Stat-Lab 216 Statistical Data Analysis III

50 Marks: 02 Credits

Number of Class: 20-25

Group A (Demography): 20Marks

Presentation of Population and Demographic Data by Graphs and Charts, Computations of Population Change and Growth Rates, Analysis of Age and Sex Data, Computation of Aging Indices, Evaluation of Age and Sex Data by Whipple's, Myer's and UN Age Sex Accuracy Indices, Analysis of Marital Status Distribution, Marriage and Divorce Rates, Computation of Different Measures of Fertility and Reproduction from Vital Registration and Census Data (such as CWR, CBR, ASFR, ASMFR, TFR, GFR, GRR, NRR and PPR), Computation of Different Measures of Mortality CDR, ASMR, IMR, Neonatal, Prenatal Death Rates, Standardization of Birth, Death, Marriage and Divorce Rates, Construction of Complete and Abridged Life Tables by different Methods, Computation of Migration Rates, Estimates of Migration by Survival Methods, Population Estimates and Projection using Mathematical Methods

Group B (Sampling Technique):20 Marks

Drawing Samples by Simple Random Sampling, Stratified Sampling, Systematic and Cluster Sampling. Estimation of Parameters in Each Case. Estimation of Variance of Estimates, Estimates of Parameter, Determination of Precision of Estimates, Relative Efficiency of Different Sampling Scheme.

Ratio, Difference, Regression and Product Methods of Estimation, Estimation for Population Total, Mean, Variance and Proportion.

Group C (Numerical Analysis): 10 Marks

Newton’s Forward and Backward Interpolation Formula, Newton’s General Interpolation Formula, Lagrange’s Interpolation Formula, Central Difference Interpolation Formula, Inverse Interpolation Formula, Numerical Integration (Simpson’s Rule, Weddle’s Rule, Trapezoidal Rule, Euler Maclaurence Formula.

Solution of Equation by Graphical Method, Bisection Method, Method of False Position, Newton Raphson Method, Method of Iteration.
Problems Related to Course STAT-111