

Faculty of Arts
Syllabus for Ph.D. Course Work Paper – I
(Research Methodology)

1.0 Course Paper :

Paper - I : Research Methodology

Paper - II : Recent Advances in the Subject

Paper - III : Specializations in the Subject

2.0 Organization Of Course Papers

2.1 Paper – I : shall be organized by the Dean/Campus Dean of the Faculty

2.2 Paper – II : shall be organized by the respective Head/Campus Head of different departments of the faculty

2.3 Paper – III : shall be organized by the teacher(s) who have offered to supervise Ph.D work in a particular specialization area.

3.0 Syllabi

3.1 Paper – I : Research Methodology

FACULTY OF ARTS

Unit-I : Fundamentals of Research

Nature and significance of Research, Identification and Formulation of Research Problem, Hypotheses, Research Questions, Research design, Review of Literature

Unit-II : Research Types and preparation of Synopsis

Historical Research, Descriptive Research, Survey Research including Case Studies, Scientific Research; Preparation of a Research Synopsis

Unit-III : Research Methodology : Data/ Literature

Collection and Generation Sampling theory, Types of Sampling, Steps in Sampling Sample Size, Advantages and Limitations of Sampling. Sample Size, Advantages and Limitations of Sampling. Collection of Data: Primary Data and Secondary Data, Limitations and Cautions.

Unit-IV : Computer Application, Data/Literature Processing and Analysis Summarization of Data, Variability, Regression and Correlation Analysis, Probability Tests.

Unit-V : Report Writing

Writing – organizing the writing, drafting the manuscript, style, Preliminaries-preface and acknowledgement, list of tables and illustrations; The Text-chapters and sub-headings, quotations, use of numbers abbreviations, footnotes, table and illustrations, pagination; References, Appendix, Bibliography.

References:

- R.P. Mishra, Research Methodology, A Hand Book, Concept Publishing Company, 2002.
- J.M.D. Morton and S.W. Cook, Research Methods in Social Relations, New York, Dryden, 1951.
- Blaxter, L. Hughes, C & Tight, M., How to Research, Viva Books, Pvt. Ltd., New Delhi, 1999.
- De Vaus, D.A., Surveys in Social Research, Rawat Publications 2003.
- May, Tim Social Research: Issues, Methods and Process, Open University Press, 2001.
- Henn, M. Weinstein .M. & Foard, N., A Short Introduction to Social Research, Visitaar Publications 2006.

Boyatzis, R.E., Transforming Qualitative Informing, SAGE, 1998.

Thankur, D., Research Methodology in Social Sciences, Deep & Deep Pub. Pvt. Ltd., 2005.

McNiff, J. & Whitehead J., Action Research: Principles and Practices, Rutledge Flamer, London, 2002.

Broota, K.D., Experimental Desings in Bechavioural Research, New Age International Pub., 2006.

Kanji, G.K. 100 Statistical Tests, SAGE 2006.

Best, J.W. & Kahn, J.V., "Research in Education", Prentice Hall of India, 2000.

Kumar, R. Research Methodology SAGE, New Delhi, 1999.

Mohan, R. Research in Education, Neel Kamal Pub. Pvt. Ltd., 2003.

Shepard, K., Presenting at Conferences, Seminars and Meeting, Response Books, New Delhi, 200.

Garett, H.E., Statistics in Psychology and Education Paragon International Publishers, 2004.

Lowenthal, K.M., An Introduction to Psychological Tests and Scale, Psychological Press (Indian Reprint), 2000.

Freeman, F.S. Theory and Practice of Psychological Testing, Oxford & IBH Pub. Co Ltd. New Delhi, 1955.

Kothari, CR (1995) Research Methodology: Methods and Techniques, Wishwa Prakashan, New Delhi.

Mishra, S.K. and Binwal, J.C., Computer Applications in Social Science Research, Vikas Publication Co. Delhi, 1991.

Bhattacharya, D. K., Research Methodology Excel books New Delhi-10028, 2006.

Kapil, H.K., Research Methodology. Bargawa Book Deepo, Agra.

MLA Handbook for Writers of Research Papers, Seventh edition New Delhi : Affiliated East- West Press, 2009.

Kumaun University Nainital
Department and Faculty of Commerce & Management
Syllabus for Ph.D. Course Work Paper – I
(Research Methodology in Commerce & Management)

Paper-I: Research Methodology in Commerce & Management

Contents:

Nature of scientific research: Quantitative and qualitative approaches
Role of research in functional areas of business – Accounting, finance, Marketing, Human Resource Management, Planning and business management
Research Method, Research Methodology and Research Process.
Defining Research Problems, Setting Objectives, Formulating Hypothesis,
Research.
Design, Sample Design.
Business Surveys – Collection of Primary and Secondary data, Design of questionnaire.
Data processing – Classification, Tabulation. Editing.
Analysis and Interpretation of Data: Uni – variate, bi-bivariate and multi-variate analysis.
Report Writing: Categories of Report, Parts of Report, Presentation of a Report

Suggested Readings:

- (1) Blaxter, L. Hughes, C & Tight, M., “How to research” Viva Books, Pvt Ltd., New Delhi, 1999.
- (2) De Vaus, D.A., “Surveys in Social Research”, Rawat Publications, 2003.
- (3) May, Tim, “Social Research: Issues, methods and Process”, Open University Press, 2001
- (4) Henn, M., Weinstein, M. & Ford, N., “A short Introduction to Social Research”, Vistaar Publications, 2006.

- (5) Boyatzis, R.E., “Transforming Qualitative Informing”, SAGE, 1998.
- (6) Thakur, D. “Research Methodology in Social Science”, Deep & Deep Pub. Pvt. Ltd., 2005.
- (7) McNiff, J. & Whitehead, J., “ Action Research: Principles and Practices”, Routledge Falmer, London, 2002.
- (8) Broota, K.D., “Experimental Designs in Behavioural Research”, New Age International Pub., 2006.
- (9) Kanji, G.K., “100 Statistical Tests”, SAGE, 2006.
- (10) Best, J.W. & Khan, J.V., “Research in Education”, Printice Hall of India, 2000
- (11) Kumar, R., “ Research Methodology”, SAGE, New Delhi, 1999.
- (12) Mohan, R., “Research in Education”, Neel Kamal Pub. Pvt. Ltd., 2003.
- (13) Shepard, K., “Presenting at Conferences, seminars and Meetings”, Response Books, New Delhi. 2005
- (14) Garrett, H.E., “Statistics in Psychology and Education” Paragon International Publishers, 2004
- (15) Lowenthal, K.M., “An introduction to Psychological Tests and Scales” Psychological Press (Indian Reprint), 2003
- (16) Freeman, F.S. “Theory and Practice of Psychological Testing”, Oxford & IBH Pub. Co. Ltd., New Delhi, 1955.

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Sanskrit)

संस्कृत

प्रश्न-पत्र द्वितीय – विशिष्ट अध्ययन (Recent Advances in the subject)

- (क) संस्कृत वाङ्मय का संक्षिप्त परिचय – वेद, व्याकरण, साहित्य, साहित्यशास्त्र, दर्शनशास्त्र।
- (ख) वाल्मीकि, व्यास, भास, कालिदास, भवभूति, भारवि, माघ आदि प्राचीन संस्कृत साहित्यकारों का परिचय।
- (ग) अम्बिकादत्त व्यास, लोकरत्नपन्त गुमानी, विश्वेश्वर पाण्डेय, मथुराप्रसाद दीक्षित, डॉ० श्रीधरभास्कर वर्णेकर, डॉ० सत्यवृत्त शास्त्री आदि आधुनिक संस्कृत साहित्यकारों का संक्षिप्त परिचय।
- (घ) वर्तमान समय में प्रकाशित होने वाले संस्कृत रिसर्च जर्नल एवं समाचारपत्रों की जानकारी

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Sociology)

SOCIOLOGY

Paper II: Recent Advances

Mean nature and types of sociological theory, Structural – functional theory, Status and Role theory
Mobility theory – migration (emigration, immigration)
Modernization-Concept and indicators of modernization, Tradition and Modernity,
Social Change-Patterns and theories of social change, Sanskritization and Westernization
Development –Social, Human and sustainable development, Indicators of development, Theories of development
Globalization, Ethno-methodology, Phenomenology

Syllabus for Ph.D. Course Work in Statistics
Paper – II (Recent Advances in Statistics)

1. Sampling Theory Small area estimation. Controlled selection
2. Composite Hypothesis Testing
3. Analysis of Survey Data – Regression Analysis. Categorical analysis
4. Bootstrapping Jack Knifing
5. Fractional Factorial Designs
6. Bayesian Estimation Procedures for reliability and sequential estimation
7. Estimation through Simulation techniques/Programming with R – software
8. Markovian Processes – Discrete and Continuous Markov Chain

Tourism Syllabus for Pre Ph.D. Course Work

Management and Organisational Behaviour: Introduction: Evolution of management Thought- Classical, Behavioural and Management Science Approaches; The Hawthorne Studies; Systems and Contingency Approach for Understanding organizations; Application of Management thought to the current scenario; Fundamental Concepts of Organizational Behaviour; The role of OB in Management; Managerial Process, Functions; Managerial Skills and Roles in Organizations. Foundations of Individual Behaviour: Personality Meaning; Development of Personality; Personality Determinants; the “Big Five” Personality Traits; Emotional Intelligence. Perception-Nature and importance, Factors influencing perception, managing the perception process, learning: Components of learning process; Theoretical process of learning Classical Conditioning; Operant Conditioning; Cognitive and Social Learning Theory. Attitude: Nature and dimensions; Components and functions of attitude, Formation and attitude change. Motivation in organizations: Nature and importance; The Motivational framework; The content theories of work motivation-Maslow’s Need Hierarchy Theory; The Dual Structure Theory of Motivation; Process theory of work motivation-Vroom’s Expectancy Theory; J.Stacy Adam’s Equity Theory.

Travel Agency Management & Tour Operations: Travel Agency: History and growth of travel agency business, emergence of Thomas Cook. Emergence of Travel Intermediaries, Indian Travel agents and tour operators-An overview; Definition of travel agent and tour operator; differentiation, interrelationship of TA/TO and principles of present business trends and future prospects, problems and issues. Setting up a Travel Agency: Market research, sources of funding Comparative study of various types of organization proprietorship, partnership, private limited and limited, Government rules for getting approval. IATA rules, regulation for accreditation, Documentation, Sources of earning: commissions, service charges etc. Tour Operation: Definition-concept- History and Growth of Tour Operation business. Types of Tour Operators. Organizational Structure, Forms of Organization, Departments and its functions. The Process of travel decision making, Mode and Destination selection. Reservation and cancellation procedures for Tour related services-Hotels, Airlines, Cruise Liners, Car rentals and Rail travel. Commission Structures from Suppliers of Service. Tour Documentations & Distribution: Voucher-Hotel and Airline Exchange Order, Pax Docket, Status Report, Daily Sales Record, AGT Statements-Credit Cards-Importance and Future. RBI Regulations for Tour Operators. Managing Tour Operation. Field Operations-inbound and outbound. Managing Distribution, Role of Distribution in exchange process and Distribution System in Tourism Operation. Management of Inhouse operations. Itinerary preparation, important considerations for preparing itinerary, costing, packaging and promotion.

Tourism Geography Tourism Geography & Resource Mapping in Tourism: Fundamentals of Geography, Importance of Geography in Tourism, Weather and Climate, Climatic Regions of World, Map and its types, Map Science and its role in tourism, Remote Sensing & Geographical Information System and their application in Tourism. Occidental Tourism Geography:

Destination knowledge of North America: United States of America, Canada, Mexico; Central America: Costa Rica; South America; Europe: Spain, Austria, Greece, Switzerland. Oriental Tourism Geography: Destination Knowledge of Africa: South Africa, Kenya; Middle East: Saudi Arabia United Arab Emirates; North & East Asia/ Pacific: China, Malaysia, Australia, and South Asia: India, Bhutan.

5. Hospitality Management: Hotel Organization: Hotel; Meaning & Definitions, Classification of Hotel, Hotel Tariff Plans Hotel Types of Guest Rooms. – Star Rating of Hotels, Regional, National, International Hotel Associations and their Operations. Organizational Structure. Front office Operations: Main Sections of Front Office - Front Desk, Reception, Information, Cashier desk, Guest Relations Desk, Porter's Desk, Concierge Desk, Back office, Reservation Desk, Business Centre, Front office Techniques Front office lay out and activities, guest activities in hotel reservation, role of reception- Role of Front Office Manager and Personnel, registration procedure, handling guests on arrival, Billing and departure activities. Food and Beverage and Housekeeping Department: Catering establishments and its types, Restaurant and its types. Menu-Meaning and types, Classification of beverages, Order taking procedures. F&B Department in a Hotel and its functional areas. House Keeping Department; Functional areas of Housekeeping department; Various Guest Services of this department.

Tourism Marketing: Introduction: Tourism Marketing and its basic concepts, issues and challenges in tourism marketing, Marketing environment: macro and micro environmental factors affecting tourism concept of Marketing, Mix, Marketing information system, tourism Markets. Buyer Decision and STP: Buyer decision process: Concept and process, Tourist buyer decision process: Mathieson and Wall Model, Stanley Plog's Model of Destination Preferences, Market segmentation-Need, Bases for segmentation, Market targeting, Market positioning, Targeting, Demand forecasting. Marketing Strategies: Meaning and types of tourism product, Managing tourism products, new product development, Destination Development, Product lifecycle, Brand decisions. Tourism Pricing: Concept, Factors influencing pricing, Methods of price fixation, pricing strategies. Tourism Distribution, Distribution chain/Channel. Tourism Promotion: Concept, Promotion mix and its components, 5th P in Tourism: People: Service encounter quality, Managing people and encounters in tourism experience, Process: Elements, Managing process in tourism, Capacity and demand management, Physical evidence: Concept, role & components, Inter Marketing and its process, Customer loyalty.

Tourism Policy, Planning and Development: Introduction: Concept of Policy, Formulating tourism policy, Role of government, Public and private sectors in the formulation of Tourism Policy, Role of international multinational, state and local tourism organizations in carrying out tourism policies. Tourism Policy in India: An outline of L.K. Jha Committee – 1963, Study of National Tourism Policy 1982 and 2002, National Action Plan of Tourism, 1992, The Concept of National Tourism Board, Investment Opportunities and Government Policy for investment in hotel/tourism industry. Incentives & concessions extended for tourism project. Understanding Tourism Planning: Conceptual meaning of Tourism Planning, Evolution of Tourism Planning,

Tourism Planning at international, national, regional, state and local level, Role of public and private sectors in Tourism Development, Public Private Partnership model in Tourism (PPP). Planning Process and Techniques: Techniques of Plan Formulation, Planning for Tourism Destinations- Objectives, methods and factors influencing planning. Carrying Capacity in Tourism Development, Tourism Area Life Cycle (TALC), Destination Development Process, Design considerations in the Tourism Development, Demonstration Effect – Dexey's Index in planning.

Research Methodology: Research Design: Meaning and significance of research, types of research, research ethics in social science research. Research design, important features, & steps. Types of research design, selection and formulation of research problem. Hypothesis: Nature & its role in social science. Testing of Hypothesis – Parametric and Non – Parametric Test Measurement and scaling techniques. Sampling Design: Census and sample survey, sampling techniques or methods, sample design and choice of sampling techniques, sample size, sampling & non – Sampling errors, Data collection: Methods of collecting primary data, Various types of primary data. Data Processing: Introduction, editing of data, classification and coding of data, transcription, tabulation, graphical presentation of data. Data analysis; Measures of Central Tendency and Dispersion – Normal Distribution Correlation and χ^2 Regression Analysis; t-test; F-test, Analysis of variance (ANOVA), Chi-Square (χ^2), Data Interpretation; Report Writing and Presentation, Art of citing references.

Accounting and Finance for Tourism Managers: Introduction: - Concept and objectives, Accounting as source of information for tourism managers, internal and external users of Accounting information and their needs. Generally Accepted Accounting principles – Accounting concepts and conventions. Journal and Ledger Posting: Accounting Cycle in tourism organizations; Double entry systems of accounting and usage of debit/credit in accounts; Recording of transactions; Books of original entry, Journal: Subsidiary books – Cash Book, Purchases book, Sales Book; Ledger: Meaning, utility format; posting from journal and Subsidiary books. Final Accounts: Trail Balance: Meaning, Objectives and Preparation. Meaning features, uses and preparation. Meaning, features, uses and preparation of Trading Account, Profit & Loss Account and Balance Sheet of tourism organizations-Adjusting and Closing entries. Depreciation – concept and objectives, Introduction to Finance: Concept, principles that form the basics in financial management, scope, goal of the firm; Time value of money – future value and present value computation, comparing P.V. with F.V; Cost of Capital – concept, significance, determining cost of specific sources of capital, the weighted average cost of capital, Capital Investment Decisions: concept and types of capital expenditures, capital budgeting process, Estimation of Cash Flows for investment analysis, Capital budgeting decision criteria: - pay-back period and post pay-back method, present value and net present value method, internal rate of return: Capitalization and Capital Structure-Meaning, theories of capitalization, over and under capitalization and Capital Structure- Meaning, theories of capitalization, over and under capitalization; concept of capital structure, factors affecting capital structure, relevance of capital

structure-net income approach and traditional approach, Irrelevance of capital structure-net income approach and traditional approach, and MM hypothesis, EBIT EPS analysis, Indifference point computation; Leverage: Financial, Operating leverage and total leverage, Analysis and impact of leverage. Dividend Decision: Purpose of dividend decision, objectives of dividend policy, different dividend policies, forms of dividends, Dividend relevance theories: Walters Model Gordon's Model; Dividend relevance theories-M.M.Hypothesis Valuation: Corporate dividend behavior and value of firm, Valuation of shares and bonds.

Human Resource Management in Tourism: Human Resource Management: Human Resource Management. – Nature, Philosophy, significance and core values of HRM, Evolution of HRM; Challenges facing HRM and Impact of technology on HRM practices. Role of HR managers. The qualities of good HR managers and determining personal effectiveness & sense of efficacy. Who am I exercises? Human Resource Planning: Concept and process: Job Analysis, Methods and purpose of job analysis-job description, job specification and job evaluation. Recruitment Search-process, sources and methods of recruitment. Selection Process. Placement, induction, internal mobility and separations. Performance Appraisal System (PAS): Concept, objectives and uses of PAS. PAS Methods and sources. Appraisal errors. Discipline and grievance handling Mechanism. Manpower Training: Determination training needs, methods and evaluation for operatives training and Management development programmes. HRD climate, OCTAPC culture and HRD mechanism.

Adventure Tourism Management: Introduction: Meaning, evolution, definitions of adventure tourism, core characteristics of adventure tourism, the adventure tourist, the adventure tourism market, management issues in the business of adventure tourism, Guidelines for recognition or renewal for extension as an approved adventure tourism operator. Managing Adventure Tourism at macro level: Conservation and restoration of adventure destinations, adventure tourism for growing biodiversity hot spots, impacts of adventure tourism, management of adventure tourism. Challenges of adventure tourism. River Tourism: River system, Meaning, nature and significance of river tourism, Motivations for river tourism, River expeditions: advantages, limitations, grading, training, experience requirements, Size of river, equipment, Research and planning: cost, map study, water volume, geology, access to support, contingencies, size of party, time management, portages, Administration and Safety guidelines. Wildlife Tourism: Meaning of wildlife, tourism system, primary goals of major wildlife stakeholders, importance of wildlife tourism, zoo tourism, the market of zoo tourism, hunting and fishing tourism, understanding recreational hunter's and fisher's motivations & perspectives, Impact of hunting and fishing impacts of wildlife tourism.

14. Heritage Tourism Management: Introduction: Heritage – Meaning, Types of Heritage Tourism, Cultural Heritage of India – General Features, Sources, Components and Evolution. Tangible and Intangible Heritage, heritage Management Organisations – UNESCO, ASI, ICOMOS, INTACH. Art Galleries, Cultural forms and Museums: Important Museum, Art Galleries and Libraries of India; Performing arts of India: classical dances, folk dances, and folk

culture; Handicrafts & textiles, craft melas; Souvenir industry; fairs and festivals: Social, religious and commercial fairs of touristic significance. Criteria and Types: Criteria for selection as heritage sites, monuments and zone by UNESCO (WHC). Types of Heritage Property. World famous heritage sites and monument in India and abroad. Heritage Management: Objectives and Strategies, Protection, Conservation and Preservation, Constitutional Provisions, Heritage Marketing, Heritage Hotels and its classification. Recent trends in Heritage Tourism.

Strategic Tourism Management: Introduction: Nature, Scope, Significance and process of Strategic Management; Business Strategy; Different forms of strategy; strategy and tactics; Competitive advantages as focal point of strategy; strategic Intent; Dimensions of Strategic Decisions; Corporate level and business level Strategists and their role in Strategic Management, External Environmental Analysis: The General environment and the competitive environment; processes for analyzing the external environment; Internal environmental analysis, Resource – Based view of the firm; developing the company profile-value chain framework; Methods for assessing internal strengths and weakness; SWOT Analysis. Strategy formulation & Implementation: Corporate level Strategies; Expansion Strategies; Retrenchment Strategies; Generic Business level strategies; Expansion Strategies; Retrenchment Strategies; Generic Business level Strategies; Strategic analysis and choice; BCG Matrix; GE-Nine Cell Matrix; Grand Strategy selection Matrix; Model of Grand Strategy Clusters. Strategy Implementation – 7S Framework for understanding implementation issues; Organizational Learning; Structures for Strategies, Organizational Leadership, and corporate culture. Strategic Evaluation and Control.

17. Emerging Trends in Tourism: Introduction: Growth of tourism in recent years. Domestic and global tourist traffic and tourism receipt patterns in contemporary context, Regional distribution of tourist traffic and tourism receipts; Regional disparities and tourism gap. Changing market-destination trends and the determining factors to this effect. Leading tourism markets and tourist destinations of the world. Emerging concepts in tourism: Ethnic tourism (Rural, Urban, Tribal Agri and Farm Tourism etc.) Health and Medical Tourism; Spiritual tourism, Resort and holiday tourism, Green, Eco, and Wilderness tourism. Emerging trend: Factors responsible for changing tourism concepts and tourist demand pattern. Impact of cultural, economic, political technological, environmental and ecological perspectives on tourism, Future perspective & projections of domestic and international tourism; Tourism trends in SAARC region: India's performance in domestic and international tourism; over the years; Existing inbound and outbound tourism trends, Effective and potential tourism markets of India, Reasons responsible for India's poor share In International tourism.

18. Destination Management: Tourism Destination: Definition, Concepts, and Perspectives. Typologies of Tourism Destination, destination Visioning, Destination attractiveness and competitiveness; Destination Management Planning (DMP): concepts, benefits, characteristics, process. Destination Management Organisations (DMOs); Meaning, roles, importance, types; Destination Management Companies (DMCs); performance measurement; two roles of DMOs-

IDD and EMD. Internal Destination Development (IDD); IDD activities; feasibility analysis; integrated quality management of destination; destination benchmarking; destination e-business and information management. External Destination Marketing (EMD); EMD activities; understanding travel trends, destination market research, destination positioning, image and branding; promotion of destination through special events. Destination Marketing Strategy and Plan. Global forces and impacts on destinations-safely and security, health, economic, accessibility. Critical success factors of destination management organizations.

19. Sustainable Tourism Development: Sustainable Tourism Development: Principles, Major Dimensions of Sustainability; Tourism, Environment and Society: Tourism & the Natural Environment; Environmental Impacts of Tourism, Tourism, & Resource Management; Ecotourism Theory & Practice; Tourism, Sustainability & Social Theory. Sustainable Tourism Planning (STP); Meaning & Principles of STP; Basic Concepts in Sustainable Design: Climate analysis, Locality analysis and Site analysis; Carrying Capacity Analysis; Zoning System. Instruments; for Sustainable Tourism: Measurement Instruments;; Command & Control Instruments; Economic Instruments; Voluntary Instruments & Supporting Instruments. Global Initiatives: Global Observatory on Sustainable Tourism (GOST); Global Sustainable Tourism Criteria & Council (GSTC), International Task Force on Sustainable Tourism; Agenda 21 for Travel and Tourism Industry.

20. Entrepreneurship Development in Tourism: Entrepreneurship: concept, meaning, definition, importance, characteristics, Stages in Entrepreneurship Process. Types of Entrepreneurs, Entrepreneurial motivation, entrepreneurial climate. Role of entrepreneurship in economic development, entrepreneurial skill for travel, tourism and hospitality trade; problems of entrepreneurship in travel trade. Factors influencing the development of entrepreneur. Entrepreneurship in Tourism; Identification of opportunities, alternative fields of self-employment in tourism, Business plan, Feasibility Report, Funding options, Organizational Framework for Promotion and Development of Tourism and Travel Business, Venture Creation and Management in tourism. Conceptualizing a Business: Business model; Business Strategy – understanding customers and analyzing competition, Form of organization and legal considerations, networking and collaboration, good business practices. Setting up a tourism enterprise: steps, procedures, licenses, registration etc; Institutional support for Ministry of Tourism GOI/ J&K, MSMEs.

21. Tourist Transport Management: Surface Transport System: Approved tourist transport operators, car hire companies including Renta-car and tour coach companies, Fare Calculation, Transport & Insurance documents, transportation cycle, calculation of rates for surface travel Regional Transport Authority, Road transport documentation and insurance, All India tourist transport permit, setting up of a tourist transport company. Scheduled and non-scheduled air services, LCC and its benefits, Factors likely to affect the future of air transport industry. Rail transport System: Major railway system of world (British Rail, Euro Rail, Japanese Rail and Amtrak Orient Express), Tibetan Rail. Indian Railways Functioning and operations, Types of rail

tours available in India, Indrail Pass, Major tourist trains Palace on Wheels, Royal Orient, Fairy Queen Deccan Odyssey and Toy Trains. GSA's abroad. Water Transport System: An overview, Cruise ships, Ferries, Hovercraft and Boats, Terms used in water Transport, management strategies of star cruise, Ocean Odyssey, Queens Mary-2, Major water based leisure practices and their features in India, Shikara; importance, types and Architecture.

Syllabus for Ph.D Course Work in Zoology
(Paper II : Recent Advances in Zoology)

- (I) Biodiversity: levels of biodiversity, value of biodiversity, regional, national and global status of biodiversity, threats to biodiversity, conservation and management of biodiversity, biodiversity act and related international conventions, bio-geographical classification of India.
- (II) Environmental stresses and their management, global warming. atmospheric ozone, Biodegradation and bioremediation of chemicals.
- (III) Chemistry of gene: structure of nucleic acids (A,B,C & Z DNAs RL model of Sasisepharan, super coiling, genetic & Non-genetic RNA, DNA replication, DNA repair (excision repair, mismatch repair and SOS repair) and genetic diseases in humans. restriction enzymes in cloning, techniques used in recombinant DNA technology and its application, DNA fingerprinting.
- (IV) Social behavior of animals: costs and benefits of group-living, types of social acts, individual adjustments of group-living, parental care and socio-functional organization in apes & monkeys.
- (V) Special features of selected micro-organisms: animal viruses, plant viruses, bacteriophages, rikettsiae, mycobacterium, mycoplasma, actinomycetes, fungi and slime-moulds.
- (VI) A brief knowledge of environmental endocrinology.
- (VII) Cells in culture: requirements for cell culture, aseptic technique, primary culture, organotypic cultures.
- (VIII) Pesticides: brief history, pesticide industries and markets. Dose-response relationship, insecticide, carcinogenic, teratogenic effects.

Kumaun University Nainital
Department and Faculty of Education
Syllabus for Ph.D. Course Work Paper – I
(Research Methodology in Education)

Paper-I Research Methodology in Education

Contents:

- Unit-1 :** Nature of scientific research : Quantitative and qualitative approaches
- Unit-II :** Steps in the Process of Quantitative and qualitative Research
- Unit-III :** Basic Concepts in the process of Positivist research: Theory, Hypothesis, Data and their collection, Sampling for data collection, Data Analysis, Hypothesis testing, Interpretation of findings, Report writing.
- Unit-VI :** Qualitative Data their collection and analysis
- Unit-V :** Overview of Major types of Educational Research: Historical, Normative Survey, Experimental, Action Research and Case Study
- Unit-VI:** Development of a Research Proposal
- Unit -VII:** Types of different data collection tools and methods of their Construction
- Unit-VIII:** Strategies for Undertaking and writing Review of Research Literature
- Unit - IX :** Review of different Methods of statistical analysis of qualitative and quantitative data
- Unit - X :** Writing and publishing research reports/ papers
- Unit -XI :** Making effective presentation of research findings

Suggested Readings:

- (1) Blaxter, L. Hughes. C & Tight, M., “How to Research” , Viva Books, Pvt Ltd., New Delhi, 1999.

- (2) De Vaus, D.A., "Surveys in Social Research" , Rawat Publications, 2003.
- (3) May, Tim, "Social Research : Issues, methods and Process", Open University Press, 2001
- (4) Henn, M., Weinstein, M. & Foard, N., "A short Introduction to Social Research", Vistaar Publications, 2006
- (5) Boyatzis, R.E., "Transforming Qualitative Informing", SAGE, 1998.
- (6) Thakur, D. "Research Methodology in Social Sciences", Deep & Deep Pub. Pvt. Ltd., 2005.
- (7) McNiff, J. & Whitehead, J., " Action Research: Principles and Practices", Routledge falmer, London, 2002.
- (8) Broota, K.D., " Experimental Designs in Behavioural Research" New Age International Pub., 2006.
- (9) Kanji, G.K., "100 Statistical Tests", SAGE, 2006.
- (10) Best, J.W. & Kahn, J.V., " Research in Education", Printice Hall of India, 2000.
- (11) Kumar, R., "Research Methodology", SAGE, New Delhi, 1999.
- (12) Mohan, R., "Research in Education", Neel Kamal Pub. Pvt. Ltd., 2003.
- (13) Shepard, K., "Presenting at Conferences, Seminars and Meetings", Response Books, New Delhi. 2005.
- (14) Garrett, H.E., " Statistics in Psychology and Education" Paragon International Publishers, 2004.
- (15) Lowenthal, K.M., "An introduction to Psychological Tests and Scales" Psychological Press (Indian Reprint), 2003.
- (16) Freeman, F.S. "Theory and Practice of Psychological Testing", Oxford & IBH Pub. Co. Ltd., New Delhi, 1955.

Faculty of Science
Syllabus for Ph.D. Course Work Paper – I
(Research Methodology)

1. **Scientific Process:** Meaning and Definition, a brief history of scientific process.
2. **Introduction of Research Methodology:** Meaning of research, objectives of research, types of research, significance of research, problems encountered by researchers in India.
3. **Research Problem:** Definition, necessity and techniques of defining research problem, Formulation of research problem, Objectives of research problem.
4. **Research Design:** Meaning, need and features of good research design, Types of Research Designs, Basic Principles of Experimental Designs, Design of experiments, Synopsis design for research topic.
5. **Sampling Designs:** Census and Sample surveys, Different types of sample designs, Characteristics of good sample design, Techniques of selecting a random sample.
6. **Editing, Data Collection and Validation:** Primary and secondary data, Methods of collecting primary and secondary data, Importance and methods of editing and data validation.
7. **Hypothesis:** Definition, testing of hypothesis, procedures of hypothesis testing, flow diagram for hypothesis testing, Parametric and non-parametric tests for testing of hypothesis, Limitations of tests of hypothesis.
8. **Paper/Thesis Writing and Report Generation:** Basic concepts of paper their writing and report generation, review of literature, Concepts of Bibliography and References, significance of report writing, steps of report writing, Types of Research reports, Methods of presentation of report.
9. **Computer Applications:** Fundamentals of computers - definition, types of computers. RAM, ROM, CPU, I/O devices. Number system - binary, octal and hexadecimal, base conversion. Logic gates - AND, OR, NOT. Data Structure - array, stack (push, pop), queue (insert, delete), linked list - singly,

doubly, Operating system - definition, types of OS. Use of software - MS Office - Power Point, WORD and EXCEL and ACCESS.

10. **Field and Computer hard:** viruses, misuse of internet, hacking, Field hazards.
11. **Instrumentation:** Description and principles of (i) Electrophoresis (ii) PCR Machine (iii) Laminar Flow (iv) Ultracentrifuge (v) Autoclave and (vi) Light and electron microscopy, Chromatography and HPLC, Handling of instruments and precautions.
12. **Safety Measures:**
 - (i) **Lab Safety Measures:** Introduction, Code of conduct - while entering in the lab, while working with the chemicals, while disposal of chemicals, Storage and disposal of chemical wastes - aqueous wastes, organic wastes and radioactive wastes, Human contribution to reduce hazardous wastes.
 - (ii) **Field Safety Measures:** Food security during field trip/expedition, safety measures during field trip/expedition - self- care, avoid in fields, care from wild animals, hazard warnings, Safety measures during visit to library and villages, first aid in the fields.

Suggested Readings:

1. Blum, Deborah and Mary Knudson, eds. A field guide for science writers: the official guide of the National Association of Science Writers, New York: Oxford University Press, 1997.
2. Booth, Wayne, Gregory G Colomb, Joseph M. Williams. The craft of Research Chicago University of Chicago Press, 1995.
3. Davis, Martha. Scientific Papers and Presentations. San Diego: Academic Press, 1997.
4. Fuscaldo, AA, Erlick, BI, Hindman, B. Laboratory Safety: Theory and Practice. New York: Academic Press, 1980.
5. Bajpai, PK. Biological Instrumentation and Methodology. New Delhi: S. Chand & Co. Ltd. 2006.
6. Rajaraman, V. Fundamentals of Computers.
7. Horowitz & Sahni. Data Structure.
8. Manual of MS Office.

Kumaun University Nainital
Department and Faculty of Education
Syllabus for Ph.D. Course Work Paper – I
(Research Methodology in Education)

Paper-I Research Methodology in Education

Contents:

- Unit-1 :** Nature of scientific research : Quantitative and qualitative approaches
- Unit-II :** Steps in the Process of Quantitative and qualitative Research
- Unit-III :** Basic Concepts in the process of Positivist research: Theory, Hypothesis, Data and their collection, Sampling for data collection, Data Analysis, Hypothesis testing, Interpretation of findings, Report writing.
- Unit-VI :** Qualitative Data their collection and analysis
- Unit-V :** Overview of Major types of Educational Research: Historical, Normative Survey, Experimental, Action Research and Case Study
- Unit-VI:** Development of a Research Proposal
- Unit -VII:** Types of different data collection tools and methods of their Construction
- Unit-VIII:** Strategies for Undertaking and writing Review of Research Literature
- Unit - IX :** Review of different Methods of statistical analysis of qualitative and quantitative data
- Unit - X :** Writing and publishing research reports/ papers
- Unit -XI :** Making effective presentation of research findings

Suggested Readings:

- (1) Blaxter, L. Hughes. C & Tight, M., “How to Research” , Viva Books, Pvt Ltd., New Delhi, 1999.

- (2) De Vaus, D.A., "Surveys in Social Research" , Rawat Publications, 2003.
- (3) May, Tim, "Social Research : Issues, methods and Process", Open University Press, 2001
- (4) Henn, M., Weinstein, M. & Foard, N., "A short Introduction to Social Research", Vistaar Publications, 2006
- (5) Boyatzis, R.E., "Transforming Qualitative Informing", SAGE, 1998.
- (6) Thakur, D. "Research Methodology in Social Sciences", Deep & Deep Pub. Pvt. Ltd., 2005.
- (7) McNiff, J. & Whitehead, J., " Action Research: Principles and Practices", Routledge falmer, London, 2002.
- (8) Broota, K.D., " Experimental Designs in Behavioural Research" New Age International Pub., 2006.
- (9) Kanji, G.K., "100 Statistical Tests", SAGE, 2006.
- (10) Best, J.W. & Kahn, J.V., " Research in Education", Printice Hall of India, 2000.
- (11) Kumar, R., "Research Methodology", SAGE, New Delhi, 1999.
- (12) Mohan, R., "Research in Education", Neel Kamal Pub. Pvt. Ltd., 2003.
- (13) Shepard, K., "Presenting at Conferences, Seminars and Meetings", Response Books, New Delhi. 2005.
- (14) Garrett, H.E., " Statistics in Psychology and Education" Paragon International Publishers, 2004.
- (15) Lowenthal, K.M., "An introduction to Psychological Tests and Scales" Psychological Press (Indian Reprint), 2003.
- (16) Freeman, F.S. "Theory and Practice of Psychological Testing", Oxford & IBH Pub. Co. Ltd., New Delhi, 1955.

Syllabus for Ph.D Course Work in Biotechnology

Paper II Recent advances in Biotechnology

In the era of multidisciplinary approach revolution in biotechnology that began nearly 50 years ago has an enormous impact. As biotechnology pertains to the study of living systems at the molecular level, especially DNA, RNA and PROTEIN, and provides a background appropriate for further work in the rapidly expanding areas, basic techniques in biotechnology are much needed by the students of Botany, Zoology, Microbiology, Fisheries, Veterinary, Pharmacology, Physiology, Medicine, Genetics. Agriculture and allied subjects. This course “Recent Advances in Biotechnology” Will focus on selected aspects of biotechnology that provide a comprehensive overview of the key concepts in molecular biology, principles for understanding the structure and functional relationships of molecular biology techniques to facilitate and sharpen skills on biotechnology techniques.

Course will give emphasis on recent molecular biology techniques including several examples of molecular applications in field of Genomics cell biology, Agriculture, Microbiology, Diagnostics, Pharmacology etc.

The overall course is divided into following topics covering following techniques

1. **Hybridization techniques:** Southern, Western, Northern and Dot Blots etc.
2. **Gene expression studies:** Real-Time-PCR. Micro arrays & Gene chips
3. **Sequencing:** DNA and protein sequencing
4. **Immunological techniques:** Radial Immuno diffusion test. ELISA, RIA, Surface Plasmon Resonance etc.
5. **Molecular Marker:** RFLP, AFLP, SCARs, SNPs, ISSR-SSR etc
6. **Spectroscopic methods:** UV/Vis, fluorescence spectrometry
7. **Electrophoretic techniques:** Vertical, Horizontal, 2-Dimensional, Denaturing gradient gel electrophoresis, Thermal gradient gel electrophoresis etc
8. **Variants of PCR and Amplification of gene:** Semi-quantitative RT PCR Nested PCR, Multiplex PCR, DOP-PCR etc.
9. **Bioinformatics:** Data Mining GENBANK, Blasting sequence, Primer designing etc.

Syllabus for Ph.D Course Work in Botany
(Paper II : Recent Advances in Botany)

1. Microbes and Mycorrhiza and their significance.
2. Biodiversity assessment and conservation: Distribution pattern, endemism, resource utilization and conservation.
3. Modern trend in taxonomy with special reference to Biosystematics.
4. Ecosystems: Diversity and Management with special reference to the Himalaya.
5. Genetic engineering and its implications: Gene isolation, enzymatic synthesis of gene, transgenic crops, PCR (Polymerase Chain Reaction).
6. Biotechnology: Scope and importance of biotechnology, tissue culture techniques in biotechnology, biotechnology in medicine and agriculture.

Suggested Readings:

1. Mitra, Sandhya (1996) Genetic Engineering. Mc-Millan India Co. Ltd., New Delhi.
2. Gupta, P.K. (2001). Elements of Biotechnology. Rastogi Publications, Meerut, Pp:1-13.
3. Odum, E.P.(2000). Fundamentals of Ecology. Thomson Asia Pvt. Ltd., Singapore.
4. Ricklefs, Robert, E. and Gary L. Miller (2009). Ecology (IVth edition). W.H. Freeman and Company, New York.
5. Chawala, H.S (2006). Introduction to Plant Biotechnology. Oxford and IBH Pub. Co., New Delhi.
6. Naik, V.N. (2001). Taxonomy of Angiosperms. Tata MC Graw- Hill Pub. Co. Ltd., New Delhi.
7. Christian Leveque and Jean-Claude Mounoluv. – Biodiversity, John Wiley & Sons, Ltd.
8. Smith, S.E. & D.J. Read- Mycorrhizal Symbiosis. Academic Press.
9. Mahendra Raj & Ajit Verma – Diversity and Biotechnology of Actomycorrhiza.

Department of Chemistry
Kumaun University, Nainital
Pre-Ph.D. Course work

Chemistry Paper- II

MM: 75

The question paper will have eight questions. Any five questions have to be attempted. Each question carries 15 (fifteen marks).

1. **Nanoscience & Nanotechnology:** Definition, classification based on particle's shape and composition, 1D 2D 3D nanomaterials, CNT graphene, size effects and surface effects on the properties of nanomaterials, general methods of synthesis of nanomaterials, top- down and down-up approach for synthesis of nanomaterials, nucleation and growth of nano systems, self assembly, biogenic synthesis using microorganism. Chemical reduction and oxidation, hydrothermal, micelles, sol-gel processes. Applications of nanomaterials in biomedical science, optics, electronics, building materials.
2. **Natural products Chemistry:** General introduction, occurrence and classification of natural products, flavonoids, phenolics, saponins, steroids and terpenoids, natural products in traditional medicine, methods of extraction and isolation- reflux extraction, Soxhlet extraction, Clevenger extraction, liquid-liquid extraction, supercritical fluid extraction, ultrasound and microwave assisted extraction, pulsed electric field and enzyme assisted extraction, theory of distillation, fractional distillation, steam distillation, vacuum distillation, fractional evaporation, crystallization.
3. **Chemical dynamics:** General introduction, order and molecularity, first, second and third order reactions, temperature on reaction rate, activation energy, catalysis, homogeneous versus heterogeneous catalysis, phase transfer catalyst, green catalyst, solid surface supported catalyst kinetics of reactions taking place in solution, methods for kinetics of fast reactions, Lindmann's theory for unimolecular reaction rate.
4. **Surface Chemistry:** Adsorption, characterization of adsorbent, kinetics and thermodynamics of adsorption, Freundlich, Langmuir, B.E.T. and Temkin models of adsorption, applications of adsorption in environmental protection.
5. **Instrumentation Techniques:** Working principles and instrumentation of UV-visible, infrared (IR), FT-IR, Raman spectroscopy, NMR, X-Ray diffraction, X-Ray photoelectron spectroscopy, scanning electron microscopy (SEM), transmission electron microscopy (TEM), atomic force microscopy (AFM) techniques, flame emission spectroscopy, atomic absorption spectroscopy, inductively coupled plasma atomic emission spectroscopy, thin layer chromatography, paper chromatography, column chromatography, gas chromatography (GC), GC-MS, HPLC, TGA/DTA.

6. Soil and water chemistry

Soil- Definition, classification, soil fertility, productivity. Properties- Colour, temperature, pH, electrical conductivity, water holding capacity, organic carbon, macro- and

micronutrients. Soil pollution- causes and remedies. Uses of soil analysis. Water-Hydrosphere, Resources of water. Properties- Colour, odour, pH, turbidity, electrical conductivity, total dissolved solids, total suspended solids, hardness, DO, COD, BOD, nutrients. Water pollution - causes and water treatment methods.



Prof. Anand B. Melkani
Convener, Chemistry

25th June, 2022

Kumaun University Nainital
Department and Faculty of Commerce & Management
Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in the Field of Commerce & Management)

Paper-II : Recent Advances in the Field of Commerce and Management

Contents:

- (1) Survey and research work in different functional areas of business.
- (2) Different dimensions of international business and its environment.
- (3) Policies and legal provisions of government with respect to the business environment in India.
- (4) Managerial economics and their applications in managerial decision making.
- (5) Understanding of finance functions and relevant techniques of financial management.
- (6) Recent changes in financial accounting and reporting practices.
- (7) Understanding of the services and its management.
- (8) An insight into the interface of information technology with business, and to familiarize them with computer applications in business decisions.
- (9) Changing dimensions of the Modern Organization and their Management.

Suggested Readings:

- (1) Sam Pitroda, “National Knowledge Commission: Report to the Nation”, 2006-2009, Govt of India, New Delhi.

- (2) Yazali Josephine, “Globalization and Challenges for Education”, NIEPA, Shipra Publication, New Delhi, 2003
- (3) Terenzini, P.N. & Chaffe, E.E., “Total Quality Management in Higher Education”, San Francisco, Jossey Buss, CA, 1991
- (4) University News: Vols. 47 (24); 47(40); 47(41); 47(43); 47(44); 47(50); 47(48); 47(50); 48(15); 48(18); 48(19); 48(20); Journal of Higher Education, Association of Indian Universities, New Delhi.
- (5) Bajaj: Management Processing and Organization, Excel Publication
- (6) Gosh: HRD and Management Vikas
- (7) Sundaram and Bank: International Business Environment Text and Cases, PHI.
- (8) Govt. of India, Latest Economic Survey.
- (9) Mary Ellen Ceuffey, Business English.
- (10) Edwin B Flippo, Personal Management.
- (11) Subrahmanyam, et,al Personality Development, Excel Books, New Delhi.
- (12) N. Vinaykn, A Prabile of Indian Capital Market.
- (13) RBI, Report on trends and progress of banking in India, Various Issues, Mumbai.
- (14) N. Ghosh, Management Control Systems. Prentice Hall of India.
- (15) Saunderr, Research Methods for Business Students (Person India, New Delhi).
- (16) Smith, Malcom, Research Methods in Accounting (Sage Publ, 2007).
- (17) Smith, Thorp and Lowe, Management Research (Sage Publication)
- (18) Cereensteinand Feinamn, Electronic Commerce, Tata Mv Cerawhill, New Delhi,

Syllabus for Ph.D. Course Work in Computer Science Paper – II (Recent Advances in Computer Science)

Unit I - Digital Image Processing (2 Questions)

Introduction to Digital Image Processing: Enhancement, Segmentation, Object Detection and Recognition.

Unit II - Machine Learning (2 Questions)

Introduction to Artificial Intelligence, Artificial neural network, Support Vector Machine (SVM) with applications.

Unit III - Soft Computing (2 Questions)

Introduction to Fuzzy Logic, Fuzzy Sets and Operations, Introduction to Genetic Algorithm and its Applications.

Unit IV - Network Services (2 Questions)

Introduction to Cloud Computing, Mobile Computing and Ad Hoc Network.

Unit V - Computing Software (2 Questions)

Introduction to MATLAB and R.

Suggested Readings:

1. “Digital Image processing” by Rafael C. Gonzalez, Richard Eugene Woods Prentice Hall.
2. “Introduction to Artificial Intelligence and Expert System” by Dan W. Patterson, PHI.
3. “Neural Network, Fuzzy Logic and Genetic Algorithm” by S. Rajashekharan, G.A. Vijay Laxmi, PHI
4. “MATLAB Primer” by Timothy A. Devis Kermit Sigmon, Chapman and Hall.

Question Paper will consist of 10 questions and student has to attempt one question from each unit.

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Drawing & Painting)

DRAWING & PAINTING

Paper II: Recent Advances in the subject

Methods and techniques used recently by Contemporary Indian Artists.

(M.F.Husain, P.N.Choyal, Satish Gujral, Jatin Das, Tayab Mehta, Mansa Ram, Arpana Caur, Vikash Bhattacharya, Yusuf Arakal, Vivek Sundram, Atul Dodia, Rajeev Lochan, Jahangir Sabbawala, Method, Material & other recent technologies etc.)

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Economics)

Economics

Paper II: Recent Advances

Consumerism, Economic Integration, Developmental inequalities, Market vs. government & institutions, Social Welfare initiatives, Technology and Environmental aspects, Objectives of Modern economic Policies.

References:

- Blaug, M (1985) Great Economists since Keynes, Harvester Press, Sussex.
- Myrdal, G (1953) The Political Elements in the Development of Economic Theory, Routledge and Kegan Paul, London.
- Micheal P. Todaro, Economic Development in the Third world, longman, 1981
- G.M. Meir and Robert, E Baldwin, Development, Economic Development
- Anne O Kruger, Political Economy of Policy Reforms in Developing Countries, MIT Press Cambridge Mass. 1994
- Amartya Sen, Development as freedom, House, inc.1999
- Amartya Sen and Jean Derez, The Amartya Sen and Jean Derz Omnibus “Poverty and Famines” “Hunger and Public action” and “Economic Development and Social Opportunity” Oxford University Press, 2004
- Pant, K.C. India’s Development Scenario: Next Decade and Beyond, in Two volumes. Academic Foundation, New Delhi.
- Papola, T.S and Alakh N. Sharma, Employment and Poverty Reduction in India ILO Geneva. 2004
- Dev, M, Kannan, KP, and Ramachandran, N (eds) (2003) Towards a Food Secure India, Institute for Human Development, New Delhi

Sen, AK (1995) Inequality Re-examined, Harvard Univ. Press, Mas Bassanini,

A, Scarpetta, S and Visco, I (2000) “Knowledge Technology and Economic Growth. Recent Evidence form OECD Countries”

Dasgupta, P and Malor, KG(1997) The Environment and Emerging Development Issues, Clarendon, Oxford

Datt, G and Ravallionm M (1998) “ Why have Some Indian States Done Better than Others at Reducing Rural Poverty?” Economics 65 (257),pp 17-38.

<http://www.worldbank.org> <http://www.Planningcommmission.nic.in>, <http://www.rib.in>. <http://www.mospi.gov.in> <http://www.Infr.org> <http://www.ncaer.org> <http://www.openlibrary.org>, Economics Survey Released by Govt. of India, Union and State Budgets. Finance Commission Reports, Economics policy reports, Reports Released by different committees set up by Govt of India of India and Institutions relating to economic Interest. Five Year Plans, Economic Times, Financial times, Economics and Political Weekly, Indian Economic Review. Yojana, IMF, World Bank. ADB,ILO,FAO,WTO Study Papers and Reports.

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Sociology)

SOCIOLOGY

Paper II: Recent Advances

Mean nature and types of sociological theory, Structural – functional theory, Status and Role theory
Mobility theory – migration (emigration, immigration)
Modernization-Concept and indicators of modernization, Tradition and Modernity,
Social Change-Patterns and theories of social change, Sanskritization and Westernization
Development –Social, Human and sustainable development, Indicators of development, Theories of development
Globalization, Ethno-methodology, Phenomenology

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Drawing & Painting)

DRAWING & PAINTING

Paper II: Recent Advances in the subject

Methods and techniques used recently by Contemporary Indian Artists.

(M.F.Husain, P.N.Choyal, Satish Gujral, Jatin Das, Tayab Mehta, Mansa Ram, Arpana Caur, Vikash Bhattacharya, Yusuf Arakal, Vivek Sundram, Atul Dodia, Rajeev Lochan, Jahangir Sabbawala, Method, Material & other recent technologies etc.)

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Psychology)

PSYCHOLOGY

Paper II: Recent Advances in Psychology

- 1. Paradigms: Concept of Paradigms:** Ontology, Epistemology, and Methodology and Methodology; Key paradigms: Positivism, Post-positivism, the Critical Perspective and Social Constructionism, Participate Research/Co-operative Enquiry; Existential-Phenomenology.
- 2. Indian psychological concepts:** Introduction to Indian Perspectives.
Upanishads, Samkhya, Vedanta, Jainism, Buddhism, Nyaya, Charvak, Bhagavadgita; Methods of knowing. Consciousness and Self and Identity.
- 3. Positive Psychology:** Identifying and measuring strengths: Positive self, traits, emotional strength, and flow. Promoting positive relationship: Compassion, forgiveness, gratitude, Empathy, Yoga, Health and Well-Being
- 4. Social issues:** Critical Psychology: Examining the relationship between political processes, cultural realities, historical forces & subjective experience. The interpersonal & intrapsychic formation of our gendered subjective: Masculinity, femininity & the “recovery” of women voices. Poverty, Deprivation and disadvantage.
- 5. Cultural Indian Psychology:** The Pan-Indian Identity; A critical look into “The Inner World” the meeting place for childhood and Society. Symptoms and Healing Traditions in India; In India Intimate Fusion: Fantasies and fears of Indian Men and Women, Analysis of Social Violence.

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Home Science)

HOME SCIENCE

A: Foods and Nutrition

Unit I – Food Science

- Introduction to food science – evolution of food industry and allied industries.
- Understanding food groups for balanced diet, structure and composition, nutritive value processing techniques of cereals, pulses and legumes, fruits and vegetables, nuts and oil seeds, milk and milk products, egg, meat and fish.
- Sugar, spices and condiments
- Processed food: jams, jellies, squashes, pickles
- Beverages – Coffee, Tea, Cocoa, carbonated and non carbonated, alcoholic beverages
- Food additives, food colour, emulsifiers, stabilizers and flavors
- Leavened products
- Food fortification, enrichment and supplements
- Sensory evaluation of food products
- Food spoilage and food poisoning – Spoilage caused by micro – organisms, enzymes, pests and rodents
- Principles of food preservation – food dehydration, heat preservation, cold preservation
- Food irradiation and microwave heating
- Fermentation and fermented foods

Unit II – Human Nutrition and Dietetics

- Nutrients in foods: Their function, requirements and sources, digestion absorption and utilization of nutrients. Effect of low and excess intake of nutrients on human body, B.M.R.
- Recommended dietary allowances and nutrition for different age sex and activities
- Methods of assessment of nutritional status
- History of dietetics, effect of illness on food acceptance, role of dietician, dietetic counseling
- Therapeutic modification of normal diet, food exchange lists, special feeding methods
- Causes, symptoms and principles of dietetic managements of
 - Fevers
 - Peptic ulcer
 - Gastritis, diarrhea, constipation
 - Jaundice
 - Hepatitis
 - Cardiovascular disease
 - Nephritis and renal disorders
 - Gout
 - Arthritis
 - Diabetes mellitus
 - Obesity
 - Under weight, (PCM)
 - Cancer
 - Diet in surgery, burns, injury and allergy
 - Nutritional Management of eating disorders-Anorexia Nervosa, Bulimia, Binge eating.

Unit III Community Nutrition

- National and international agencies and various programmers dealing with nutrition of community in India
- Nutritional education-Rationale, planning, execution and evaluation
- Food security : food distribution system, PDS, FCI
- Magnitude of nutritional problems in India: Major deficiency disorders PEM, Vitamin A deficiency, endemic goiter, fluorosis etc.
- Concept of health, vital statistics and demographic indicators
- Community nutrition as a field: public health nutrition, goals of nutrition programme, dietary guidelines, present trends and focus on community nutrition, methods of assessing nutritional status
- National food and nutrition policy, plan of action and programmes
- Primary health care-concept and organization, current status of health care system in India
- Nutrition and infection

Unit IV Nutrition during life span

- Nutrition in infancy – growth and development, nutritional requirements, feeding pattern, weaning practices, weaning and supplementary foods
- Pre-School age-growth and development, nutritional requirements, special care in feeding them, nutritional problems of this age - School age and adolescents-growth and development, nutritional requirements, nutritional problems
- Young adults-nutritional requirements, nutritional status of India adult population, nutritional problems common to this age

- Elderly-nutritional requirements, special needs, nutritional problems
- Pregnancy-Physiological adjustments, nutritional requirements, nutritional status of India pregnant women, effect of malnutrition on outcomes of pregnancy
- Lactation-Physiology of lactation, factors affecting lactation, nutritional requirements

B: Clothing and Textile

Unit I Textile Science

- Natural fibers: Physical and chemical properties and fabric manufacture
- Man made fibers: Physical and chemical properties and fabric manufacture
- Blends and mixtures, yarn classification, spun yarns, filament yarns
- Labels and their classification
- Identification of fibers
- Laundering of textiles
- Soaps and detergents, bleaches, whitening agents and blues
- Hard and soft-water
- Care and storage of textiles

Unit II Fabric Formation and finishes

- Method of fabric formation
- Basic weaves, non woven fabric construction, knitted fabrics
- Looms
- Special finishes – Bleaching, scouring, degumming, carbonizing, mercerizing, sanforizing, beetling, creping, glazing, calendaring, flocking, napping, tentering, shearing

- Functional finishes – water proof and water repellent finish, soil repellent finish, shrinkage control, wrinkle resistance, flame retardant finish, mildew proof, rot proof, moth proof, antistatic and antibacterial finish
- Adding colour textile: Natural and synthetic dyes
- Classification of dyes, dyeing techniques
- Textile and environment
- Printing techniques

Unit III Apparel Designing and Historic Textiles

- Sources of inspiration for apparel designing
- Techniques of pattern making - Drafting their applications and limitation in clothing construction
- Psychological and sociological influence of dress
- Basic principles of construction of garments for different age
- Clothing – origin and reasons
- Costumes in ancient Indian civilization
- Indian embroideries

C: Human Development

Unit I Life Span Development

- Prenatal development stages – Genetic and environmental factors, critical influences, birth process
- Infancy (Birth to 2 years)
- Physiological, cognitive, social, physical emotional, motor development
- Early environment and its importance

- Child rearing practices
- Early childhood years – Physical, motor, emotional cognitive and language development
- Middle childhood – Physical and motor development, language and intellectual development, growth trends emotional, social and moral development
- The function of family, school and community in growth of children

Unit II Life Span Development II

- Adolescence – Physical and social changes development of emotional maturity, personal and vocational interest, problems of this stage
- Early and middle adulthood – Meaning, development of self, physical, intellectual and personality development
- Old age – Older adults, characteristics physical, cognitive and personality changes attitude towards life, psychological changes, special needs of elderly

Unit III Theories of Human Development

- Theories of Human development
- Learning theories
- Personality
- Mental development – Meaning, components, assessment, significance and types of mental tests
- Exceptional children
- Family relationship
- Juvenile delinquency -Mental hygiene

Unit IV Aspects of Human Development

- Concept of human development, Human development index, human development indicators
- Millennium development goals and human development
- Human development in India and human rights
- Education and development education and social change. Population and education. Educational profile of India
- Elementary school and higher education in India
- National policies for education, National curriculum framework, NCERT 2005, DPEP, Right to education 2010 & MDM
- Social empowerment – education, health, nutrition, drinking water and sanitation
- Self help groups, women in agriculture, women and industry support services
- Legal empowerment – legal literacy on personal and family laws, role of family court and legal aid center
- Support system – role and functions of department of women and child development, central social welfare board, state social welfare boards, National Commission for woman
- Programmes for women and child development

Family Resource Management

Unit I Theory of Management

- History of home management
- Ends sought through management Goals – factors affecting, end Values – sources of values, patterns, status security Standards
- Management as a system
- Management abilities

- Decision Making – Meaning, types, modes and techniques and tools for decision making
- Management functions and process
- Planning organizing, guiding, controlling evaluation

Unit II Family Economics

- Importance and relationship of economics to resource management
- Consumption functions and consumption pattern of families, elements of market, theory of consumer behavior – central problem of choice and utility, solution, law of diminishing and marginal utility and law of equi – marginal utility
- Planning of expenditure (account keeping and marketing-types), functions, importance and market devices – labels, packing, guarantee and brands
- Techniques of financial assessment budgeting taxes, saving and insurance
- Consumer behaviors
- Consumer protection government, public and private protection, role of consumer education, standardization of consumer goods and testing methods

Unit III Housing

- Requirement of housing, history of housing, changes in housing, changes in housing need and standards
- Present housing condition in India
- Housing in India as effected by various trends
- Solving India's housing problems
- Factors affecting housing
- Approaches to housing
- Housing schemes and agencies, rent control policies
- Housing standards and housing legislation.

- Technical aspects of house design with reference to principles of planning
- Residential architectural design for various life styles
- Cost of housing design – estimating and costing in relation to land price and construction, factors influencing cost, sources of financial assistance
- Analysis of housing design – analysis of plans, material and construction techniques, study of different housing designs
- Housing research – agencies for research and development, methods and techniques
- Graphic representation of interiors and floor plans

E: Home Science Extension Education

Unit I Extension Education System

- History, philosophy, objectives, concepts, contribution, principles, development of extension, Extension education: meaning, process and principal of learning in extension
- Formal and non formal education, principles, significance, steps and types of program planning and evaluation
- Community development programmes in India
- Review of different rural development programme – IRDP, TRYSEM, JRY, NREGA, PMRY, SRY, SGSY
- Institutions for child and women development- WHO, UNICEF, UNESCO etc
- Support structures and their functions – Panchayats, panchayati raj institution, central social welfare boards, state social welfare boards, national level voluntary agencies, CAPART etc.

Unit II Communication Technologies in Extension

- Types of communication systems – concept, functions and significance

- Interpersonal, characteristics and scope of mass communication
- Mass communication – Elements, characteristics, models, theories, scope and challenges
- Traditional and modern methods of communication
- Media systems: Trends and techniques, concepts, scope, relevance of media in society functions, reach and influences of media
- Participatory rural appraisal PRA and RRA techniques
- Elements of diffusion of innovation and decision making process

Unit III Research Methods and Statistics

- Research in home science concept, need and approaches
- Types of research: Historical, survey, experimental and case study
- Definition and identification of research problems, hypothesis, basic assumption and limitation of research problem
- Sampling: Types and selection of samples
- Data collection and processing methods
- Role of statistics in research – elementary statistics, classification and tabulation and frequency distribution of data, , mean, median, mode, probability
- Use of computer for analysis of data

प्री० पी० एच० डी० पाठ्यक्रम वर्क कार्स

द्वितीय प्रश्न पत्र (Research Advances in the Subject Music)

इकाई—1

- 1 भारतीय संगीत का इतिहास (प्राचीन काल, मध्यकाल, आधुनिक काल।)
- 2 शास्त्री संगीत की विभिन्न गीत शैलियाँ (ध्रुपद, धमार, खयाल, गत, तराना, ठुमरी, दादर भजन) आदि का विस्तृत अध्ययन।
- 3 हॉरमनी तथा मैलोडी।

इकाई—2

- 1 तत्वाद्य सुषिर वाद्य, घनवाद्य तथा अवनद्ध वाद्यों का विस्तृत अध्ययन।
- 2 शास्त्री संगीत में प्रयुक्त होने वाली तथा प्रचलित तालों का (लयकारी सहित अध्ययन)।
- 3 शुद्ध राग, छायालग राग, संकीर्ण राग, पूर्वांग उत्तरांगवादी राग, सन्धि राग, परमेल प्रवेश रागों का अध्ययन।
- 4 स्वर राग व ताल की दृष्टि से हिन्दुस्तानी उत्तरी दक्षिणी संगीत पद्धतियों व तुलनात्मक अध्ययन।

इकाई—3

- 1 सौन्दर्य शास्त्र, मेजरटी, मेजरटोन, मानरटोन, सेमीटोन, कॉडस, क्लैफ।
- 2 स्वर—स्वरान्तर।
- 3 स्नातक एवं स्नातकोत्तर पाठ्यक्रम के समप्रकृति रागों का तुलनात्मक अध्ययन।

इकाई—4

- 1 कंठ साधना।
- 2 श्रुति, स्वर थाट, ग्राम, मूर्च्छना, प्रबन्ध, जातिगायन, राग गायन का विस्तृत अध्ययन।
- 3 शास्त्रीय संगी के किन्हीं पाँच प्रसिद्ध गायन एवं गायिकाओं का जीवन परिचय एवं संगीत में योगदान।
- 4 रामायण, महाभारत तथा पुराणों में संगीत।

Faculty of Art
Ph.D. Course Work Module for Research Paper III
Paper III: On specialized branch of the subject

Introduction: This paper is specially meant to adjudge the acquired knowledge and ability of candidate in the specialized branch of the subject related to which the candidate will finally submit the Ph.D. **Memoir (i.e. Maxima)** for evaluation. Hence, this is advisable that in place of a separate theory based examination candidate may be asked to prepare a **dissertation** work therewith called **Minima**) on major themes and or broader issues of the specialized aspects of the subject-field (in which the candidate wishes to pursue the research work) in consultation with his/her supervisor.

Frame work of Minima: Through out the course period candidate will primarily consult the supervisor and candidate will be deeply involved in information search and consulting the library. The **Minima** work can be organized as follows.

Topic: To be chosen from the **specialized** branch approved by the supervisor.

Content:

- (i) Principles and Theory (historical and modern perspective).
- (ii) Review of research (national and international status). This will help researchers identifying the research gaps and all be further useful while framing the research objectives in a more rational manner.
- (iii) Materials and Methods (Standard and innovative methods. if any).
- (iv) References, Bibliography/Webliography (this would include complete list of consulted journals, books, memoir including the published unpublished Ph.D. theses, web-pages and search engines etc.).

(Minima work can be limited to 100 printing pages including the chart, figures and references).

Kumaun University Nainital
Department and Faculty of Education
Syllabus for Ph.D. Course Work Paper – I
(Research Methodology in Education)

Paper-I Research Methodology in Education

Contents:

- Unit-1 :** Nature of scientific research : Quantitative and qualitative approaches
- Unit-II :** Steps in the Process of Quantitative and qualitative Research
- Unit-III :** Basic Concepts in the process of Positivist research: Theory, Hypothesis, Data and their collection, Sampling for data collection, Data Analysis, Hypothesis testing, Interpretation of findings, Report writing.
- Unit-VI :** Qualitative Data their collection and analysis
- Unit-V :** Overview of Major types of Educational Research: Historical, Normative Survey, Experimental, Action Research and Case Study
- Unit-VI:** Development of a Research Proposal
- Unit -VII:** Types of different data collection tools and methods of their Construction
- Unit-VIII:** Strategies for Undertaking and writing Review of Research Literature
- Unit - IX :** Review of different Methods of statistical analysis of qualitative and quantitative data
- Unit - X :** Writing and publishing research reports/ papers
- Unit -XI :** Making effective presentation of research findings

Suggested Readings:

- (1) Blaxter, L. Hughes. C & Tight, M., “How to Research” , Viva Books, Pvt Ltd., New Delhi, 1999.

- (2) De Vaus, D.A., "Surveys in Social Research" , Rawat Publications, 2003.
- (3) May, Tim, "Social Research : Issues, methods and Process", Open University Press, 2001
- (4) Henn, M., Weinstein, M. & Foard, N., "A short Introduction to Social Research", Vistaar Publications, 2006
- (5) Boyatzis, R.E., "Transforming Qualitative Informing", SAGE, 1998.
- (6) Thakur, D. "Research Methodology in Social Sciences", Deep & Deep Pub. Pvt. Ltd., 2005.
- (7) McNiff, J. & Whitehead, J., " Action Research: Principles and Practices", Routledge falmer, London, 2002.
- (8) Broota, K.D., " Experimental Designs in Behavioural Research" New Age International Pub., 2006.
- (9) Kanji, G.K., "100 Statistical Tests", SAGE, 2006.
- (10) Best, J.W. & Kahn, J.V., " Research in Education", Printice Hall of India, 2000.
- (11) Kumar, R., "Research Methodology", SAGE, New Delhi, 1999.
- (12) Mohan, R., "Research in Education", Neel Kamal Pub. Pvt. Ltd., 2003.
- (13) Shepard, K., "Presenting at Conferences, Seminars and Meetings", Response Books, New Delhi. 2005.
- (14) Garrett, H.E., " Statistics in Psychology and Education" Paragon International Publishers, 2004.
- (15) Lowenthal, K.M., "An introduction to Psychological Tests and Scales" Psychological Press (Indian Reprint), 2003.
- (16) Freeman, F.S. "Theory and Practice of Psychological Testing", Oxford & IBH Pub. Co. Ltd., New Delhi, 1955.

Kumaun University Nainital
Department and Faculty of Education
Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in the field of Education)

Paper II : Recent Advances in the field of Education

Contents:

Unit-I: Higher Education in the Context of Globalization

Unit-II: Changing Paradigm of Technology in Higher Education:
m-learning, u-learning, weblog, Information literacy in
higher education

Unit-III: Developments in the field of Education :
Right to Education Bill-2008
Human Rights Education and Teacher Education Curriculum
Shakshar Bharat Program
Rashtriya Madhyamic Shiksha Shaksharta Mission
National Curriculum framework
Knowledge Commission
Delor's report

Unit-IV: Reforms in examination and evaluation in higher Education

Unit-V: Total quality management in Education

Unit-VI: Future of Open Distance Learning under GATS policy regime

Unit-VIII: Future perspectives in Teacher Education

Suggested Readings:

- (1) Sam Pitroda, "National Knowledge Commission: Report to the Nation", 2006-2009, Govt. of India, New Delhi.
- (2) Hallak, J, "Globalization, Human Rights and Education", UNESCO, IIEP, Paris, 1999.

- (3) Yazali Josephine, “Globalization and Challenges for Education”, NIEPA, Shipra Publication, New Delhi, 2003.
- (4) Khajapeer, M., “Teacher Education in 21st century India”, University News, Vol. 39, No.9, 2001.
- (5) NCERT, “National Curriculum Framework-2005”, New Delhi
- (6) Terenzini, P.N & Chaffe, E.E., “ Total Quality Management in Higher Education”, San Francisco , Jossey Buss, CA 1991.
- (7) University News: Vols. 47 (24); 47(40); 47(41); 47(43); 47(44); 47(50); 47(48); 45(50); 48(15); 48(18); 48(19); 48(20); Journal of Higher Education, Association of Indian Universities, New Delhi.
- (8) Right to Education Bill – 2008 PRS: www.prsindia.org.
- (9) Teacher Education in Madhya Pradesh, SCERT, Bhopal, NCTE, MG Marg, IP Estate, New Delhi, 1997.
- (10) Rao, D. Bhaskar, “Global consensus on Teacher Education”, Discovery Pub. House, New Delhi, 1998.

Kumaun University Nainital
Department and Faculty of Education
Ph.D. Course Work Module for Research Paper III
Paper III: On specialized branch of the subject

Introduction: This paper is specially meant to adjudge the acquired knowledge and ability of candidate in the specialized branch of the subject related to which the candidate will finally submit the Ph.D. **Memoir (i.e. Maxima)** for evaluation. Hence, this is advisable that in place of a separate theory based examination candidate may be asked to prepare a **dissertation** work therewith called **Minima**) on major themes and or broader issues of the specialized aspects of the subject-field (in which the candidate wishes to pursue the research work) in consultation with his/her supervisor.

Frame work of Minima: Through out the course period candidate will primarily consult the supervisor and candidate will be deeply involved in information search and consulting the library. The **Minima** work can be organized as follows.

Topic: To be chosen from the **specialized** branch approved by the supervisor.

Content:

- (i) Principles and Theory (historical and modern perspective).
- (ii) Review of research (national and international status). This will help researchers identifying the research gaps and all be further useful while framing the research objectives in a more rational manner.
- (iii) Materials and Methods (Standard and innovative methods. if any).
- (iv) References, Bibliography/Webliography (this would include complete list of consulted journals, books, memoir including the published unpublished Ph.D. theses, web-pages and search engines etc.).

(Minima work can be limited to 100 printing pages including the chart, figures and references).

Kumaun University Nainital
Department and Faculty of Commerce & Management
Syllabus for Ph.D. Course Work Paper – I
(Research Methodology in Commerce & Management)

Paper-I: Research Methodology in Commerce & Management

Contents:

Nature of scientific research: Quantitative and qualitative approaches
Role of research in functional areas of business – Accounting, finance, Marketing, Human Resource Management, Planning and business management
Research Method, Research Methodology and Research Process.
Defining Research Problems, Setting Objectives, Formulating Hypothesis,
Research.
Design, Sample Design.
Business Surveys – Collection of Primary and Secondary data, Design of questionnaire.
Data processing – Classification, Tabulation. Editing.
Analysis and Interpretation of Data: Uni – variate, bi-bivariate and multi-variate analysis.
Report Writing: Categories of Report, Parts of Report, Presentation of a Report

Suggested Readings:

- (1) Blaxter, L. Hughes, C & Tight, M., “How to research” Viva Books, Pvt Ltd., New Delhi, 1999.
- (2) De Vaus, D.A., “Surveys in Social Research”, Rawat Publications, 2003.
- (3) May, Tim, “Social Research: Issues, methods and Process”, Open University Press, 2001
- (4) Henn, M., Weinstein, M. & Ford, N., “A short Introduction to Social Research”, Vistaar Publications, 2006.

- (5) Boyatzis, R.E., “Transforming Qualitative Informing”, SAGE, 1998.
- (6) Thakur, D. “Research Methodology in Social Science”, Deep & Deep Pub. Pvt. Ltd., 2005.
- (7) McNiff, J. & Whitehead, J., “ Action Research: Principles and Practices”, Routledge Falmer, London, 2002.
- (8) Broota, K.D., “Experimental Designs in Behavioural Research”, New Age International Pub., 2006.
- (9) Kanji, G.K., “100 Statistical Tests”, SAGE, 2006.
- (10) Best, J.W. & Khan, J.V., “Research in Education”, Printice Hall of India, 2000
- (11) Kumar, R., “ Research Methodology”, SAGE, New Delhi, 1999.
- (12) Mohan, R., “Research in Education”, Neel Kamal Pub. Pvt. Ltd., 2003.
- (13) Shepard, K., “Presenting at Conferences, seminars and Meetings”, Response Books, New Delhi. 2005
- (14) Garrett, H.E., “Statistics in Psychology and Education” Paragon International Publishers, 2004
- (15) Lowenthal, K.M., “An introduction to Psychological Tests and Scales” Psychological Press (Indian Reprint), 2003
- (16) Freeman, F.S. “Theory and Practice of Psychological Testing”, Oxford & IBH Pub. Co. Ltd., New Delhi, 1955.

Kumaun University Nainital
Department and Faculty of Commerce & Management
Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in the Field of Commerce & Management)

Paper-II : Recent Advances in the Field of Commerce and Management

Contents:

- (1) Survey and research work in different functional areas of business.
- (2) Different dimensions of international business and its environment.
- (3) Policies and legal provisions of government with respect to the business environment in India.
- (4) Managerial economics and their applications in managerial decision making.
- (5) Understanding of finance functions and relevant techniques of financial management.
- (6) Recent changes in financial accounting and reporting practices.
- (7) Understanding of the services and its management.
- (8) An insight into the interface of information technology with business, and to familiarize them with computer applications in business decisions.
- (9) Changing dimensions of the Modern Organization and their Management.

Suggested Readings:

- (1) Sam Pitroda, “National Knowledge Commission: Report to the Nation”, 2006-2009, Govt of India, New Delhi.

- (2) Yazali Josephine, "Globalization and Challenges for Education", NIEPA, Shipra Publication, New Delhi, 2003
- (3) Terenzini, P.N. & Chaffe, E.E., "Total Quality Management in Higher Education", San Francisco, Jossey Buss, CA, 1991
- (4) University News: Vols. 47 (24); 47(40); 47(41); 47(43); 47(44); 47(50); 47(48); 47(50); 48(15); 48(18); 48(19); 48(20); Journal of Higher Education, Association of Indian Universities, New Delhi.
- (5) Bajaj: Management Processing and Organization, Excel Publication
- (6) Gosh: HRD and Management Vikas
- (7) Sundaram and Bank: International Business Environment Text and Cases, PHI.
- (8) Govt. of India, Latest Economic Survey.
- (9) Mary Ellen Ceuffey, Business English.
- (10) Edwin B Flippo, Personal Management.
- (11) Subrahmanyam, et,al Personality Development, Excel Books, New Delhi.
- (12) N. Vinaykn, A Prabile of Indian Capital Market.
- (13) RBI, Report on trends and progress of banking in India, Various Issues, Mumbai.
- (14) N. Ghosh, Management Control Systems. Prentice Hall of India.
- (15) Saunderr, Research Methods for Business Students (Person India, New Delhi).
- (16) Smith, Malcom, Research Methods in Accounting (Sage Publ, 2007).
- (17) Smith, Thorp and Lowe, Management Research (Sage Publication)
- (18) Cereensteinand Feinamn, Electronic Commerce, Tata Mv Cerawhill, New Delhi,

Kumaun University Nainital
Department and Faculty of Commerce & Management
Ph.D. Course Work Module for Research Paper III
Paper III: On specialized branch of the subject

Introduction: This paper is specially meant to adjudge the acquired knowledge and ability of candidate in the specialized branch of the subject related to which the candidate will finally submit the Ph.D. **Memoir (i.e. Maxima)** for evaluation. Hence, this is advisable that in place of a separate theory based examination candidate may be asked to prepare a **dissertation** work therewith called **Minima**) on major themes and or broader issues of the specialized aspects of the subject-field (in which the candidate wishes to pursue the research work) in consultation with his/her supervisor.

Frame work of Minima: Through out the course period candidate will primarily consult the supervisor and candidate will be deeply involved in information search and consulting the library. The **Minima** work can be organized as follows.

Topic: To be chosen from the **specialized** branch approved by the supervisor.

Content:

- (i) Principles and Theory (historical and modern perspective).
- (ii) Review of research (national and international status). This will help researchers identifying the research gaps and all be further useful while framing the research objectives in a more rational manner.
- (iii) Materials and Methods (Standard and innovative methods. if any).
- (iv) References, Bibliography/Webliography (this would include complete list of consulted journals, books, memoir including the published unpublished Ph.D. theses, web-pages and search engines etc.).

(Minima work can be limited to 100 printing pages including the chart, figures and references).

Kumaun University Nainital
Department and Faculty of Law
Syllabus for Ph.D. Course Work Paper – I
(Research Methodology in Law)

Paper-I-Research Methodology

- 1- Meaning, Objectives and Kinds of Legal Research
- 2- Methods of Legal Research
 - i- Doctrinal and Non-doctrinal Research
 - ii- Quantitative and Qualitative Research
 - iii- Socio-legal Research
 - iv- Relevance of Empirical Research
- 3- Identification of Research Problem
- 4- Research Design
- 5- Devising Tools and Techniques for Data Collection
- 6- Data Analysis

Kumaun University Nainital
Department and Faculty of Law
Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in the Field of Law)

Paper –II- Recent Advances in the Subject Concerned

- 1- Feminist Jurisprudence
- 2- Critical Legal Studies Movement
- 3- Challenges to Indian Federalism
- 4- Challenges to Parliamentary Democracy in India, Concept of Panchayati Raj and Village Courts
- 5- Important Constitutional Amendments during last ten years
- 6- Landmark Judicial Pronouncements and Important Central legislations during last two years
- 7- Recent Trends in Tortious Liability in Relation to Hazardous Activities

Kumaun University Nainital
Department and Faculty of Law
Syllabus for Ph.D. Course Work Paper – III
(On specialized branch of the subject)

Introduction: This paper is specially meant to adjudge the acquired knowledge and ability of candidate in the specialized branch of the subject related to which the candidate will finally submit the Ph.D. **Memoir (i.e. Maxima)** for evaluation. Hence, this is advisable that in place of a separate theory based examination candidate may be asked to prepare a **dissertation** work therewith called **Minima**) on major themes and or broader issues of the specialized aspects of the subject-field (in which the candidate wishes to pursue the research work) in consultation with his/her supervisor.

Frame work of Minima: Through out the course period candidate will primarily consult the supervisor and candidate will be deeply involved in information search and consulting the library. The **Minima** work can be organized as follows.

Topic: To be chosen from the **specialized** branch approved by the supervisor.

Content:

- (i) Principles and Theory (historical and modern perspective).
- (ii) Review of research (national and international status). This will help researchers identifying the research gaps and all be further useful while framing the research objectives in a more rational manner.
- (iii) Materials and Methods (Standard and innovative methods. if any).
- (iv) References, Bibliography/Webliography (this would include complete list of consulted journals, books, memoir including the published unpublished Ph.D. theses, web-pages and search engines etc.).

(Minima work can be limited to 100 printing pages including the chart, figures and references).

Kumaun University Nainital
Subject – Defence and Strategic Studies
Syllabus of Ph.D. Entrance Test

Unit – I Military History of India

1. Military System in Vedic and Epic Age (1500-600B.C.)
2. Battle of Hydaspes (326.B.C)
3. Warfare and Military Organization (600-185B.C) and Kautilya Philosophy of War
4. Changes in Hindu Military system and Art of Warfare during the Age of Gupta and Harsh Vardhana (185B.C.to 647 A.D.)
5. Arab and Turk invasions of India and new trends in Warfare. Rajput Military System and art of Warfare with special reference to the battle of TARRAIN (1191-92A.D.)
6. Military system of the Delhi Sultanate (1206 to 1520A.D.)
7. The development in Mughal Military system and changes in the art of Warfare (1526 to 1707 A.D.) with special reference to the Battles of PANIPAT and KHANWA, cause of the failure of Mughal Military systems.
8. Maratha Military system, with special reference to the Third Battle of PANIPAT 1761 A.D.
9. Military system and pattern of warfare of SIKH ARMY, ANGLO-SIKH Warfare with Reference to the Battle of ASSAYE (1803A.D) and SOBRAON (1846A.D.)
10. Development of the presidency armies under the East India Company.
11. Indian war of Independence 1857.
12. Organization of the Indian Armed Force after independence.
13. Kashmir Operation 1947-1948.
14. India – Pakistan Conflict of 1965.
15. India- Pakistan Conflict of 1971.

16.Kargil war 1999.

Selected Readings

- | | | |
|---------------|---|--------------------------------------|
| Majumdar B.N. | - | A Study of India Military History. |
| Majumdar P.K. | - | Bhartiya Sana ka Itinas |
| Fukker J.F.C. | - | Generalship of Alexander the Gareat. |
| Singh L.J. | | |

Kumaun University Nainital
Department and Faculty of Education
Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in the field of Education)

Paper II : Recent Advances in the field of Education

Contents:

Unit-I: Higher Education in the Context of Globalization

Unit-II: Changing Paradigm of Technology in Higher Education: m-learning, u-learning, weblog, Information literacy in higher education

Unit-III: Developments in the field of Education :
Right to Education Bill-2008
Human Rights Education and Teacher Education Curriculum
Shakshar Bharat Program
Rashtriya Madhyamic Shiksha Shaksharta Mission
National Curriculum framework
Knowledge Commission
Delor's report

Unit-IV: Reforms in examination and evaluation in higher Education

Unit-V: Total quality management in Education

Unit-VI: Future of Open Distance Learning under GATS policy regime

Unit-VIII: Future perspectives in Teacher Education

Suggested Readings:

- (1) Sam Pitroda, "National Knowledge Commission: Report to the Nation", 2006-2009, Govt. of India, New Delhi.
- (2) Hallak, J, "Globalization, Human Rights and Education", UNESCO, IIEP, Paris, 1999.

- (3) Yazali Josephine, “Globalization and Challenges for Education”, NIEPA, Shipra Publication, New Delhi, 2003.
- (4) Khajapeer, M., “Teacher Education in 21st century India”, University News, Vol. 39, No.9, 2001.
- (5) NCERT, “National Curriculum Framework-2005”, New Delhi
- (6) Terenzini, P.N & Chaffe, E.E., “ Total Quality Management in Higher Education”, San Francisco , Jossey Buss, CA 1991.
- (7) University News: Vols. 47 (24); 47(40); 47(41); 47(43); 47(44); 47(50); 47(48); 45(50); 48(15); 48(18); 48(19); 48(20); Journal of Higher Education, Association of Indian Universities, New Delhi.
- (8) Right to Education Bill – 2008 PRS: www.prsindia.org.
- (9) Teacher Education in Madhya Pradesh, SCERT, Bhopal, NCTE, MG Marg, IP Estate, New Delhi, 1997.
- (10) Rao, D. Bhaskar, “Global consensus on Teacher Education”, Discovery Pub. House, New Delhi, 1998.

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in English)

Paper II: Recent Advances in the subject

Modern Literary Criticism and Theory

1. New Criticism
2. Structuralism
3. Post-Structuralism.
4. New Historicism.
5. Feminism.
6. Psychoanalytical Criticism
7. Cultural Criticism.

References:

David Lodge. Modern Criticism and Theory.

Rene Welleck A History of Modern Criticism.

ohn Crowe Ransom The New Criticism.

Jonathan Culler. Struturalist Poetics.

Christopher Norris. Deconstruction; Theory and Practice.

H. Aram Veesser. The New Historicism.

Alan Sinfield. Cultural Politicis.

Toril Moi. Texual/Sexual Politics: Feminist Literary Theory. Mary

Eagleton. A Conise Companion to Feminist Theory.

Elaine Showalter. The New Femisnist Criticism.

Sander Gilaman. Introducing Psychoanclytic Theory.

Syllabus for Ph.D. Course Work Paper – II
Recent Advances in Forestry & Environmental Science

1. Recent advance in the forestry an introduction.
2. Various disciplines of forestry.
3. Forests and impact of climate change.
4. Research methods and sampling techniques for various disciplines of Forestry like Forest Ecology, Soil Science, Social Forestry, Agroforestry. Plantation Forestry, Watershed Management. Seed Science and Technology, Regeneration and Natural Resource Management (NRM).
5. Forestry and its relation to industries, Use of GIS & Remote Sensing and computer application in Forestry
6. Basic statistics used in Forestry. Measures of central tendency, dispersion, correlation, regression and analysis of variation and various software's used in data analysis.
7. Important instruments used in forestry research.

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Geography)

GEOGRAPHY

Paper-II: Recent Advances in the subject :

Unit-I: Emergence of Geography as Scientific Discipline: Impact of Explorations and Discoveries.

Unit-II: Dichotomies: Systematic and Regional, Determinism and Possibilism and Physical and Human Geography.

Unit-III : Impact of Quantitative Revolution in Geography: Development of Theories and Models.

Unit-IV: Introduction of Aerial Photographs, Satellite Data and Global Positioning System a

Unit-V: Introduction to Geographical Data in Geographic Information System and Science.

References:

1. Hartshorne. R. The Nature of Geography, 1939
2. Hartshorne, R. Perspective on the Nature of Geography. 1959
3. Minshull, R The Changing Nature of Geography. London. 1970
4. Minshull,R. Regional Geography. Theory and Practice. 1967
5. Spate, O.H.K. Let me Enjoy-Essays Partly Geographical
6. Taylor. G(ed) Geography in the twentieth Century. 1951
7. James & James(eds.) American Geography- Inventory and Prospect, 1954
8. Wooldridge and East The Spirit and purpose of Geography, London .1958
9. Wooldridge The Geographer as Scientist essays on the scope and nature of Geography: London, 1956
10. Board and Others Progress in Geography, Vol.I to V.
- 11.Harve , D. Explanation in Geography, London,1969
- 12.Freeman. T.W A Hundred Years of Geography. London. 1961

13. Dickinson and Howarth The Making of Geography, Oxford, 1933
14. Spilphus The Background of Geography
15. Bundury, E.H. A History of Ancient Geography
16. Newton Travels and Travelers in the Middle Ages
17. Pensore, B Travels and Discovery in Renaissances, 1952
18. Tozer, H.F. A History of Ancient Geography
19. Kimbli, G.H.T. Geography in the Middle Ages
20. Singh, L.R. Bhoogol KI Prakriti (in Hindi)
21. Brock J.M. Geography: Its scope and spirit
22. Stamp, L.D. & Wooldridge London Essays in Geography. 1951
23. Prakasa, Rao, V.L.S. Regional Planning
24. Daysh, G.H.J. Essay in Regional Planning
25. Dickinson, R.E. City and Region-A Geographical Interpretation
26. Dickinson, R.E. The Makers of Modern Geography, 1969
27. Dickinson, R.E. Geography as Ecology
28. Stamp, L.D. Applied Geography
29. Singh. R.L.(ed) Applied Geography
30. Willam Bunge Theoretical Geography
31. Haggett and Chorley Models in Geography. London. 1967
32. Cooke. F.D & Johnson Trends in Geography
33. Haggett, Peter Geography: A Modern Synthesis, New York, 1975
34. James, P.E. All Possible worlds-A History of Geographical Ideas. 1980
35. Helt Jensen.A. Geography: Its History and Concepts
36. Dikshit. R.D. Geographical Thought, Prentice Hall India. 1997
37. Adhikari, S. Fundamentals of Geographical Thought, Chaitanya. Allahabad
38. Haggett. P. & Chorley Models in Geography, London, 1969

39. K.K.Kampal, Handbook of Aerial Photography and Interoperation: A Handbook
- 40.P.Nag and M.Kundart. Digital Remote Sensing.
- 41.P.Guha. Remote Sensing for Beginners.
- 42.Paul A. Longley,Michael F.Goodchild, David Geographic Information System and Science
- 43.John P. Wilson and A.S. Fotheringham. The Geographic Information Science.

Syllabus for Ph.D. Course Work Paper – II
Recent Advances In Geology
Subject Code: 19

Recent developments in Himalayan geology – origin, sedimentation, magnetism and metamorphism.

Modern concept in global tectonics. Contemporary developments in Indian stratigraphy and palaeontology.

Recent mineral discoveries, genesis and occurrence in India.
Environmental status of Indian subcontinent.

Role of geologist in climate change studies. Application of Computer softwares in Geology

Suggested Readings

1. The Making of India Geodynamic Evolution by K.S.Valdiya
2. Geology, Environment and Society by K.S.Valdiya
3. The Dynamic Earth by A.M. Patwardhan
4. Plate Tectonics and Crustal Evolution by Kent C. Condie
5. Fundamentals of Geology by A.B. Roy
6. A handbook of Minerals, Crystals, Rocks and Ores by P.K. Alexander
7. Economic Geology by Umeshwar Prasad
8. Precambrian Geology of India by S.M. Nakvi and Rogers
9. Precambrian of South India by S.M. Nakvi
10. Rockware ® Web page

प्री-पीएच.डी.

द्वितीय प्रश्नपत्र पाठ्यक्रम सत्र 2022 से लागू

1. हिन्दी साहित्य का इतिहास : सैद्धान्तिक एवं आलोचनात्मक अध्ययन
2. हिन्दी में आधुनिक साहित्य सिद्धान्त/विचारधाराएँ : स्वच्छन्दतावाद, मार्क्सवाद, गाँधीवाद, अस्तित्ववाद, राष्ट्रवाद, उत्तरआधुनिकता
3. (क). हिन्दी में नए विमर्श : स्त्री विमर्श, दलित विमर्श, आदिवासी विमर्श एवं ट्रांसजेंडर(परलैंगिकता) का प्रश्न
(ख). लोक साहित्य
4. साहित्य समीक्षा का व्यावहारिक अध्ययन
5. हिन्दी विषय में शोध प्रस्ताव एवं रूपरेखा निर्माण का व्यावहारिक अध्ययन

Handwritten signature

Handwritten signature: Krawat

प्रो. चन्द्रकला रावत

संयोजक

पाठ्यक्रम एवं शोध समिति

हिन्दी एवं अन्य भारतीय भाषा विभाग

कुमाऊँ विश्वविद्यालय, नैनीताल

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in History)

**SYLLABUS FOR PRE-PhD COURSE WORK EXAMINATION-
HISTORY (w.e.f.Session 2015-16 onwards)**

Note: the question paper will be of three hour duration. It will be required to cover all the three periods, i.e., Ancient, Medieval and Modern India

Ancient India

1. Indus Valley Civilization : Salient features
2. Vedic Age; Vedic Literature; Caste system
3. Buddhism and Jainism-Birth and expansion
4. Mauryan Period- Chandragupta Maurya and Asoka
5. Gupta Period-Chandragupta Viramaditya - Political and Cultural achievements
6. Harsa and his times; Rajput period
7. Economic and Social Changes in Ancient India

Medieval India

8. Advent of Islam - invasions of Mahmud Gaznavi and Mohammed Ghori
9. Delhi Sultanate-different dynasties
10. Mughal Period-Consolidation of Empire-Akbar, Shajahan and Aurangzeb; decline of the Empire
11. Economic and Social Changes in Medieval India

Modern India

12. Advent of European Powers- English, French, Portuguese and Dutch
East India company-Initial years; Dual Government in Bengal; Administrative Reforms under Warren Hastings and Lord Cornwallis; Struggle for supremacy against Marathas, Mysore, Gurkhas and Sikhs
13. Indian Renaissance: Raja Ram Mohan Roy, Dayanand Saraswati, Annie Besant, Swami Vivekanand
14. Resistance Against British rule: revolt of 1857; Indian National Congress; advent of Mahatma Gandhi; Constitutional reforms; Road to freedom-Quit India Movement; Independence and Partition of India
15. Economic and Social Changes in Modern India

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Home Science)

HOME SCIENCE

A: Foods and Nutrition

Unit I – Food Science

- Introduction to food science – evolution of food industry and allied industries.
- Understanding food groups for balanced diet, structure and composition, nutritive value processing techniques of cereals, pulses and legumes, fruits and vegetables, nuts and oil seeds, milk and milk products, egg, meat and fish.
- Sugar, spices and condiments
- Processed food: jams, jellies, squashes, pickles
- Beverages – Coffee, Tea, Cocoa, carbonated and non carbonated, alcoholic beverages
- Food additives, food colour, emulsifiers, stabilizers and flavors
- Leavened products
- Food fortification, enrichment and supplements
- Sensory evaluation of food products
- Food spoilage and food poisoning – Spoilage caused by micro – organisms, enzymes, pests and rodents
- Principles of food preservation – food dehydration, heat preservation, cold preservation
- Food irradiation and microwave heating
- Fermentation and fermented foods

Unit II – Human Nutrition and Dietetics

- Nutrients in foods: Their function, requirements and sources, digestion absorption and utilization of nutrients. Effect of low and excess intake of nutrients on human body, B.M.R.
- Recommended dietary allowances and nutrition for different age sex and activities
- Methods of assessment of nutritional status
- History of dietetics, effect of illness on food acceptance, role of dietician, dietetic counseling
- Therapeutic modification of normal diet, food exchange lists, special feeding methods
- Causes, symptoms and principles of dietetic managements of
 - Fevers
 - Peptic ulcer
 - Gastritis, diarrhea, constipation
 - Jaundice
 - Hepatitis
 - Cardiovascular disease
 - Nephritis and renal disorders
 - Gout
 - Arthritis
 - Diabetes mellitus
 - Obesity
 - Under weight, (PCM)
 - Cancer
 - Diet in surgery, burns, injury and allergy
 - Nutritional Management of eating disorders-Anorexia Nervosa, Bulimia, Binge eating.

Unit III Community Nutrition

- National and international agencies and various programmers dealing with nutrition of community in India
- Nutritional education-Rationale, planning, execution and evaluation
- Food security : food distribution system, PDS, FCI
- Magnitude of nutritional problems in India: Major deficiency disorders PEM, Vitamin A deficiency, endemic goiter, fluorosis etc.
- Concept of health, vital statistics and demographic indicators
- Community nutrition as a field: public health nutrition, goals of nutrition programme, dietary guidelines, present trends and focus on community nutrition, methods of assessing nutritional status
- National food and nutrition policy, plan of action and programmes
- Primary health care-concept and organization, current status of health care system in India
- Nutrition and infection

Unit IV Nutrition during life span

- Nutrition in infancy – growth and development, nutritional requirements, feeding pattern, weaning practices, weaning and supplementary foods
- Pre-School age-growth and development, nutritional requirements, special care in feeding them, nutritional problems of this age - School age and adolescents-growth and development, nutritional requirements, nutritional problems
- Young adults-nutritional requirements, nutritional status of India adult population, nutritional problems common to this age

- Elderly-nutritional requirements, special needs, nutritional problems
- Pregnancy-Physiological adjustments, nutritional requirements, nutritional status of India pregnant women, effect of malnutrition on outcomes of pregnancy
- Lactation-Physiology of lactation, factors affecting lactation, nutritional requirements

B: Clothing and Textile

Unit I Textile Science

- Natural fibers: Physical and chemical properties and fabric manufacture
- Man made fibers: Physical and chemical properties and fabric manufacture
- Blends and mixtures, yarn classification, spun yarns, filament yarns
- Labels and their classification
- Identification of fibers
- Laundering of textiles
- Soaps and detergents, bleaches, whitening agents and blues
- Hard and soft-water
- Care and storage of textiles

Unit II Fabric Formation and finishes

- Method of fabric formation
- Basic weaves, non woven fabric construction, knitted fabrics
- Looms
- Special finishes – Bleaching, scouring, degumming, carbonizing, mercerizing, sanforzing, beetling, creping, glazing, calendaring, flocking, napping, tentering, shearing

- Functional finishes – water proof and water repellent finish, soil repellent finish, shrinkage control, wrinkle resistance, flame retardant finish, mildew proof, rot proof, moth proof, antistatic and antibacterial finish
- Adding colour textile: Natural and synthetic dyes
- Classification of dyes, dyeing techniques
- Textile and environment
- Printing techniques

Unit III Apparel Designing and Historic Textiles

- Sources of inspiration for apparel designing
- Techniques of pattern making - Drafting their applications and limitation in clothing construction
- Psychological and sociological influence of dress
- Basic principles of construction of garments for different age
- Clothing – origin and reasons
- Costumes in ancient Indian civilization
- Indian embroideries

C: Human Development

Unit I Life Span Development

- Prenatal development stages – Genetic and environmental factors, critical influences, birth process
- Infancy (Birth to 2 years)
- Physiological, cognitive, social, physical emotional, motor development
- Early environment and its importance

- Child rearing practices
- Early childhood years – Physical, motor, emotional cognitive and language development
- Middle childhood – Physical and motor development, language and intellectual development, growth trends emotional, social and moral development
- The function of family, school and community in growth of children

Unit II Life Span Development II

- Adolescence – Physical and social changes development of emotional maturity, personal and vocational interest, problems of this stage
- Early and middle adulthood – Meaning, development of self, physical, intellectual and personality development
- Old age – Older adults, characteristics physical, cognitive and personality changes attitude towards life, psychological changes, special needs of elderly

Unit III Theories of Human Development

- Theories of Human development
- Learning theories
- Personality
- Mental development – Meaning, components, assessment, significance and types of mental tests
- Exceptional children
- Family relationship
- Juvenile delinquency -Mental hygiene

Unit IV Aspects of Human Development

- Concept of human development, Human development index, human development indicators
- Millennium development goals and human development
- Human development in India and human rights
- Education and development education and social change. Population and education. Educational profile of India
- Elementary school and higher education in India
- National policies for education, National curriculum framework, NCERT 2005, DPEP, Right to education 2010 & MDM
- Social empowerment – education, health, nutrition, drinking water and sanitation
- Self help groups, women in agriculture, women and industry support services
- Legal empowerment – legal literacy on personal and family laws, role of family court and legal aid center
- Support system – role and functions of department of women and child development, central social welfare board, state social welfare boards, National Commission for woman
- Programmes for women and child development

Family Resource Management

Unit I Theory of Management

- History of home management
- Ends sought through management Goals – factors affecting, end Values – sources of values, patterns, status security Standards
- Management as a system
- Management abilities

- Decision Making – Meaning, types, modes and techniques and tools for decision making
- Management functions and process
- Planning organizing, guiding, controlling evaluation

Unit II Family Economics

- Importance and relationship of economics to resource management
- Consumption functions and consumption pattern of families, elements of market, theory of consumer behavior – central problem of choice and utility, solution, law of diminishing and marginal utility and law of equi – marginal utility
- Planning of expenditure (account keeping and marketing-types), functions, importance and market devices – labels, packing, guarantee and brands
- Techniques of financial assessment budgeting taxes, saving and insurance
- Consumer behaviors
- Consumer protection government, public and private protection, role of consumer education, standardization of consumer goods and testing methods

Unit III Housing

- Requirement of housing, history of housing, changes in housing, changes in housing need and standards
- Present housing condition in India
- Housing in India as effected by various trends
- Solving India's housing problems
- Factors affecting housing
- Approaches to housing
- Housing schemes and agencies, rent control policies
- Housing standards and housing legislation.

- Technical aspects of house design with reference to principles of planning
- Residential architectural design for various life styles
- Cost of housing design – estimating and costing in relation to land price and construction, factors influencing cost, sources of financial assistance
- Analysis of housing design – analysis of plans, material and construction techniques, study of different housing designs
- Housing research – agencies for research and development, methods and techniques
- Graphic representation of interiors and floor plans

E: Home Science Extension Education

Unit I Extension Education System

- History, philosophy, objectives, concepts, contribution, principles, development of extension, Extension education: meaning, process and principal of learning in extension
- Formal and non formal education, principles, significance, steps and types of program planning and evaluation
- Community development programmes in India
- Review of different rural development programme – IRDP, TRYSEM, JRY, NREGA, PMRY, SRY, SGSY
- Institutions for child and women development- WHO, UNICEF, UNESCO etc
- Support structures and their functions – Panchayats, panchayati raj institution, central social welfare boards, state social welfare boards, national level voluntary agencies, CAPART etc.

Unit II Communication Technologies in Extension

- Types of communication systems – concept, functions and significance

- Interpersonal, characteristics and scope of mass communication
- Mass communication – Elements, characteristics, models, theories, scope and challenges
- Traditional and modern methods of communication
- Media systems: Trends and techniques, concepts, scope, relevance of media in society functions, reach and influences of media
- Participatory rural appraisal PRA and RRA techniques
- Elements of diffusion of innovation and decision making process

Unit III Research Methods and Statistics

- Research in home science concept, need and approaches
- Types of research: Historical, survey, experimental and case study
- Definition and identification of research problems, hypothesis, basic assumption and limitation of research problem
- Sampling: Types and selection of samples
- Data collection and processing methods
- Role of statistics in research – elementary statistics, classification and tabulation and frequency distribution of data, , mean, median, mode, probability
- Use of computer for analysis of data

Syllabus for Ph.D. Course Work Paper – II
Recent Advances In Information Technology
Subject Code: 23

UNIT I : Advance Data Base Management System

ER-model, Relational model (relational algebra, tuple calculus), Database design (integrity constraints, normal forms), Query languages (SQL), File structures (sequential files, indexing, B and B+ trees), Transactions and concurrency control, Introduction to NOSQL.

UNIT II : Advanced Operating Systems

History of OS, Types of OS, Processes, Threads, Inter-process communication, Concurrency, Synchronization, CPU scheduling, Memory management and Deadlock handling, Virtual memory, File systems, I/O systems, Protection and security, Introduction to Google file system.

UNIT III : Computer Networks & the Security Concept

Introduction to computer networks and the Internet, overview of network building blocks, network architecture with layers, protocols & applications, ISO OSI stack, Basic concepts of hubs, switches, gateways, and routers, LAN technologies (Ethernet, Token ring), Flow and error control techniques, Routing algorithms, IPv4, Congestion control, TCP/UDP, Application layer protocols (ICMP, DNS, SMTP, POP, FTP, HTTP);

Cryptography and Network Security : Introduction to cryptography, cryptosystems, cryptanalysis, basic concepts of public key and private key cryptography, symmetric-asymmetric encryption, digital signatures, Network Security, authentication, e-mail, IP & web security, phishing & pharming, various attacks and their prevention.

UNIT IV : : Artificial Intelligence and Natural Language Processing:

Introduction & concept, AI problems, AI techniques, problem as state space search, problem characteristics, production systems, types of production systems, *Heuristic search techniques*: Generate and test, Hill climbing, Best first search, Problem reduction, Constraint satisfaction, Means-Ends Analysis, Knowledge Representation, Reasoning Planning & Learning, Expert Systems and their applications.

Introduction to Natural Language Understanding, An Outline of English Syntax, Grammars and Parsing, Grammars for Natural Language, Toward Efficient Parsing, Ambiguity Resolution: Statistical Methods, Linking Syntax and

Semantics, Ambiguity Resolution, Scoping and the Interpretation of Noun Phrases.

UNIT V : Cloud Computing:

History, NIST definition of cloud computing, working of cloud computers, pros and cons of cloud computing, developing cloud services, Iaas, Paas, Saas, deploying cloud computing- public, private, hybrid and community cloud, Virtualization, virtual machine monitor and their types, hardware and desktop virtualization, service oriented architecture, Web 2.0, security and privacy issue in cloud computing.

References:

- **Avi Silberschatz, Peter Galvin, Greg Gagne, “Operating System Concepts”, John Wiley & Sons.**
- **Andrew S. Tanenbaum, “Computer Networks”, Prentice Hall.**
- **William Stalling, “Cryptography & Network Security: Principles & Practices”, Pearson.**
- **Elaine Rich, Kevin Knight, Shivashankar B Nair, “Artificial Intelligence”, McGraw Hill**
- **M. Morris Mano, “Digital Logic and Computer Design”, Pearson.**
- **Ronald J. Brachman, Hector J. Levesque, “Knowledge Representation and Reasoning”, Morgan Kaufmann.**
- **Daniel Jurafsky, James H. Martin, “Speech and Language Processing”, Prentice Hall.**
- **Elmsari & Navathe, : “ Fundamentals of Database Systems”, Pearson.**
- **Anthony T .Velte, Toby J.Velte, Robert Elsenpeter, “Cloud Computing: A Practical Approach”, Tata McGraw Hill.**
- **Buyya & Vecchiola & Selvi, “Mastering Cloud Computing”, Morgan Kaufmann.**

RECENT ADVANCES IN JOURNALISM AND MASS COMMUNICATION
PRE-PhD COURSE WORK SYLLABUS

Paper II
Recent Advances in Subject

Unit 1: Scope and Significance of Communication Research

Unit 2: Theories of Mass Media: Uses and Gratification, Agenda Setting Theory, Two-Step Flow, Multi-step Flow Theory

Unit 3: Public Opinion Surveys, Exit polls, Citizen Journalism, Social Media, Recent trends in Media Interactivity and Audience Feedback

Unit 4: Recent trends in media portrayals of different sections of society (Women, children, poor and marginalized sections), Post-Globalization changes in Mass Media in India

Unit 5: Field Survey, Observation, Participant Observation, Non-Participant Observation, Field Diary, In-depth Interviews, Structured Interviews, Unstructured Interviews, Semi-Structured Interviews

Kumaun University Nainital
Department and Faculty of Law
Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in the Field of Law)

Paper –II- Recent Advances in the Subject Concerned

- 1- Feminist Jurisprudence
- 2- Critical Legal Studies Movement
- 3- Challenges to Indian Federalism
- 4- Challenges to Parliamentary Democracy in India, Concept of Panchayati Raj and Village Courts
- 5- Important Constitutional Amendments during last ten years
- 6- Landmark Judicial Pronouncements and Important Central legislations during last two years
- 7- Recent Trends in Tortious Liability in Relation to Hazardous Activities

KUMAUN UNIVERSITY, NAINITAL LIBRARY AND INFORMATION SCIENCE COURSE

Recent Advances in Library and Information Science

Unit I: Information and Communication Technology (ICT)

- Origin and Growth.
- Information Technology and its Components.
- Communication Technology and its components.
- Role of ICT in the Development of LIS centers.

Unit II: Types of Networks and Security measures.

- Types of Network & Network topologies.
- Network Components: UTP, Optical Fibers, Ethernet, Network interface card, Hub, Routers, modems and requirements of Wi-fi.
- Planning of computer network in Library and Information centres.
- Network security measures.

Unit III: Relational Database Management Systems (RDBMS)

- Introduction and concept of RDBMS
- DBMS vs. RDBMS
- RDBMS software; Proprietary and Open source.
- Interfaces for RDBMS using SQL.
- Development of database using MySQL.

Unit IV: Internet

- Internet based services.
- Types of Internet Connectivity.
- Web browsers.
- Web Servers and its functions.
- Search Engines
- Website design using HTML/XHTML
- Internet Security
- Use of Internet in LIS

Unit V: Digital Library (DL)

- Introduction and Basic Concepts.
- Hardware and Software for DL.
- Content creation for DL
- Intellectual Property Right (IPR) Issues.



- Digitization and preservation.
- Development of DL using Greenstone/Dspace.
- Important DL projects in the world and India.

Unit VI: Web 2.0 based Lib Service.

- Lib 2.0
- Blogs
- RSS Feeds
- Ask the Librarian
- Virtual Libraries

gms

Syllabus for Ph.D Course Work in Mathematics
(Paper II : Recent Advances in Mathematics)

Fuzzy set and fuzzy logic: From classical crisp sets to fuzzy sets, operations on fuzzy sets, Introduction to fuzzy arithmetic, fuzzy relation, fuzzy logic, fuzzy relations equations, uncertainty- based information, and applications of fuzzy sets in decision making and physical sciences.

Chaos and bifurcation: Iteration of functions, phase portraits, periodic points and stable sets, differentiability and hyperbolicity, chaos in perspective, Routes to chaos, Chaos (definitions and examples), characteristics of chaos, bifurcation (definitions and examples).

Optimization Techniques: Unconstrained optimization techniques, constrained optimization techniques and solutions of constrained nonlinear optimization problems, Decision Theory, Introduction to Game theory, Heuristics based optimization problems, Decision Theory, Introduction to Game theory, Heuristics based optimization Techniques.

Suggested Reading:

1. Discrete Dynamical systems by R.A.Holmgren
2. Chaos theory tamed by Garnett P. Williams, A Joseph Henry
3. Chaotic Dynamical systems by R.L devaney
4. Bifurcation and chaos in complex systems by Jian – Qiao Sun and Albert lu
5. Operations Research by H.A.Taha
6. Operations Techniques by Chander Mohan and kusum Deep
7. Engineering optimization by S.S.Rao
8. Fuzzy sets and fuzzy logic by Klir and Boyuan
9. Fuzzy sets, Uncertainty and information by Klir and Folger
10. Fuzzy sets and logics by Zimmerman

प्री० पी० एच० डी० पाठ्यक्रम वर्क कार्स

द्वितीय प्रश्न पत्र (Research Advances in the Subject Music)

इकाई—1

- 1 भारतीय संगीत का इतिहास (प्राचीन काल, मध्यकाल, आधुनिक काल।)
- 2 शास्त्री संगीत की विभिन्न गीत शैलियाँ (ध्रुपद, धमार, खयाल, गत, तराना, ठुमरी, दादर भजन) आदि का विस्तृत अध्ययन।
- 3 हॉरमनी तथा मैलोडी।

इकाई—2

- 1 तत्वाद्य सुषिर वाद्य, घनवाद्य तथा अवनद्ध वाद्यों का विस्तृत अध्ययन।
- 2 शास्त्री संगीत में प्रयुक्त होने वाली तथा प्रचलित तालों का (लयकारी सहित अध्ययन)।
- 3 शुद्ध राग, छायालग राग, संकीर्ण राग, पूर्वांग उत्तरांगवादी राग, सन्धि राग, परमेल प्रवेश रागों का अध्ययन।
- 4 स्वर राग व ताल की दृष्टि से हिन्दुस्तानी उत्तरी दक्षिणी संगीत पद्धतियों व तुलनात्मक अध्ययन।

इकाई—3

- 1 सौन्दर्य शास्त्र, मेजरटी, मेजरटोन, मानरटोन, सेमीटोन, कॉडस, क्लैफ।
- 2 स्वर—स्वरान्तर।
- 3 स्नातक एवं स्नातकोत्तर पाठ्यक्रम के समप्रकृति रागों का तुलनात्मक अध्ययन।

इकाई—4

- 1 कंठ साधना।
- 2 श्रुति, स्वर थाट, ग्राम, मूर्च्छना, प्रबन्ध, जातिगायन, राग गायन का विस्तृत अध्ययन।
- 3 शास्त्रीस संगी के किन्हीं पाँच प्रसिद्ध गायन एवं गायिकाओं का जीवन परिचय एवं संगीत में योगदान।
- 4 रामायण, महाभारत तथा पुराणों में संगीत।

Syllabus for Ph.D. Course Work Paper – II

Recent Advances in Pharmaceutical Science

Paper II will be divided in two section. Section A will be compulsory to all. A research scholar has to select one topic out of Section B depending upon to specialization or the area identified for the proposed research work

SECTION A (compulsory to all)

1. **Introduction and Application of following:**
 - a) New Drug Development strategies (Definitions and basic principles only)
 - i. Combinatorial Chemistry
 - ii. QSAR/SAR
 - iii. Physicochemical Evaluation
 - iv Drug bio-screening and evaluation (Preclinical and Clinical)
 - v. High Throughput screening
 - b) Extraction methods for Herbal Drugs.
 - c) Applications of Nanotechnology in Pharmaceutical Science
2. **Pharmacological Screening and Assays:** General principles of screening correlations between various animal models and human situations, animal ethics
3. **GMP:** Guidelines- Building and facilities Equipment, Personnel, Raw Materials Production, Laboratory Controls, Records, Labeling, Complaints,
4. **Drug discover and Development:** Pre-discovery, Drug Discovery, Early Safety Tests, preclinical Testing, Investigational New Drug (NDA) Application and Safety, New Drug Application (NDA) and Approval. Manufacturing, Ongoing Studies and Phase 4 Trials
5. **Drug Regulatory Affairs:** Indian Patent Act 1970, Its amendments, concepts of IPR, criteria for granting patents and filing a Indian patent, PCT, Patent infringement. INDA/NDA/ANDA filing. Para- I, II, III, IV filing. Hatch-Waxman amendments, Introduction to patent Search. OECD guidelines for chemical testing pertaining to use as drug, related substances, excipients, toxicity, etc. WHO guidelines for standardization of raw material and finished products including herbal products.
6. **Stability testing:** Introduction, seientific and technical background to the design of stability testing regulatory requirements as per Indian and other

regulatory authorities for testing of new active substances, bulk active drug substances, dosage form in their final packaging.

7. **Clinical pharmacology and pharmacodynamics:** Clinical study design, documentation, presentation and interpretation. Clinical trials. definition, Phase I, Phase II, Phase III and Phase IV studies, design documentation, presentation and interpretation, statistical analysis of clinical data, factorial design, guidelines as per Indian and other regulatory authorities.

SECTION B

(Select one out of I, II, III, IV)

(I) Pharmaceutics (Subject Specific)

1. Introduction to the development of the dosage form in the view the drug (S)
2. Historical background of the disease and importance of the selected dosage form and route of administration
3. Review of recent trends of the new formulation and outcomes.
4. The concepts of bioavailability and bioequivalence, In vitro and in vivo methods in establishment of bioequivalence.
5. Compartment modeling in pharmacokinetics, significance of different pharmacokinetic parameters, Non-linear pharmacokinetic and reasons thereof. Dose adjustment in disease conditions and in geriatric and pediatric patients.
6. Applications of computer in pharmacokinetics, statistical quality control. Validation of processes. Computer-aided design of experiments
7. Polymers- Natural and synthetic polymers with respect to their pharmaceutical applications, characterization methods of polymers, polymers drug interactions.
8. Controlled drug delivery – Strategies. Oral drug delivery (Gastroretentive and osmotic control systems) targeting through nanoparticles colon targeting lung targeting, targeting of cancerous tissues, mucoadhesive and transdermal drug delivery systems.

(II) Pharm. Chemistry (subject specific)

1. Need of development of new chemical entity.
2. Historical background of the disease in which new chemical is employed.
3. Review of recent trends in development of new chemical entity and its outcomes.
4. Modern synthetic methods: Asymmetric synthesis of chiral drugs, Microwave assisted organic synthesis – concepts, applications and case studies.
5. Advances in QSAR methods (2D,3D QSAR) – concepts and applications in design. case studies.
6. Synthesis, mode of action, structures – activity relationships of newer drugs and agents belonging to the following categories: COX-2 inhibitors anti-histamines (H₁, H₂&H₃), oral hypoglycemics, anticonvulsants, fluoroquinolone antibiotics, anticancer & anti – HIV drugs.
7. Structural elucidation. biosynthesis and mode of (a) Steroids Sex hormones, (b) Alkaloids Quinine and steroidal alkaloids, (c) Antibodies, New generation cephalosporins and monoclonals, (d) Glycosides, Cardiac glycosides, Triterpenoid glycosides (Panax ginseng); (e) Prostaglandins and their analogs.

(III) Pharmacognosy (Subject specific)

1. Biological sources of the selected medicinal plant (s) Botanical review animal Sources of the drug.
2. Review of recent trends of specific chemical constituents related to disease in concern.
3. Biosynthetic pathways and Radio tracer techniques
4. Marine drug
5. Plant tissue culture techniques
6. Methods of extraction, isolation and purification of plant constituents novel solvent extraction methods, modern chromatographic methods (HPLC, HPTLC and GLC)
7. General methods of physicochemical characterization of plant constituents – Melting point, boiling point optical rotation, case studies involving structural elucidation of phyto-constituents (alkaloids, glycosides, phenolics etc) by spectral methods.

8. Standardization of herbal drugs by conventional and modern techniques including chemical markers, DNA based molecular markers Pre –formulation, formulation & standardization of herbal drugs (Traditional and NDDS like phytosomes nanoparticles etc.). Herbal drug interactions and synergism, Regulatory guidelines for evaluating the safety and efficacy herbal medicines.

(IV) Pharmacology (Subject Specific)

1. Epidemiology of disease.
2. Recent trends in Drug Therapy.
3. Methodologies in Evaluation of potential new drug.
4. Chemical transmission and drug action in the CNS, pharmacological kinetics.
5. Drug discovery and evaluation through advanced pharmacological methods with emphasis on neuropsychopharmacology.
6. Pharmacology of drugs in neurodegenerative disorders (Mechanism) neurodegeneration dementia and Alzheimer's disease, Parkinson's disorders Huntington's disease) including case studies on newer agents and drugs.
7. Modern principles of cancer and AIDS therapy. Advances in pharmacotherapy of diabetes, hypertension and other cardiovascular diseases.
8. Applications of PK-PD modeling and related software in drug development.

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Physics)

1. **Mathematical Methods**
Complex variables, Cauchy – Riemann condition, analytic functions. Cauchy's theorem. Legendre Bessel Hermite differential eqs.. Fourier integral and Fourier transforms.
2. **Classical Mechanics**
D'Alembert's principle and Lagrange's equations, Hamilton's principle, the principle of least action, Canonical transformations.
3. **Non Relativistic Quantum Mechanics**
Schrödinger equation and its applications, Theory of angular momentum, Quantum theory of Scattering, S-matrix Theory.
4. **Statistical Physics**
Foundation of Statistical mechanics, Elements of ensemble theory – a system in Microcanonical, Canonical and Grand Canonical ensembles, Partition functions applications of ensemble theory Maxwell - Boltzmann, Bose-Einstein, Fermi-Dirac distributions.
5. **Atomic and Molecular Physics**
Electronic spectra, Radiative transitions, Applications of Laser in spectroscopy, Basic idea of two photon processes and frequency up conversion.
6. **Nuclear and particle Physics**
Nuclear forces, Nuclear Models, Beta decay Fermi theory, parity violation, Symmetry and conservation laws, Special Unitary Symmetries and Quark model.
7. **Electrodynamics and Plasma Physics**
Maxwell's equations in four dimensions, Gauge transformations, Lorentz transformations, Elementary concept of Plasma and Magneto-Hydrodynamics.
8. **Relativistic Quantum Mechanics**
Relativistic Quantum Mechanics, Basic concepts of Quantum Field Theory.
9. **Electronics**
Linear integrated circuits, Operational amplifier and its applications.
10. **Condensed Matter Physics**
Debye theory of solids, Bloch theorem, K.P. Model distinction between Metal, insulator and semiconductor, Superconductivity, BCS theory of Superconductor.

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Political Science)

POLITICAL SCIENCE

Paper II: Recent Advances in the subject

Group –A: Political Theory

1. Political theory; Meaning, Nature of Political Theory, Its distinction form ideologies- World view and cosmologies; Relevance of Political Theory
2. Types of Political Theory; Grand Theories; Little Theories etc
3. State of Political theory in the 21st century
4. End of Ideology, end of History, End of Sovereignty Debates
5. Environmentalism

Group- B: Indian Politics And Administration

1. Nature of Indian Political System: Historical and Contemporary Perspectives
2. Major constitutional issues : Review of Constitution Debates
3. Regionalism, Language politics, Communalism, Secularism, Terrorism, Criminalization of politics
4. Political Economy of India
5. Regional Political in India and issues with special reference to Uttarakhand

Group – C: International Relation

1. Nature of International relations in the 21st century Recent Approaches to the study of International Relations Realism, Neo-realism, PostModernism, Feminism, Constructivism, Rationalism, Critical Theory, Instuitionalism

2. Cold war as a system; End of Cold war; Security dilemmas after the cold war
3. Globalization, Global Governance, Global Culture
4. Third World and International Relations
5. United Nations: Political Strength and Weaknesses
6. Role of Major Powers in World Politics China, USA, Russia, Germany, France and Britain

Syllabus for Ph.D. Course Work Paper – II
(Recent Advances in Psychology)

PSYCHOLOGY

Paper II: Recent Advances in Psychology

- 1. Paradigms: Concept of Paradigms:** Ontology, Epistemology, and Methodology and Methodology; Key paradigms: Positivism, Post-positivism, the Critical Perspective and Social Constructionism, Participatory Research/Co-operative Enquiry; Existential-Phenomenology.
- 2. Indian psychological concepts:** Introduction to Indian Perspectives.
Upanishads, Samkhya, Vedanta, Jainism, Buddhism, Nyaya, Charvaka, Bhagavadgita; Methods of knowing. Consciousness and Self and Identity.
- 3. Positive Psychology:** Identifying and measuring strengths: Positive self, traits, emotional strength, and flow. Promoting positive relationship: Compassion, forgiveness, gratitude, Empathy, Yoga, Health and Well-Being
- 4. Social issues:** Critical Psychology: Examining the relationship between political processes, cultural realities, historical forces & subjective experience. The interpersonal & intrapsychic formation of our gendered subjective: Masculinity, femininity & the “recovery” of women voices. Poverty, Deprivation and disadvantage.
- 5. Cultural Indian Psychology:** The Pan-Indian Identity; A critical look into “The Inner World” the meeting place for childhood and Society. Symptoms and Healing Traditions in India; In India Intimate Fusion: Fantasies and fears of Indian Men and Women, Analysis of Social Violence.