

Shri Govind Guru University
Choice Based Credit System (CBCS)
Syllabus for B. Com. Semester - I (Statistics)

Effective from June - ____

Sub. : Basic Statistics - I

SE - 101 B

Hours : 3 / Week

Credit - 3

Exam Hours : 3

Objective : Students should be acquainted with the initial requirements of applied statistical tools.

1. Linear Correlation : (25 %)

Concept of bivariate data, Definition and types of correlation, Definition of correlation coefficient (r), its properties, and interpretation of values of r , Methods of finding correlation coefficient by using Karl Pearson method for bi-variate data and for frequency distribution data, Spearman's method for finding rank correlation coefficient for repeated and non repeated ranks.

2. Time Series : (25 %)

Meaning and uses of time series, Various components of time series, determination of trend by using graphical, moving average and least square method, To separate seasonal component by using moving average method, with examples.

3. Business Forecasting : (25 %)

Meaning and uses of business forecasting, Different methods of forecasting (i) Theoretical explanation of Regression analysis, Index numbers, Economic models, Opinion poll method, Extrapolation, Graphical method, (ii) Theoretical explanation with numerical examples of - Least Square Method for linear and quadratic relationship between variables.

4. Demographic Statistics : (25 %)

Meaning, definition and uses of demographic statistic, Methods of collecting demographic statistics - registration method, census method, analytical method. Mortality rates pertaining to (i) CDR (ii) SDR (iii) IMR, Birth rates pertaining to (i) CBR, (ii) SBR, (iii) Age specific birth rate, Fertility rates pertaining to (i) GFR, (ii) SFR, (iii) TFR.

Recommended Reading :

1. Ken Black, Business Statistics, John Wiley & Sons (Asia) Pte Ltd., Singapore.
2. J. K. Sharma, Business Statistics, Pearson, New Delhi.
3. Sancheti & Kapoor, Business Statistics, Sultan Chand & Sons, New Delhi.
4. Srivatava O. S. : A Text Book of Demography, Vikas publishing.
5. Trivedi and Trivedi : Business Mathematics, Pearson India Ltd., New Delhi.
6. Sancheti & Kapoor : Business Mathematics Sultan Chand & Sons, New Delhi.

Shri Govind Guru University
Choice Based Credit System (CBCS)
Syllabus for B. Com. Semester - II (Statistics)

Effective from June - ____

Sub. : Basic Statistics - II

SE - 102 B

Hours : 3 / Week

Credit - 3

Exam Hours : 3

Objective : Students must be familiar with Matrix Algebra and basic techniques of operations research.

1. Matrix Algebra : (25 %)

Definition of Matrix, Different types of matrices, Algebra of matrices (Addition, Subtraction and Multiplication), Determination of a square matrix, Definition of ad-joint of a matrix, inverse of a matrix and its uses to solve simultaneous linear equations (up to three variables only), Use of matrix in simple business applications.

2. Linear Programming Problem : (25 %)

Meaning of linear programming, its uses, assumptions and limitations, Explanation of basic terminologies, Mathematical form of linear programming problem, Solution of linear programming problem by using graphical methods, Simple formulation problems (for two variables).

3. Transportation Problem : (25%)

Definition of balanced Transportation Problem (T. P.), General Transportation table and its mathematical form, Initial basic feasible solution and initial cost by using North - West Corner rule, Least Cost Method, Vogel's Approximation Method, Examples base on these methods.

4. Assignment and Replacement Problems : (25 %)

Definition of balanced Assignment Problem (A. P.), its mathematical form, Application of Hungarian method for solving A. P. in the cases of maximization and minimization problem, Meaning of Replacement problem (R. P.), Simple examples of replacement problem when the units are deteriorate depending on time and money value remains same.

Recommended Reading :

1. Barry Render, Ralph M. Stair, Michael E. Hanna, Quantitative Analysis for Management, Pearson Education (Singapore) Pte. Ltd.
2. Anderson, Sweeney, Williams, An Introduction to Management Science Quantitative Approach to Decision Making, Cengage Learning India Pvt. Ltd., New Delhi.
3. J. K. Sharma : O. R. Theory and Application, Macmillan India Ltd.
4. Vohra N. D., Quantitative Techniques in Management Tata Mc Graw Hill, New Delhi.
5. H. A. Taha, Operations, Research, Macmillan Publishing Co. Inc.