

#### 4.5 – B. BUSINESS STATISTICS - II

(For students who have not studied Statistics at PU I & II / XI & XII classes)

Lecture per Week: 4 hours

Max Marks: 80 (End Sem.) + 20 (IA) = 100

Exam Duration: 3 Hours

**Objectives:** To train the students of commerce to become familiar with the elementary tools of statistics which are used in the analysis of a collected data.

Unit	Topics	No of periods
I	<b>Binomial and Poisson Distributions:</b> Probability mass functions of Binomial and Poisson distributions, properties of Binomial and Poisson distributions. Mean and variance of Binomial and Poisson variance (Without derivation) and problems based on theory (without fitting).	10
II	<b>Normal Distribution:</b> Definition of a normal variate. Properties of normal curve. Standard normal variate (S.N.V.) Standardization of a normal variate. Problems using Normal Curve. Relation between Binomial-Poisson-Normal distributions (No Problems on fitting).	10
III	<b>Control Charts:</b> Concept of S.Q.C. Control charts and their uses. Control limits for mean and Range, P and C- charts. Problems and interpretation.	10
IV	<b>Correlation and Regression:</b> Meaning and Definition of Correlation, types- Positive, negative and Zero Correlation, methods of measurement of Correlation- Scatter Diagram, Karl-Pearson and Spearman's Rank Correlation Coefficient. Properties Of Correlation simple examples. Meaning and Definition of Regression, Regression equations, properties of regression lines and regression coefficients and problems based on theory.	10
V	<b>Transportation Problem-</b> Meaning and Definition Statement of T.P, Feasible, basic feasible solution, degenerate solution, non degenerate solution and optimal solution of T.P. Balanced and unbalanced T.P. Finding initial basic feasible solution by North-West Corner Rule, Method of matrix minima (lowest cost entry method) and Vogel's approximation method. Calculation of total transportation cost.	10

#### Suggested Readings:

- 01 Business Statistics by Prof. R. H. Dhareshwar
- 02 Business Statistics by S. C. Gupta
- 03 Business Statistics by S. P. Gupta
- 04 Business Statistics by Rajamohan
- 05 Operation Research by Kalavati
- 06 Operation Research by Goel and Mittal