

**Syllabus for Ph.D. Entrance Test**

**(Economics)**

**Research Methodology**

**2018-2019**

**Unit-1:** Nature, purpose and limitations of scientific research, Approaches to research; Deductive and Inductive methods, Types of research, Formulation of research problem- identification and operationalization of the problem, Survey of literature, Development of working hypotheses, Preparation of research design. Investigation in availability of information. Sampling design; error minimization; evaluation of time and cost, Hypothesis testing, interpretation and generalization, systematization of findings.

**Unit-2:** Population and samples, sampling techniques, Sampling and non-sampling errors, Sample size, Limitations of sampling. Sources of data: Primary data, Secondary data, Methods of data collection, Design of questionnaire, Problems in data collection, Data processing- operations and problems in data processing. Measurement and scaling techniques. Measures of Central Tendency, dispersion, skewness, kurtosis and their measurement, Correlation and types, Regression, Index Number, Time series analysis, Analysis of Variance, Interpolation and Extrapolation.

**Unit-3:** Simple and General Linear Regression Model; Theoretical distribution-Binomial, Position and Normal Distribution, Statistical Inference, Testing of hypothesis and Estimation, Standard Error, confidence level, P-Value, Test of Significance for Attributes, small and large samples, students t-distribution, F-test, Chi square test and goodness of fit, Z-test.

**Readings:**

1. Kothari. C. R. Research Methodology
2. Kurien, C.T. (ed.), A Guide to Research in Economics
3. Ghosh. B.N., Scientific Methods and Social Research
4. Foercese, D.P. and Richer, S., Social Research Methods
5. Feeber, R and Verdoorn, P.J., Research Methodology in Economics and Business.
6. Wilkinson, T. S. and Bhandarker, P.L. ,Methodology and Techniques of Social Research
7. Yamane, T., Statistics: An Introduction Analysis
8. Das, R.K. and Nagar, A.L., Basic Statistics
9. Spiegel, M.R., Theory and Problems of Statistics (Schaum's outlines Series)
10. Asthana and Braj Bhushan: Statistics for Social Sciences (with SPSS applications), PHI.