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PG DEPARTMENT OF EDUCATION

Pre PhD Course Work

Paper –I

Research Methodology and Statistics in Education

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Marks: 100

Pass Marks: 50

Credit: 04

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Unit -1

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- Research problem - Sources of research problem, Evaluation of the problem, definition and statement of the problem
- Hypothesis: Characteristics, Formulation, types
- Review of Related Literature: Need and purpose, Sources, Method of literature search (Search Engine/ abstracting and indexing services, Bibliography)
- Research Proposal- purpose and format

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Unit - II

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- Sampling: Population and sample, Characteristics of good sample, Methods of Sampling: Probability sampling (simple random, cluster, systematic and stratified, multi stage) Non probability, sample size Errors in sampling and how to reduce them.

- Experimental Research – Characteristics, steps merits & demerits Validity of experimental Design (internal and external validity) Experimental design- pre-experimental design, experimental design, factorial design, Quazi experimental design & time series design

- Qualitative Research: Meaning, characteristics. Reasons for conducting qualitative research, types (Biographical, Phenomenological, Ethnography, grounded and case study), steps for conducting qualitative studies.

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UNIT -III

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- Writing Research Report – Purpose, format and style of writing research report.

- General rules of report writing
- Analysis of Quantitative Data: Concept and types of correlation coefficient. Assumptions, Uses of Biserial, Point Biserial, tetrachoric, Phi- coefficient, partial order (upto 2nd order) and Multiple Correlations.

- Analysis of Variance Concept, Assumptions. Computations upto three way ANOVA, Analysis of Covariance (ANCOVA)
- Parametric and Non parametric techniques: concept, difference between Parametric and non parametric techniques, Assumptions, of Chi square. K.S. Test and Median Test
-                 Analysis of Qualitative Data :– Content Analysis, Logical analysis, Inductive analysis

UNIT- IV

Computers

- Uses of Computer: - MS Office, (Word, Excel & Power Point, their use in data analysis.)
- Tracing ten sites of research area with addresses and a write up to be prepared about new issues taken up by them.
- Using E- journals and preparing ten abstract of the area chosen

Note: There will be 8 questions in the paper out of which 5 questions are to be attempted. The paper shall be of 3 hours

References:-

1. Borg W.R. and Gall O M: Educational Research Introduction to Educational Research Longman New York 1979.

2. Ebel R.I.: Measuring Educational Achievement, Prentice Hall Pvt. Ltd. New Delhi, 1966

3. Fox D.J.: The Research Process in Education. Holt, Rinchart and Winston, New York, 1969

4. Tuckman B.W. Conducting Educational Research, Harcoourt Brace

Jovanovich Inc., New York, 1973.

Paper II

Maximum Marks: 150
Pass Marks: 75

Credit: 06

Pre PhD Course work

A. Philosophical and Cross Cultural Studies

1. Sociological & Philosphical perspectives:

Socio Historical contexts of the educational programs & policies since independence; Theories of Sociology : Post Modernism in Education - Concept and implications ; social & Technological Changes & its impact on the Context, delivery of content in classroom, Multi Culturalism in Education

2. Higher Education & use of Technology:

Education – Higher education & its role in India vis a vis to Globalization, privatization & liberalization; policies & documents on Higher education & role of the policy Making bodies like UGC: & NCTE. Yash Paul Committee on Higher Education.

B. Teacher Education

1. a) Professional growth: Pre – service and In-service Education and Training

   b) Professional Development of Teachers.

   c) Professional Ethics

2. Recommendations of NCFTE 2009

3. Role of Educational Technology in Teacher Education

 - Teaching Strategies – Brain storming, Team Teaching

- Multimedia Features, Impact, Limitation

-   Teacher Education and Open Distance Learning (ODL)

3. Psychological Testing

1. Concept of Psychological Tests.

2. Principal Characteristics of Psych Test or Chief Characteristics, Salient

3. Varieties of Psychological test

4. Current uses of Psychological test.

Use of Psychological test

.Code of Professional Ethics pertaining to psychological tests

.Problems of test administration

. Problems of scoring

. Construction of objectives types test:

   Achievement Test   Intelligence Test

.Procedure of Test Construction

  ➤ Try out of Test items: Items Analysis, Types of items

Paper III

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Maximum Marks -50

Pass Marks-25

Credit: 02

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Research and Publication Ethics

THEORY

- **RPE 01: PHILOSOPHY AND ETHICS**

  1. Introduction to philosophy; definition, nature and scope, concept, branches
  2. Ethics: definition, moral philosophy, nature of moral judgments and reactions

- **RPE 02: SCIENTIFIC CONDUCT**
  1. Ethics with respect to science and research
  2. Intellectual honesty and research integrity
  3. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
  4. Selective reporting and misrepresentation of data

* **RPE 03: PUBLICATION ETHICS**

  1. Publication ethics: definition, introduction and importance
  2. Best practices / standards s   ing initiatives and guidelines: COPE, WANE, etc.
  3. Conflicts of Interest
  4. Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types
  5. Violation of publication ethics, authorship and contributorship
  6. Identification of publication misconduct, complaints and appeals
  7. Predatory publishers and journals

PRACTICE
- **RPE 04: OPEN ACCESS PUBLISHING**
- **1.** Open access publications and initiatives

.Code of Professional Ethics pertaining to psychological tests

.Problems of test administration

. Problems of scoring

SHERPA/ROMBO online resource to check publisher copyright & self-archiving policies

3 Software tool to identify predatory publications developed by SPPU

4 Journal /journal suggestion tools viz. JANE; Elsevier Journal Finder, Springer Journal Suggester, etc.

RPE 05: PUBLICATION MISCONDUCT

A. Group Discussion

1. Subject specific ethical Issues, FEP. Authorship

2. Conflicts of interest

3 Complaints and appeals: examples and fraud from India and abroad

B. Software tools

Use of plagiarism software like Turnitin, Urkund and other open source software tools.

RPE 06: DATABASES AND RESEARCH METRICS

A. Databases

1. Indexing databases

2. Citation databases: Web of Science, Scopus etc.

B. Research Metrics

1. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP,Cit Score.

2. Metrics: h-index, g index, i10 index, altrnetrics