

## **Syllabus for Pre-Registration Qualifying Entrance Examination for Ph.D (Education)**

### **Unit I Research in Education – Introduction**

Meaning , Purpose and Significance of Educational Research – Kinds of Educational Research : Basic, Applied and Action research – meaning, characteristics and methodological procedure of qualitative and mixed research - its advantages and limitations.

### **Unit II Formulation of Research Problem**

Criteria and sources for identifying research problem – Delineating and operationalising variables, Review of Related Literature: Importance and various sources in including internet. - Hypothesis: Concept, characteristics of a good hypothesis, sources and types of hypothesis.

### **Unit III Methods, Sampling, Tools and Technique**

Descriptive research, Ex-post facto research - Historical research - Experimental research: Experimental Designs - Qualitative Research: Scope and areas of application - Concept of population and sample - Steps and characteristics of a good sample - Sampling errors and how to reduce them - Various techniques of sampling: Probability and non-probability - Characteristics of a good research tool - Types, characteristics and uses of research tools: Questionnaire, Interview, Observation.

### **Unit IV Computer applications and Statistics**

Use of word processing, spread sheet and database software. Plotting of graphs. Internet and its application: E-mail, WWW, Web browsing, acquiring technical skills, drawing inferences from data, Introduction to Statistics – Probability Theories - Conditional Probability, Poisson distribution, Binomial Distribution and Properties of Normal Distributions, Estimates of Means and Proportions; Chi Square Test, Association of Attributes t Test –Anova, Standard deviation Coefficient of variations. Co relation and Regression Analysis.

### **Unit V Structure and components of Scientific Reports**

Types of Report – Technical Reports and Thesis – Significance – Different steps in the preparation – Bibliography, Referencing and foot notes –Importance of Effective Communication. Preparing Research papers for journals, Seminars and Conferences – Design of paper using TEMPLATE, Calculations of Impact factor of a journal, citation Index, ISBN & ISSN. Preparation of Project Proposal - Title, Abstract, Introduction – Rationale, Objectives, Methodology – Time frame and work plan – Budget and Justification – References, Documentation and scientific writing, Results and Conclusions, Preparation of manuscript for Publication of Research paper, Presenting a paper in scientific seminar, Thesis writing. Structure and Components of Research Report, Types of Report: research papers, thesis, Research Project Reports, Pictures and Graphs, citation styles, writing a review of paper, Bibliography.