

Note: There will be eight (8) questions in all. The first question is compulsory and consists of six (6) short-questions having four (4) marks each. Answer to these questions should not exceed 150 words. The candidate will be required to attempt any four questions out of remaining seven (7) questions and each question carries fourteen (14) marks each. Duration of each paper will be three (3) hours.

Multiple regression and correlation: Linear regression equation, Regression equation in terms of simple correlation; coefficients; Reliability of the estimate; Multiple Correlation; Partial Correlation.

Index Numbers: Meaning, types and uses; Methods of constructing price and quality indices (simple and aggregate); Test of adequacy; Chain base index numbers; Base shifting, splicing and deflating; Problems in constructing index numbers; Consumer price index.

Time Series Analysis: Components of a time series, Models of time series analysis- additive and multiplicative; Methods of constructing seasonal index; Adjusting time series data for seasonal variations, Estimation of seasonal variations.

Theory of Probability: Probability as a concept; approaches to defining probability; addition and multiplication laws of probability; Conditional probability; Bayes Theorem.

Probability distributions: Probability distribution as a concept; Binomial, Poisson, and Normal distributions- their properties and parameters

REFERENCES

Poonia, Virender: *Advanced Statistics*, Visvabharti Publication, New Delhi.

Heinz, Kohler: *Statistics for Business & Economics*, Harper Collins.

Lawrence B. Morse: *Statistics for Business & Economics*, Harper Collins

Levin, Richard I.& David S Rubin: *Statistics for Management*, Prentice Hall of India, Delhi.

Chou-Ya-Lun: *Statistical Analysis*, Holt, Rinchart and Winslon.