

SIDHO KANHO BIRSHA UNIVERSITY: PURULIA

Syllabus for Ph.D. COURSEWORK for Arts and Commerce

(Framed & Approved Vide Research Sub Committee Meeting dated 13.12.2014, 12.02.2015 & 3.03. 2015)

Paper : 1

Group A : Research Methodology

Full Marks: 50 (25 Lecture Hours)

Characteristics of a good research, Types of research - Quantitative and Qualitative, Nature of research – Pure and Applied Research, objectives of research

Writing a Research Proposal: Preamble/introduction, Problem, Objectives of the Study, Hypothesis, meaning of testing of hypothesis, Difference between objective and hypothesis, Study Design and Structure, Problems and Limitations, Documentation

Formulation of research problem: Review of literature, Significance of literature review, Procedure of review, Identification of research gap, Consideration and formulation of research problems, formulation of research objectives

Differences in methods of data collection in quantitative and qualitative type of research, complete enumeration and sample survey

Sampling – meaning, concept and uses of sampling, Types of Sampling Design with advantages and disadvantages (only theoretical part).

Data Collection, Types of Data, Processing of Data – Editing, Coding and Classification, Tabulation of Data

Techniques of Field Work – Participant and Non-Participant Observation, interviewing

Data Analysis & Research Tools – Measures of Central Tendency and Dispersion, Co-efficient of Variation, Skewness, Correlation and Regression Analysis including Multiple Regression Analysis, Tests of Significance - z test, t-test, F-test, chi-square test and ANOVA.

Report Writing – characteristics of good report, layout of Report, Referencing, Bibliography, Appendices.

Referencing: Endnote Footnote, Different styles of referencing APA, MLA Chicago etc

Group B: Computer Application in Research Work

Full Marks: 50 (25 Lecture Hours)

Computer & Internet: Desktop computers, Block diagram of a computer, Input and output devices, memory and storage devices, Client server, Desktop, Workstation, Parallel and Supercomputing. Different ports of PC's and its uses, Different type of printers. Scanners. Software: OS, Windows OS, Application software. Networking, different LAN and WAN connections, connecting to a network, testing connection, Internet, IP address, Hypertext, Uniform Resource Locator, Web Browsers, Domain Name, Internet Services Providers, Internet Security, Internet Requirements, Web Search Engine, Net Surfing, Internet, Services.

Windows XP/VISTA: Windows concepts, Features, Windows Structure, Desktop, Taskbar, Start Menu, My Computer, Recycle Bin, Windows Accessories- Calculator, Notepad, Paint, Wordpad, Character Map, Windows Explorer.

Word Processing; MS Word: Features, Creating, Saving and Opening Documents in Word, Interface, Toolbars, Ruler, Menus, Keyboard Shortcut, Editing, Previewing, Printing,& Formatting a Document, Advanced Features of MS Word, Find & Replace, Using Thesaurus, Using Auto- Multiple Functions, Mail Merge, Handling Graphics, Tables & Charts, Converting a word document into various formats like- HTML,PDF etc.

Worksheet- MS-Excel: Worksheet basics, creating worksheet, entering into worksheet, heading information, data, text, dates, alphanumeric values, saving & Quitting worksheet, Opening and moving around in an existing worksheet, Toolbars and Menus, Keyboard shortcuts, Working with single and multiple workbook, working with formulae & cell referencing, Auto sum, Coping formulae, Absolute & relative addressing, Worksheet with ranges, formatting of worksheet, Previewing & Printing worksheet, Graphs and charts, Database, Creating and Using macros, Multiple worksheets- concepts, creating and using.

Presentation:

MS Power Point: Creating slide show with animations. Power point screen: screen layout and Views, insert a newslide,applying design template, changing slide layout,reordering and hiding slides, slide show and editing custom slide. Resizing a text box ,Text box properties,Delete a text box,Bulleted lists,Numbered lists,Adding notes,Video and Audio, Adding text Editing options,Formatting text,Replace fonts,Line spacing ,Change case Spelling check, Color schemes,Adding clip art,Adding an image from

a file Editing graphic,AutoShapes,WordArt,Backgrounds, Action buttons, Slide animation, Animation preview.

Data Analysis and Display: Facilities in MS Excel for Data analysis and, display, Other data display software, case study: Origin . Software for Scientific and Statistical Analysis: Case studies : SPSS Database: Creating a Database and simple Querying.

Measures of Central Tendency and Dispersion, Co-efficient of Variation, Skewness, Correlation and Regression Analysis including Multiple Regression Analysis, Tests of Significance - z test, t-test, F-test, Chi-square test and **ANOVA** (with the help of SPSS Software).

References :

1. C R Kothari , Research Methodology: Methods and Techniques , New Age International (P) Ltd. (2010) ,
2. Taylor, B., Sinha, G. And Ghoshal, T.: *Research Methodology: A Guide for Researchers in Management and Social Sciences*, Prentice Hall India, New Delhi.
3. Information Communication Technology by Tim Shortis.
4. Handbook of Communication and Social Interaction Skills by John O. Greene, Brant Raney Burleson
5. Ranjit Kumar, Research Methodology: A Step-by-Step Guide for Beginners, SAGE Publications
6. . Inderpal Singh, Research Methodology and Statistical Methods, Kalyani Publishers, Ludhiana.
7. G Kanji 100 statistical tests, Sage Publications
8. A.S. Gaur & S.S. Gaur , Statistical Methods for Practice and Research (A Guide to Data Analysis using SPSS), Sage Publications
9. Panneerselvam, R.: Research Methodology, Prentice Hall India, New Delhi.
10. Krishnaswamy, K.N., Sivakumar, A. and Mathirajan, M.: *Management Research Methodology: Integration of Principles, Methods and Techniques*, Pearson Education, New Delhi.
11. Srivastava, T. N. and Rego, S.: *Business Research Methodology*, Tata McGraw-Hill Education
12. Rao, A. S. and Tyagi, D.: *Research Methodology with SPSS Statistical Package for the Social Sciences*, Shree Niwas Publications
13. Argyrour, G.: *Statistics for Research with a Guide to SPSS*, SAGE Publications Ltd
14. Kothari, C. R.: *Research Methodology Methods and Techniques*, New Age International (P) Ltd.
15. Burns, R. P. and Burns, R.: *Business Research Methods and Statistics Using SPSS*, SAGE Publications Ltd
16. Wooldridge, J. M.: *Introductory Econometrics: A Modern Approach*, Cengage Learning
17. Gujarati, D. N., Porter, D. C. and Gunasekhar, S.: *Basic Econometrics*, Tata McGraw - Hill Education
18. Maddala, G. S. and Lahiri, K.: *Introduction to Econometrics*, Wiley Publication

Paper :2

Term Paper (Full Marks – 100)

There will be a term paper/ dissertation which shall be on Literature Survey / Literature Review / Book Review related to the field of research work of the candidate . The candidate will have to face Viva-Voce before an external subject expert and the research supervisor, where questions will be asked on the area of his/her research interest and the said Literature Survey / Literature Review / Book Review done by him/her.

Syllabus for Ph.D. COURSEWORK for Science

(Framed & Approved Vide Research Sub Committee Meeting dated 13.12.2014, 12.02.2015 & 3.03. 2015)

Paper : 1

Group A : Research Methodology

Full Marks: 50 (25 Lecture Hours)

Course
Introduction to Research Methodology: Meaning of Research, Objectives of Research, Motivations in Research, Types of Research, Research Approaches, -3L
Significance of Research, Research Methods v/s Methodology, Research and Scientific Methods, Research Process, Criteria of good Research. -3L
Defining the Research Problem: what is Research Problem? Selecting the problem, Necessity of and Techniques in defining the problem. -3L
Developing a research plan: Meaning characteristics of Research, The nature of educational research, Basic and applied research. -3L
Review of Literature: Purpose of the Review, Identification of the related Literature, Organizing the related Literature-3L
The Research Report: General format of the Research report, style and formatting of writing, typing of the research report, proof reading of the final draft of the research report. -3L
Analysis of data: Various measures of relationship often used in research studies, Correlation coefficients. -3L
Chi-Square test: Definition of chi-square test. Significance in Statistical analysis. -3L

Group –B : Computer Applications in Research Work (Both Theoretical and Practical)

Course
Basic of operating systems – handling operating systems, Latex -3L
Literature survey using web, handling search engines -3L

Computer usage for collecting/ analyzing data – simulations using Fortran/ Matlab/C/SPSS-3L+3L
Preparing presentations: i) Research papers: Using word processing software – MS Word, Seminar presentations – Power point for oral and poster presentations – 3L
Drawing graphs and diagrams – Origin/Excel/others, <i>Figure Plotting</i> : Figure insertions in documents -3L+3L
Basics of a measurement and its interpretation, mean, standard deviation, variance, correlation coefficient <i>Curve Fitting</i> : Linear and Non-linear fitting of data. -3L

References :

1. C R Kothari , Research Methodology: Methods and Techniques , New Age International (P) Ltd. (2010) ,
2. Taylor, B., Sinha, G. And Ghoshal, T.: *Research Methodology: A Guide for Researchers in Management and Social Sciences*, Prentice Hall India, New Delhi.
3. Information Communication Technology by Tim Shortis.
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5. Ranjit Kumar, Research Methodology: A Step-by-Step Guide for Beginners, SAGE Publications
6. . Inderpal Singh, Research Methodology and Statistical Methods, Kalyani Publishers, Ludhiana.
7. G Kanji 100 statistical tests, Sage Publications
8. A.S. Gaur & S.S. Gaur , Statistical Methods for Practice and Research (A Guide to Data Analysis using SPSS), Sage Publications
9. Panneerselvam, R.: Research Methodology, Prentice Hall India, New Delhi.
10. Krishnaswamy, K.N., Sivakumar, A. and Mathirajan, M.: *Management Research Methodology: Integration of Principles, Methods and Techniques*, Pearson Education, New Delhi.
11. Srivastava, T. N. and Rego, S.: *Business Research Methodology*, Tata McGraw-Hill Education
12. Rao, A. S. and Tyagi, D.: *Research Methodology with SPSS Statistical Package for the Social Sciences*, Shree Niwas Publications
13. Argyrous, G.: *Statistics for Research with a Guide to SPSS*, SAGE Publications Ltd
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15. Burns, R. P. and Burns, R.: *Business Research Methods and Statistics Using SPSS*, SAGE Publications Ltd
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17. Gujarati, D. N., Porter, D. C. and Gunasekhar, S.: *Basic Econometrics*, Tata McGraw - Hill Education
18. Maddala, G. S. and Lahiri, K.: *Introduction to Econometrics*, Wiley Publication

Part of Resolutions of Ph.D. Committee Meeting dated 26/2/2016 related to Paper -2 of Course Work Syllabus

It is resolved that the Paper -2 (carrying 100 marks) of the Course Work shall either include Dissertation/ Literature Review of 100 marks or it may be a combination of Dissertation/ Literature Review part carrying 50 marks and subject development part carrying 50 marks.