

JYOTI NIVAS COLLEGE AUTONOMOUS
Programme: B.COM /INTEGRATED B.COM M.COM/LSCM
QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS –II
Course Code : 24IVQA02

No. of Credits: 4

Semester: IV
No. of Hours: 60

COURSE OBJECTIVES:

- To apply Correlation and Regression for data analysis
- To estimation through time series analysis and find the trend
- To test the level of significance
- To find the association in two variables

LEARNING OUTCOMES:

- Enables the students to use the knowledge in decision making.
- Understand the practical application of statistics
- Usage hypothesis in day to day life
- Application of goodness of fit

Unit-1: Correlation Analysis

10 hours

Correlation – Meaning & Definition - Uses – Types – Interpretation of Correlation, Probable Error – Calculation of Karl Pearson's Coefficient of Correlation (Deviations taken from Arithmetic Mean only) & Spearman's Rank Correlation – Problems when ranks are given, ranks are not given and tied ranks (Excluding Bi-variate and Multiple correlation).

Unit- 2: Regression Analysis

10 hours

Meaning, Difference between Correlation and Regression, Regression Equations – X on Y and Y on X using Regression Coefficients- Problems on estimations.

Unit-3: Time Series Analysis

12 hours

Meaning, Components of a Time Series; Measurement of trend: Calculation of trend Values (Y_c) under Least square method and Moving Average method (3 yearly, 4 yearly and 5 yearly moving averages)

Unit- 4: Statistical Inference

14 hours

Statistical hypothesis - Null, alternative, simple, and composite. Types of error, level of significance and power of a test.

Test of significance- Test for normal mean and equality of mean for large samples. Test for proportion and equality of proportions.

Unit- 5: Association of Attributes

14 hours

Classification, Correlation and Association, Types of Association, Comparison of Observed and Expected Frequencies, Yule's Coefficient of Association. Chi-square Test, Assumptions, Degrees of Freedom, Significance level, Test of goodness of fit, Test of Independence – 2x2 Problems

Skill Development Activities:

- Collect statistics on the ranks given by two judges for 10 beauty pageant candidates and compute rank correlation coefficient
- Calculate 3 yearly moving averages with imaginary values.
- Fit a Straight Line Trend with Imaginary Figures and show it graphically
- Calculate the association of any two attributes with imaginary data.

Books for References:

1. S C Gupta: Fundamentals of Statistics – Himalaya Publishing House
2. S P Gupta: Statistical Methods- Sultan Chand
3. Dr. B N Gupta: Statistics, Sahithya Bhavan
4. Elhance: Statistical Methods, Kitab Mahal
5. Sanchetti and Kapoor: Business Mathematics, Sultan Chand

Note: Latest edition of text books maybe used