

**H. N. G. University , Patan**  
**M.Sc.(CA & IT) – Semester - IV**  
**401: Statistical Methods**

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**Unit: 1**

[25%]

**Measure of Central Tendency : -**

**Arithmetic Mean :**

- Arithmetic Mean for raw data
- Discrete frequency distribution
- Continuous frequency distribution
- Properties of Arithmetic Mean
- Merits & Demerits of A.M.

**Median :**

- Median for raw data
- Discrete frequency distribution
- Continuous frequency distribution
- Merits & Demerits of Median

**Mode :**

- Mode for raw data
- Discrete frequency distribution
- Continuous frequency distribution
- Merits & Demerits of Mode

**Measure of Dispersion :-**

- Introduction
- Range & its Co-efficient
- Quartile deviation & its Co-efficient
- Mean deviation & its Co-efficient
- Standard deviation & its Co-efficient

**Unit: 2**

[25%]

**Correlation Co-efficient : -**

- Definition of Correlation
- Types of Correlation
- Scatter Diagram Method
- Karl Pearson's Correlation Co-efficient
- Correlation Co-efficient for Bivariate frequency distribution
- Probable error for correlation

**Unit: 3**

[25%]

**Regression Analysis :-**

- Definition of Regression
- Regression Lines
- Regression Co-efficients
- Properties of Regression Co-efficients
- Least square fit linear regression curve fitting

**Unit: 4**

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**Time Series and Business forecasting :-**

- Utility of Time series Analysis
- Components of Time series
  - Secular Trend
  - Seasonal Variation
  - Cyclic Variation
  - Irregular Variation
- Method of Measurement of components : Moving averages method
- Forecasting Model and Method : Exponential Smoothing Method

**Text Books :-**

1. Fundamental of statistics – Sixth Edition (S.C.Gupta)

**Reference Book : -**

1. Statistical Methods (S.P.Gupta)
2. Business Statistica (R.S.Bhardwarj)
3. Statistics(R.S.N.Pillai and V.Bagavati)