

**SYLLABUS OF M. PHIL**

M.Phil Geography

Exam. 2014

**DEPARTMENT OF GEOGRAPHY**  
**University of Rajasthan, Jaipur**

**Exam. 2014**

Course Work for Ph.D. / M. Phil. in Geography - 2010 and Onwards

**SCHEME OF EXAMINATION: I SEMESTER**

1. There shall be four papers and each paper is divided into four units. Two questions will be set from each unit. Candidates are required to attempt four questions in all selecting one question from each unit. All questions carry equal marks.
2. Each paper will carry 100 marks, out of which 20 marks will be for internal assessment. Written examination of 80 marks will be of three hours duration.
3. Minimum pass marks will be 50% aggregate in each paper. However, a candidate has to secure minimum 40% in internal assessment and written examination separately.

(Internal assessment will be done by the teachers concerned on the basis of test papers, and regularity in the class.)

***Papers For Semester I***

- |           |   |
|-----------|---|
| Paper I   | Research Methodology  |
| Paper II  | Review of Literature in the proposed field of Research  |
| Paper III | Applied Geography   |
| Paper IV  | Any one of the following:<br>(a) Introduction to Geoinformatics<br>(b) Disaster Perception and Management |

***For Semester II (Only for M Phil Students)***

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|-----------|-----------------------------------|
| Paper V   | Advanced Economic Geography       |
| Paper VI  | Regional Planning and Development |
| Paper VII | Any one of the following :        |

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- (a) Advanced Geomorphology
- (b) Advanced Biogeography
- (c) Advanced Urban Geography

#### Paper VIII Dissertation

### PAPER I: RESEARCH METHODOLOGY

- Unit I      Meanings and nature, approaches to research, fact and theory, paradigm and theory building, hypothesis and models, questionnaire and schedule (need, significance and procedure) sampling theory : types and needs.
- Unit II      Selected techniques of spatial analysis, concentration and dispersal of economic activities, combinational analysis, methods of measuring regional disparities and inequalities.
- Unit III      Applications of statistical methods, probability, correlation (simple and multiple and partial) regression (simple and multiple) regression residual, matrix, multivariate analysis.
- Unit IV      Network analysis, use of software for quantitative geographical analysis, introduction to RS and GIS, integrated area development planning, methods of delimiting regions (economic, industrial, agriculture and planning).

#### Books Recommended

- Guthrie, G. 2010. Basic Research Methods – An Entry to Social Science Research. SAGE Publications, India Pvt Ltd., New Delhi.
- Johnston, R.J. and Sidaway, J.D. 2004. Geography & Geographers. Arnold, London.
- K.R. Sharma 2004. Research Methodology, National Publishing House, Jaipur.
- Mahmood, A. 1998. Statistical Methods in Geographical Studies. Rajesh Publication, New Delhi (fourth revised edition).



Pal, S.K. 1998. Statistics for Geoscientists – Techniques and Applications. Concept Publishing Company, New Delhi.

Mishra, H.N. and Singh, V.P. 1998. Research Methodology in Geography, Rawat Publication, Jaipur.

Har Prasad 1992. Research Methods and Techniques in Geography, Rawat Publication, Jaipur.

Kothari, C.R. 1990. Research Methodology – Methods and Techniques. Wishwa Prakashan, New Delhi (second edition).

Mishra, R.P. 1989. Research Methodology, Concept Publishing Co., New Delhi.

Gupta, S.P. 1979. Statistical Methods. Sultan Chand & Sons, New Delhi, (Twelfth thoroughly revised edition).

Harvey, D. 1969. Explanation in Geography. Arnold Heinemann, London (first Indian edition 1984).

वीरेन्द्र प्रकाश शर्मा 2001, रिसर्च मेथडोलोजी, पंचशील प्रकाशन, फिल्म कॉलोनी, चौडा रास्ता, जयपुर।

डी.डी. चौनियाल 2006, सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली, शारदा पुस्तक भवन, इलाहाबाद।

श्रीवास्तव एवं प्रसाद 2008, भूगोल की सांख्यिकी विधियाँ, वसुन्धरा प्रकाशन, गोरखपुर।

## **PAPER II: REVIEW LITERATURE IN THE PROPOSED FIELD OF RESEARCH**

- Unit I            Concept of review of literature, essential features, importance of review literature in the field of research.
- Unit II            Review of literature from various sources (national and international journals, books, magazines, newspapers, published and unpublished dissertation and Ph.D. thesis.)
- Unit III           Formulations of research design, preparation of research project, synopsis, chapterization, references and bibliography.

- Unit IV Writing research proposal and report, objectives, importance, problems of report writing, contents, language and style of report, characteristics of good report, analysis of report writing

### **Books Recommended**

- Oliver, P. 2008. Writing Your Thesis. Sage South Asian Edition, New Delhi.  
Markman, R. H. and Waddell, M. L. 2001. Ten Steps in Writing the Research Paper.

### **PAPER III APPLIED GEOGRAPHY**

- Unit I Nature, scope and content of applied geography, identification of problems of interdisciplinary nature (like environment resources base, resources use development and disparity).
- Unit II Issues related to physical Geography : Applications of geomorphic mapping terrain evaluation, urban and environmental geomorphology, and geomorphic hazards. Morph metric analysis, drainage basin and slope analysis.
- Unit III Environmental Issues: environmental pollution (air, water, soil and noise), desertification, environmental degradation, and environmental disaster management.
- Unit IV Issues related to economy and human resource management : spatial organization of economic activities (like agriculture, industry, transport trade etc.) Demographic issues, urban, rural and political issues.

### ***Books recommended***

- Lownsbury, J.F and Aldrich, F.T. 1979. Methods and Introduction to Geographical Methods and techniques, Clarendon Press, Oxford.
- Harvey David : Explanation in geography, Edward Arnold, London,
- Dohrs, F.E and Sommers, 1967, Introduction to geography, Thomas Y Crowell Co. New York

### **PAPER IV (a) INTRODUCTION TO GEOINFORMATICS**

- (5)
- Unit I      Types of Remote Sensing, Elements of Remote Sensing and Image Interpretation, Interpretation Keys.
- Unit II      Components of Geographic Information Systems (GIS), Basic Data Formats, Integration of RS and GIS. Spatial Data Management Systems.
- Unit III      Fundamentals of mapping and Digital Cartography, Digitization and Map Compilation.
- Unit IV      Use of Global Positioning System (GPS).

***Books Recommended***

- Joseph, G. 2005. Fundamentals of Remote Sensing. Universitles Press (India) Private Limited, Hyderabad.
- Demers M.N. 1997. Fundamental of Geographic Information Systems. John Wiley & Sons, Inc., New York.
- Robinson, A.H., Morrison, J.L., Muehrcke, P.C., Kimerling, A.J. and Guptill, S.C. 1995. Elements of Cartography. John Wiley & Sons, Inc., New York.
- Cromley, R.G. 1992. Digital Cartography, Prentice Hall, Englewood Cliffs, N.J.
- Gupta, R. K. 2008. Principles of Geoinformatics, Jain Brothers, Pilani.

**PAPER IV (b) DISASTER PERCEPTION AND MANAGEMENT**

- Unit I      Concept of disaster management, its importance, need and scope  
Hazards, risks, vulnerability and disaster, types of hazards and disaster  
man made and natural, climate change.
- Unit II      Natural and man made disaster : Floods, drought, earthquakes,  
landslides, cyclones, forest fire and Tsunamis, forest degradation,  
construction of dams, diversion of river channels, mining and  
quarrying, haphazard urban growth and industrial location.

- Unit III Disaster perceptions: Concept relating to the pre disaster phase, emergency phase and post disaster management, disaster preparedness, mitigation and response.
- Unit IV Disasters management mechanism in India: Public awareness, agencies, resources, early warning system, plans, policies, training in disaster management.

### ***Books Recommended***

- Kapur, A. 2010. Vulnerable INDIA – A Geographical Study of Disasters. SAGE Publications India PVT LTD, New Delhi.
- Murthy, D B N 2007. Disaster Management: Text and Case studies. Deep & Deep Publications, New Delhi.
- Government of India 2004. Disaster Management in India – A Status Report. Ministry of Home affairs, National Disaster Management Division, New Delhi.
- Gupta, K. C. Disaster Management in India. Allied publishers, New Delhi.

### ***Websites***

- [www.gisdevelopment.net/technology/gis/techgi0030pf.htm](http://www.gisdevelopment.net/technology/gis/techgi0030pf.htm)
- [www.unisdr.org/eng/country-inform/reports/India-report.pdf](http://www.unisdr.org/eng/country-inform/reports/India-report.pdf)
- [www.newindigo.eu/India/info/space.html](http://www.newindigo.eu/India/info/space.html)

## **Semester II (Only for M Phil Course)**

### **PAPER V : ADVANCED ECONOMIC GEOGRAPHY**

- Unit I Concept of economic geography ,simple model of economy, spatial structure of economy, economic resources, resource evaluation, resource region, process of economic regionalization.
- Unit II Physical and chemical properties of Soil, soil erosion and conservation, agricultural ecology: dry farming and irrigated farming, concept and techniques of delimitation of agricultural regions, agricultural efficiency, crop combination, intensity of cropping and crop diversification.



Unit III Industrial location schools : the least cost ,the transport cost, the market area ,new trends in industrial geography, testing location theory, industrial regions and methods of delineation.

Unit IV Decision making process ,spatial organization of landure, Vonthunen, isolated state, central place theory, geography and economic planning.

***Books recommended***

Alexander, J.W. economic geography (prentice hall, New York) James, O. Wheeler and Peter, O. muller: "Economic geography" John Willey and sons.

Singh J. and Dhillon, S. S 2004: Agricultural geography. Tata Mc-Graw-Hill, New Delhi

Singh, J. and Dhillon, S. S. 2004. Agricultural geography. Tata Mc-Graw-Hill, New Delhi.

Shafi, M. 2000. Agricultural Geography of South Asia. Macmillan, New Delhi.

Tyagi, B. P. 1998. Agricultural Economics and Rural Development. Sixth Edition, Jai Praksh Nath & Co., Merrut.

Grigg, D. 1995. An Introduction to Agricultural Geography. Second edition, Routeledge, London.

Mandal, R. B. 1982. Land Utilization – Theory and Practice. Concept Publishing Company, New Delhi.

Chapman, K and Walker, D. 1991. Industrial Location: Principles and Policies. Blackwell, Oxford.

Scott, A. J. 1988. New Industrial Spaces. Pion, London.

Smith, D. M. 1981. Industrial Location – an economic, geographical analysis. John Wiley, New York.

Jarret, H. R. 1977. A Geography of Manufacturing. Trans-Atlantic Publishers, London.

***Websites***

[www.aag.org/cs/about\\_aag/specialty...2/economic\\_geography](http://www.aag.org/cs/about_aag/specialty...2/economic_geography)

[en.wikipedia.org/wiki/Economic\\_geography](http://en.wikipedia.org/wiki/Economic_geography)

**PAPER VI : REGIONAL PLANNING AND DEVELOPMENT**





- Unit I Conceptual and theoretical framework of regional planning; multi-level planning and inter-regional stresses, regional hierarchy, role of geography in preparation of a regional plan. The process of regional development: Indicators of development; levels of regional development and disparities, strategies for development.
- Unit II Regional planning in India: concept and indicators of development; regional imbalances.; type of regions and methods of regionalization, growth pole and growth centers, environmental issues in regional planning for sustainable development, demarcation and planning regions of India.
- Unit III Geography and sustainable development, development of urban regions and making cities sustainable. Surveys for planning: concept and functions, types of surveys – regional, diagnostic and techno economic.
- UNIT IV Role of remote sensing, global positioning systems (GPS) and geographic information system (GIS) in modern regional planning. Case studies from selected countries: Regional planning in USA (TVA), regional planning in India (DVC and NCR) regional planning in Netherlands (Polders).

### ***Books Recommended***

- Blair, J. P. and Carroll, M. C. 2009. Local Economic Development - Analysis, Practices, and Globalization. Second Edition, SAGE Publications, Inc
- Chandna, R. C. 2008. Regional Planning and Development. Third Edition, Kalyani Publishers, Ludhina.
- Journal of Geography and Regional Planning (JGRP) is an open access

### ***Web Resources***



**PAPER VII: ANY ONE OF THE FOLLOWING**

**(a) Advanced Geomorphology**

- Unit I Nature and scope of geomorphology. Basic Geomorphic concepts  
Geomorphic processes: interrelationships, rates and changes,  
Weathering, Mass movement, Sub-surface, fluvial, Glacial, Aeolian,  
Marine, Processes; Processes and interrelationships, rates and  
changes. Quantitative Analysis of Fluvially eroded land forms – basin  
studies.
- Unit II Regional Geomorphology: Problem of Regionalization, Methodological  
problems, Regional differences of Rock structure, Isostatic, epeirogenic  
and eustatic changes, Climatic, Climatic changes in the pleistocene  
period, Indian Stratigraphy : Geomorphic Region of India,  
Morphogenetic Regions of Rajasthan
- Unit III Quantitative analysis of fluvial eroded land forms – basin studies,  
Concept of land system: Controlling factors - Regional lithology, past  
and present regional climates and geomorphic evolution.  
Environmental remote sensing and interpretation of aerial photographs  
– Geomorphology, Geology, Soil conservation, erosion, vegetation,  
buried channels and resource inventory.
- Unit IV Geomorphological mapping: historical background, purpose of  
geomorphological mapping, development of Legend systems, various  
types of legends, geomorphological maps and applied Geomorphology.

***Books Recommended***

Singh, S. 2007. Geomorphology. Fifth Edition, Prayag Pustak Mandir, Allahabad.



- Singh, S. and Dubey, A. 2002. Gully Erosion and Managemnt – Methods and Applications (A Field Manual). New cademic Publishers, Delhi.
- Bloom, A. L. 1998. Geomorphology – A Systematic Analysis of Late Cenozoic Landforms. Pearson Education Delhi (First Indian Reprint 2003).
- Goudie, A, Anderson, M., Burt, T., Lewin, J., Richards, K., Whalley, B. and Worsley, P. 1990. Geomorphological Techniques. Unwin Hyman, London.
- Chorley, R. et al 1984. Geomorphology. Methuen & Co. Ltd., London.
- Sharma, H.S. (1980) : Perspective in Geomorphology, International series, Ceoncpet Publishing Company, New Delhi.
- Sharma, H.S. & V.S. Kale (2009) : Geomorphology in India, Prayag Publishing Company, Allhabad.

### **(b) Advanced Biogeography**

- Unit I      Plant and animal Ecology, Ecosystems, the nature of Ecosystems, Energy Flow in Ecosystems, Bio-Geochemical Cycles, Ecological Populations and Communities – The level of Equilibrium, Ecological succession, Homeostasis.
- Unit II      Interactions among animals and plants. Liebig's law of Minimum, Shelford's law of tolerance regulatory factors, Ecotones and concept of Edge. Effect Stratification, Zonation, Food Web. Reproductive and social Activities in plants and Animals Communities. Biodiversity and its depletion through natural and man-induced causes; conservation and management of ecosystems; food chain, food web, ecological succession.
- Unit III      Ecological Regulations Successions and their divergence, Barriers and Ecosis in succession. The Biome Modification in successions, Monoclimax and Polyclimax theories. Paleo – Ecology and their Evolution. Geographical Isolation – Mechanisms and Effects., Adaptations and Natural Selection. Biotic Resources, Pollution and Environmental Effects space Ecology and Nuclear radiations.

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Unit IV      Flora and Fauna in India and their Development Programmes in India. Quantitative Estimations of biotic Populations, random dispersal, variance and standard error. Finding significance by Chi-square and T - tests.

***Books Recommended***

Kormondy, E.J. Concepts of Ecology, Prentice Hall.

Knight, C.B. Basic Concepts of Ecology, Macmillan

Ipre, J and Fiegel, P. Introduction to Biostatistics, Harper and Row.

Billings, W.D., Plants and the Ecosystem, Wadsworth, California.

Robinson, H.: Biogeography, Else, Mc. Donald and Evans London 1982.

Mathur, H.S.: Essentials of Biogeography, Pointer Publishers, Jaipur, 1988.

**(c) Advanced Urban Geography**

Unit I      Nature and Scope of Urban Geography, Growth of towns during Medieval period, Industrial and modern period, Chief Characteristics of the Towns of Each period. Trends of urbanization in the world, Trends of Urbanization in India since 1901, Location, site and situation of towns, Growth of urban centres. The Towns of Indian Desert, Urban Regions of India.

Unit II      Theories and Models in Urban Studies, Umland of Towns, Development of Satellite and Dormitory Towns, Conurbations, Urban Ecology and Land use. Metropolis Regions of Mumbai, Delhi, Kolkata Conurbation, Urban Morphology of planned City – Jaipur, Chandigarh, Market Morphology.

Unit III      Rural – Urban Disparities, Sustainable Development, International Comparison on Urbanization, Classification of cities based on Functions, Urban Rank – Size Relationship, Central Place Theory, Urban Hierarchy, Urbanization and Industrialization, Urban Morphology, Law of Garden City.

#### Unit IV

Problems of Urban Development – Slums, Squatters, Water and Power supply, Transportation, Urban Housing and spacing, Pollution Urban Environmental – Solid Waste Generation, Problems and Management Crimes, Cyber Crimes in Metropolitan. Rural – Urban Fringe, Rural Urban Linkages, Master Plan of Towns, Status of Town Planning, National Commission Urbanization and Urban Development, National Capital Region Concept and Development, Policies for Urban Development.

#### ***Books Recommended***

Ramchandran, R. 1997. Urbanization and Urban Systems in India. Sixth Impression, Oxford University Press, New Delhi.

Dickinson R.E. : City Region and Regionalism (Routledge and Kegan Paul London)

Dickinson R.E. : The West European City (Routledge and Kegan Paul London)

E.W. Burgess : The Geography of the City, The City, University of Chicago Press, 1925.

H. Carter : The Study of Urban Geography, London, Edward, Arnold, 1973.

King, L.J. & Golledge, R.G. : Cities, Space and Behaviour – The Elements of Urban Geography, Prentice Hall, New Jersey, 1978.

Prakasa Rao, V.L.S. : Urbanization in India – Spatial Dimensions, Concept Publishers, 1983.

R.M. Mandal : Urban Geography, Concept Publishing Company, New Delhi.

Singh, R.L. : Banaras – A Study in Urban Geography (Student Friends, Allahabad).

#### **Paper VIII: Dissertation**