 Lectures Hours

COURSE CONTENTS



CHAPTER 08

THEORETICAL DISTRIBUTION

- ☐ Introduction
- ☐ Binominal distribution and it chief features (without proofs)
- ☐ Fitting a binominal distribution
- ☐ Normal distribution

4 Lecture Hours

COURSE CONTENTS



CHAPTER 09

ESTIMATION THEORY AND TESTING OF HYPOTHESIS

- ☐ Sampling distribution and standard error
- ☐ Test of significance for single proportion
- ☐ Test of significance for single mean
- ☐ Student's T-distribution and its applications

5 Lecture Hours

CHAPTER 10

CHI-SQUARE DISTRIBUTION

- ☐ Introduction
- ☐ Application
- ☐ Test of goodness of fit
- ☐ Test of independence of attributes

5 Lecture Hours

COURSE CONTENTS



CHAPTER 11

CORRELATION AND REGRESION ANALYSIS

- ☐ Introduction
- ☐ Correlation analysis
- ☐ Various methods of calculating correlation coefficient
- ☐ Regression analysis

5 Lecture Hours

COURSE CONTENTS



CHAPTER 12

SPSS/R PROGRAM

6 Lecture Hours

MAIN REFERENCE BOOKS:

- a. Sukhminder Singh Et. Al., "*Statistical Method for Research Workers*", Kalyani Publishers
- b. B. M. Clarke & D. Cooke, "*A Basic Course in Statistics*", Elbs. (UK)
- c. B. L. Agrawal, "*Basic Statistics*", Wiley Eastern
- d. Minimum & Clarke, "*Elements of Statistical Reasoning*", Johnwiley & Sons
- e. Levin, "*Statistics for Management*", Prentice Hall of India

Marks Weightage



WEIGHTAGE OF INTERNAL MARKS

- ☐ Attendance and Participation – 10 marks
- ☐ Case Study/Presentation/Project Work – 20 marks
- ☐ Pre-Board Examination – 20 marks

THANK YOU !