

B.COM
SEMESTER IV
STATISTICAL TECHNIQUES II
(Marks 100)

I. CORRELATION AND REGRESSION ANALYSIS : (30 MARKS-18 LECTURES)

- Meaning and types of correlation
- methods of studying correlation.
- Scatter diagrams,
- Karl Person's coefficient of correlation
- Spearman's rank coefficient of correlation,
- Properties of Karl Person's coefficient of correlation.
- Linear regression – meaning
- Regression lines and regression confidents.

i. II . ELEMENTS OF PROBABILITY : (18 MARKS-16 LECTURES)

- Random experiments and events
- definition of probability
- Conditional probability.
- Addition and multiplication theorems (with proof).
- Mathematical expectation.

III. THEORITICAL DISTRIBUTION : (18 MARKS-12 LECTURES)

- Random Variable.
- Binomial ,Poisson and Normal distribution (with properties)

IV .METHODS OF SAMPLING : (4 MARKS- 4 LECTURES)

- Census enumeration and sample enumeration.
- Methods of sampling-
- Simple random sampling, Systematic sampling, Stratified sampling, Cluster sampling, Purposive sampling, Quota sampling and Multi – stage sampling.

V .TESTS OF HYPOTHESIS AND ESTIMATION : (12 MARKS-15 LECTURES)

- Sampling distribution.
- Standard error,
- Procedure of testing a hypothesis.
- Null and Alternative hypothesis.
- Type I & Type II errors.
- Critical region and level of significance.
- Test of significance for large samples.

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- **Sample mean and sample proportion-**
- **confidence limits**
- **population mean and population proportion**

VI. STATISTICAL QUALITY CONTROL:

(18 MARKS-10 LECTURES-)

- **Meaning and Utility,**
- **Control charts for X,R,P&C**

Books for Study and Reference:

- 7. Gupta S.P**
Statistical Methods, Sultan Chand and Sons
- 8. Sancheti D.C. and Kapoor V.K**
Statistics (Theory, methods and Application) Sultan Chand and Sons
- 9. Levin Richard I and Rubin David S.**
Statistics for Management, Prentice Hall of India
- 10. Gupta C.B**
Fundamental of Statistics, Himalaya Publishing House
- 11. R.J.Shah**
Statistical Techniques.
- 12. Neeta Mazumdar**
Statistical Techniques Rajhauns Vitaran,

Unit I : E-commerce :