SCHEME OF EXAMINATIONS FOR PRE-PH.D COURSE WORK
(EDUCATION)   2012-13

Programme Structure

       The Pre-Ph.D course work shall comprise of only one Semester (i.e. six months) in which there shall be three compulsory papers.

S.No.	Name of Paper	Theory	Internal Project*	Internal Assessment (Assignments, Attendance & Seminar) **	Max Marks	Time
1	Paper-I Research Methodology	80	-	20	100	3 Hrs
2	Paper-II Statistics in Education	80	-	20	100	3 Hrs
3	Paper-III Computer Applications	50	30*	20	100	1½ Hrs

Grant Total = 300 marks

* In Paper III, students will be required to submit one project and also present in front of the Departmental Committee through power point.

** Each Scholar will be required to present and attend three seminars one in each paper. A seminar for each paper will carry 10 marks and will be attended and evaluated by all the faculty members of the Department.

Likewise, the scholar will be required to submit one assignment in each paper which will be evaluated by the concerned teachers. Each assignment will carry 5 marks. 5 Marks will be for attendance.

Syllabus for Pre- Ph.D Course (Education)

PAPER-I: RESEARCH METHODOLOGY

Time: 3 Hours

Max. Marks: 100
Theory: 80
Internal Assessment: 20

Note: Paper setters will set 9 questions in all, out of which students will be required to attempt 5 questions.

- Q. No. 1 will be compulsory and will carry 16 marks. It will comprise of 4 short answer type notes of 4 marks each to be selected from the entire syllabus.
- Two long answer type questions will be set from each of the four units, out of which the students will be required to attempt one question from each unit. Long answer questions will carry 16 marks each.

COURSE CONTENTS

Unit-1

Formulation of Research Problem
- Sources of Identifying the problem

- Definition of the Problem

- Review of Related Literature

- Hypothesis – Importance, Characteristics and Formulation of Hypothesis, Forms of Hypothesis

- Hypotheses in various types of Research

Methods of Educational Research
- Philosophical Research

- Historical Research

- Descriptive Research

- Experimental Research

Unit-2

Nature and scope of Educational Research
- Sources of Knowledge and Research.

- What is research?

- Scientific Inquiry and Theory Development

- Nature of Educational Research

- Types of Educational Research

- Scope of Educational Research

Sampling
- The concept of Population

- Characteristics of a good Sample

- Methods of Sampling

- Choice of Sampling Method

Unit-3

Data Collection
- Characteristics of a good Research Tool – Validity, Reliability, Usability

- Types of Tools and Techniques and their Uses:-

    i)   Questionnaire

    ii)   Interview

    iii)   Rating Scale

    iv)   Attitude Scale

    v)   Tests- Intelligence, Aptitude, Creativity, Achievement

    vi)   Projective Techniques

    vii)   Observation

    viii)   Socio-metric Techniques

    ix)   Non-Projective Techniques

Unit-4

- **Qualitative Research**

    i)   Meaning, Characteristics and Themes of Qualitative Research

    ii)   Qualitative Research Strategies: Document or Content Analysis, Case Study, Ethnographic Studies

iii)   Data Collection Techniques

iv)   Data Analysis in Qualitative Research

- **Developing a research proposal**
- **Reporting Research**

  - The Beginning

  - The Main Body

  - The End

  - How to evaluate a Research Report ?

Selected Readings:

Ary. D., Lucy C. Jaeobs and A, Razavich (1972) Introduction to Research in Education, New York: Holt, Rinehart and Winston Inc

Best, John W and Kahn, James V (2001), Research in Education, New Delhi: Prentice Hall of India.

Buch M.B (1991) Surveys Research in Education, New Delhi, NCERT

Coffey, A and At Kinson, P (1996), Making Sense of Qualitative Research: Complementary Research Strategies, Thousand Oaks, CA: Sage

Desai H.G. (1979) Stylemanual for dissertation thesis, Rajkot Saurashtar Univerity.

Denzin, N.K. and Lincoln, Y.S. (1994) Introduction: Entering the Field of Qualitative Research in N.K. Denzin and Y.S. Lincoln (Eds), Handbook of Qualitative Research Thousand Oaks, CA: Sage, 1-17

Edward, A.L (1957) Techniques of Attitude Scale Construction, New York: Appleton Century Crofts Inc

Festinger, U & Katz, Research Method in Behavioural Science, New York Bold Dryen

Finchjanel (1986) Research and Policy the use of qualitative methods in Social Education Research Falmer Press

Fox, David J (1969) The Research Process in Education, New York: Holt, Rinchart and Winston Inc

Good, Center V (1966) Essentials of Educational Research: Methodology and Design, New York: Applenton Century Crafts Inc

Kerlinger Fred N (1978)Foundation of Behavioural Research, New Delhi: Surneet Publication

Koul Lokesh (2007) Methodology of Educational Research, Vikas Publishing House Pvt Ltd., Third Revised Edition

Turabian, K. L (1973), A Manual for Writers of Term Papers, Theses and Dissertation, Chicago, University of Chicago Press.

Syllabus for Pre- Ph.D Course (Education)

PAPER-II: STATISTICS IN EDUCATION

Time: 3 hours

Max. Marks: 100
Theory: 80
Internal Assessment: 20

Note: Paper setters will set 9 questions in all, out of which students will be required to attempt 5 questions.

- Q. No. 1 will be compulsory and will carry 16 marks. It will comprise of 4 short answer type notes of 4 marks each to be selected from the entire syllabus.
- Two long answer type questions will be set from each of the four units, out of which the students will be required to attempt one question from each unit. Long answer questions will carry 16 marks each.

COURSE CONTENTS

Unit-I: Analysis of Data

- Types of Data
- Quantitative Data

i) Tabulation of Quantitative Data

ii) Analysis of Quantitative Data

- Graphical Representation
- Measures of Central Tendency
- Measures of Variability
- Measures of Relationship

iii) Qualitative Data

- Analysis of Qualitative Data
- Criticism of Historical Data
- Content Analysis
- Inductive Analysis

Unit-2: Statistical Testing of Hypothesis-I

Classification of Statistical Test: Parametric and Non-Parametric Tests

i) Parametric Test

- Sampling Distribution of Means

  a) Large Samples

  b) Confidence Interval

  c) Levels of Significance

  d) Small Samples

  e) Degree of Freedom

ii) Application of Parametric Test

  a) Application of Z-Test

  b) Application of T-Test

Unit-3: Statistical Testing of Hypothesis-II

- Application of F-test (one way and two way ANOVA)
- Non-Parametric Tests and Application of Chi-Square Test
- Non-Parametric Tests

  a) When to use Parametric and Non-Parametric Tests

  b) Chi-square

     -Use of Chi-square as a Test of 'Goodness of Fit'

     -Use of Chi-square

  c) Contingency Coefficient

  d) Sign Test

  e) Median Test

Unit-4:

- The Normal Curve and its Application
- Analysis of Covariance (one Way ANCOVA) Concept, Assumption and uses
- Factor Analysis: Extraction of centroid Factors and Orthogonal Rotation

Selected Readings:

Edwards, A.L.(1967) Statistical Methods for the Behavioural Sciences, New York: Holt, Rinehart and Winston

Garrett, H.E (1979): Statistics in Psychology and Education, 9th Indian Reprint Bond bay, Vakils, Feffer and Simon.

Guilford, J.P (1973) Fundamental Statistics in Psychology and Education, New York, McGraw Hill Book Company.

Lindquist, E.F (1970) Statistical Analysis in Educational Research, New Delhi, Oxford and IBH

Siegel, Sidney (1956), Non-Parametric Statistics for the Behavioural Sciences, International Student Edition, New York, McGraw Hill.

Walker, H.M and J. Lev (1965) Statistical Inference, Calcutta, Oxford and IBH Publishing House.

Syllabus for Pre- Ph.D Course (Education)

PAPER-III: COMPUTER APPLICATIONS

Time: 3 hours

Max. Marks: 100
Theory: 50
Internal Assessment: 20
Project: 30

Note: Paper setters will set 9 questions in all, out of which students will be required to attempt 5 questions.

- Q. No. 1 will be compulsory and will carry 10 marks. It will comprise of 2 short answer type notes of 5 marks each to be selected from the entire syllabus.
- Two long answer type questions will be set from each of the four units, out of which the students will be required to attempt one question from each unit. Long answer questions will carry 10 marks each.

COURSE CONTENTS

Unit-I:

- Definition of Computer, Block diagram of computers, classification of computers, role of computer in Education.

- Components of Computer

  Hardware {CPU, Monitor, Keyboard etc.)

  Software (DOS, BASIC, COBOL}

Unit-II:

- What is an OS ? Functions of an OS

- OS as a resource manager, Types of OS, Features of OS, Concepts of warm & cold booting, swapping, spooling and buffering.

Unit-III:

MS-office and data Analysis Software

- Word-Introduction of word processor, creating & saving documents.

- Excel-Introduction to excel, need of spreadsheet, creating, opening & saving workbook, editing worksheet, using links, applying different views, Types of functions.

- Power Point – Introduction of slides, speaker notes, media clips, graphs, Picture, web pages, adding different kind of slides, working with Power Point, inserting text objects, formatting Text.

- Introduction to Data analysis software SPSS & application of t-test, Chi-square and ANOVA through SPSS soft-ware.

Unit-IV:

- Introduction

- Evaluating internet resources: Authority, Accuracy and objectivity.

- Brief note on e-books and virtual library.

- UGC-infonet, INFLIBNET and ERNET.

- What is Plagiarism and how to avoid it?