Time: 3 Hours

M.M.:B. Sc: 40+10*
B.A: 28+7*
* Internal Assessment

Applied Statistics

Note : There will be nine questions in all. Question No.1 will be compulsory covering whole of the syllabus and comprising 5 to 8 short answer type questions. Rest of the eight questions will be set from the four units uniformly i.e. two from each unit. The candidate will be required to attempt five questions in all selecting one question from each unit and the compulsory one. All the questions will carry equal marks except the compulsory question, the distribution of marks for which will be as follows:-
 B.Sc.8 marks and B.A. 6 marks.

UNIT-I

Index Number : Definition, problems involved in the construction of index numbers, calculation of index numbers- simple aggregate method, weighted aggregates method, simple average of price relatives, weighted average of price relatives, link relatives, chain indices, value index numbers, price and quantity index numbers.

UNIT-II

Laspeyre's, Paasche's, Marshall- Edgeworth and Fisher's index numbers, time and factor reversal tests of index numbers, consumer price index number and its uses. Base shifting, splicing and deflating of index numbers.

UNIT-III

Time Series Analysis : Definition, components of time series-trend, seasonal variations, cyclic variations, irregular component, illustrations, additive and multiplicative models, determination of trend: graphic method, semi- averages method, method of curve fitting by principle of least squares, moving average method. Analysis of seasonal fluctuations, construction of seasonal indices using method of simple averages, ratio to trend method and ratio to moving average method.

UNIT-IV

Demographic methods : Sources of demographic data- census, register, adhoc survey, hospital records, measurement of mortality, crude death rate, specific death rate, standardized death rates, complete life tables and its main features, assumptions, descriptions and construction of life tables, uses of life tables, stationary and stable population, measurement of fertility- crude birth rate, general fertility rate, specific fertility

rate, total fertility rate, measurement of population growth, gross reproduction rate, net reproduction rate.

Books recommended

S. No.	Title of Book	Name of author	Publisher
1.	Applied General Statistics	Croxton F.E., Cowden D.J. & Kelin S.	Prentice Hall
2.	Demography	Cox P.R.	Cambridge Uni. Press
3.	Technical Demography	Ramakumar R.	New Age International
4.	Fundamentals of Applied Statistics	Gupta S.C. & Kapoor V.K.	Sultan Chand & Sons