

# **Gautam Buddha University, Greater Noida**

## **Syllabus for Entrance Examination (GBU-ET) for Ph.D. (Applied Psychology) of Research Methodology**

### **1. Nature and Scope of Educational Research**

- Scientific inquiry, scientific method, nature and sources of knowledge.
- Meaning, Nature, Need and Scope of Educational Research.
- Fundamental, Applied and Action Research.
- Some emerging trends in educational research.

### **2. Formulation of Research Problem**

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

### **3. SAMPLING**

- Concept of population and sample
- Steps and characteristics of a good sample
- Sampling errors and how to reduce them
- Various methods of sampling: Probability and non-probability

### **4. TOOLS AND TECHNIQUES**

- Characteristics of a good research tool
- Types, characteristics and uses of research tools: Questionnaire, Interview, Observation

### **5. Descriptive Statistics**

- Nature of educational data, Scales of measurement
- Measures of Central Tendency: Mean, Median and Mode
- Measures of Dispersion: Range, Quartile Deviation, Average Deviation, Standard Deviation.
- Measures of Relative Position: Percentiles and Percentile Ranks

### **6. Major Approaches to Research**

- Descriptive research, Ex-post facto research
- Historical research
- Experimental research: Experimental Designs
- Brief description of Qualitative Research: Scope and areas of application.

## **7. Research Report**

- Developing a research proposal (synopsis)
- Research Report: Characteristics and Steps in report writing.

## **8. Measures of Relationship and NPC**

- Meaning, Assumption, Computation and Uses of:
- Product Moment Correlation
- Rank Difference Correlation
- Normal probability Curve: Meaning and Characteristics, Skewness and Kurtosis

## **9. Inferential Statistics**

- Null Hypothesis, Type I and II errors, one and two tailed tests
- Standard error, Confidence limits.
- t-test: Significance of difference between Means, proportions and percentages (Independent samples)
- F-test-One-way ANOVA – Concept, assumption, computation and uses

## **10. Non Parametric Tests**

- Chi-square Test of Equality and Independence: Concept, Computation, and uses.

## **Syllabus for Entrance Examination (GBU-ET) for Ph.D. (Applied Psychology) of Subject Awareness**

- Learning
- Perceptual Process
- Memory
- Thinking and Problem Solving
- Motivation
- Classification Systems & Major Theoretical Approaches to Abnormal Psychology
- Psychology Disorders & Approach to Psychopathology
- Other Disorder & the theoretical Approaches
- Concept of research, Methods of inquiry, Type of Research
- Hypothesis Testing
- Sampling Techniques
- Research Designs
- Parametric & Nonparametric Statistical test in Research
- Methods of Data Collection
- Scaling Techniques & Criteria for Selecting Appropriate Statistical Test of analysis
- Research Report Writing
- Applied Social Psychology in India: Challenges & Possibilities, Applied Social Psychology in Developing countries need for Indian Generation
- Environmental Factors Influencing Behaviors, and human Behavior influencing environment
- Social Problems- Aggression, terrorism
- Behavior and health