

No. F : 9-5/84-U.3

**Government of India**  
**Ministry of HUMAN Resource Development**  
**(Deptt. of Education)**  
**New Delhi, the 12 January, 1987**

**Notification**

In the exercise of the power conferred by section 3 of the University Grants Commission Act. 1956 (3 of 1956), the Central Government, on the advice of the Commission hereby declares that the Rajasthan Vidyapeeth, Udaipur shall be deemed-to-be University for the purpose of the aforesaid Act.

sd/-  
(J.D.Gupta)  
Joint Secretary to the Govt. of India

The Government of India. Ministry of Human Resource Development, Department of Secondary & Higher Education Vide their Notification No. F. 31-1/98-U.3 dated 19 August 2003 has changed the name of the University from Changed the name of the University form Rajasthan Vidyapeeth, Udaipur to Janardan Rai Nagar Rajasthan Vidyapeeth, Udaipur, Rajasthan.

**FACULTY OF SOCIAL SCIENCES &  
HUMANITIES**

**SYLLABUS**



**M.A./M.SC.,  
M. PHIL - GEOGRAPHY &  
P.G. DIPLOMA - G.I.S.  
& REMOTE SENSING**

**M. V. SHRAMJEEVI COLLEGE**  
**Janardan Rai Nagar Rajasthan**  
**Vidyapeeth (Deemed) University,**  
**Udaipur (Rajasthan)**

Price : Rs. 70/-

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# First Semester

G-501 EVOLUTION OF GEOGRAPHICAL THOUGHT

COURSE CONTENT

OBJECTIVES

**M.A.**

**&**

**M.SC.**

# First Semester

## G-501 - EVOLUTION OF GEOGRAPHICAL THOUGHT

### COURSE CONTENT

#### OBJECTIVES

- To introduce the students to the Philosophical and Methodological foundations of the subject and its place in the world of knowledge.
- To familiarize them with the major landmarks in development of geographic thought at different periods of time.

#### UNIT - I

Definition of Geography, Nature and Scope. The field of Geography : its place in the classification of science : social science and natural sciences. Selected concepts in the philosophy of geography: distributions, relationship, interaction, areal differentiation and spatial organization.

#### UNIT -II

Historical Development - Contribution of different scholars during ancient, medieval and modern period : Ancient Period - Eratosthenes and Ptolemy, Medieval Period- AI - Idrisi, Modern Period - Humbolt and Karl Ritter (German), Blash and J. Brunche (French), Hartshorne (American) Herbertson ( British)

## UNIT – III

Dualism in Geography, the myth and reality about dualism-Physical and Human Geography Systematic Geography and Regional Geography. Regional Geography – concept of region. regionalization and the regional methods.

## UNIT – IV

Recent Trends in Geography – Geography in 20<sup>th</sup> century: conceptual and methodological developments and changing paradigms, Status of Indian Geography. Behavioral Geography.

## Suggested Books and References :

1. Ali.S.M.:The Geography of Puranas, people's publishing House, New Delhi, 1966.
2. Ackerman, E.A. : Geography as a fundamental Resarch Dicipline , Chicago
3. Alber, Ronala, Adams, John S. Gould, Peter : Spatial Organization: The Geographer's View of the World, Prentice Hall, N.J., 1971.
4. Ali. S. M. : The Geography of Puranas, Peoples Publishing House, Delhi, 1966.
5. Amedeo, Douglas : An Introduction to Scientific Reasoning in Geography, John Wiley, U.S.A., 1971.
6. Dikshit, R.D. (ed.) : The Art & Science of Geography Integrated Readings, Prentice Hall of India, New Delhi,

1994.

7. Hartshorne, R. : Perspectives on Nature of Geography, Rand McNally & Co., 1959.
8. Husain, M. : Evolution of Geographic Thought, Rawat Pub., Jaipur, 1984
9. Johnston, R.J. : Philosophy and Human Geography, Edward Arnold, London, 1983.
10. Johnston, R.J. : The Future of Geography, Methuen, London, 1988.
11. Minshull, R. : The Changing Nature of Geography, Hutchinson University Library, London, 1970.
12. कौशिक, एस.डी. : भौगोलिक विचारधाराएँ एवं विधितन्त्र, रस्तोगी पब्लिकेशन्स, मेरठ (यू.पी.), 2011–12
13. मौर्य, एस.डी. : भौगोलिक चिन्तन का इतिहास, प्रयाग पुस्तक भवन, इलाहाबाद (यू.पी.), 2013
14. मारू, रतनलाल एवं राजकुमार शर्मा : भौगोलिक विचारधाराएँ एवं विधितन्त्र, हिमांशु पब्लिकेशन, नई दिल्ली, 2012
15. जैन, एस.एम. : भौगोलिक चिन्तन एवं विधितन्त्र : साहित्य भवन पब्लिकेशन्स, आगरा

**I SEMESTER****G-502 - GEOMORPHOLOGY****OBJECTIVES**

- It being a course at the interface of Geography with earth. The students has to be sensitized to background knowledge of geology and environmental sciences.
- The objectives of the course is to familiarize the students with the need for understanding of geomorphology with reference to certain fundamental concepts. Focusing on the unity of geomorphology in the earth materials and the processes with or without an element of time. Processes of landscape evolution.
- Finally, a few selected applications of geomorphology to societal requirements and quality of environment are dealt with.

**COURSE CONTENT****UNIT - I**

Nature and Scope of Geomorphology, Fundamental concepts Geological structures and landforms, uniformitarianism, multicyclic and polygenetic evolution of landscape, concept of threshold, Environmental change-climatic change, morphogenetic regions.

**UNIT -II**

Earth movements – epeirogenic and orogenic earth movements, Forces of crustal instability, isostasy. Plate tectonics, Seismicity; city, Volcanicity.

**UNIT - III**

Exogenetic Process; Concept of gradation, Agents and processes of gradation, causes, types and classification of Weathering, Mass translocation and depositional processes, Slope evolution and slope replacement models.

**UNIT - IV**

Geomorphic process, dynamics of fluvial, glacial, Aeolian, marine, and Karts processes and resulting landforms complexities in geomorphologic processes. Applied Geomorphology – application of geomorphic mapping, terrain evolution, urban geomorphology, environmental geomorphology, geomorphic hazards.

**Suggested Books and References :**

1. Chorley, R.J. : Spatial Analysis in Geomorphology, Methuen, London, 1972.
2. Cooke, R.U. and Doornkamp, J.C.: Geomorphology in Environmental Management-A Introduction, Clarendon Press, Oxford, 1974.
3. Dury, G.H.: The Face of the Earth, Penguin Harmondsworth, 1959.

4. Fairbridge, R.W. Encyclopedia of Geomorphology, Reinholdts, New York, 1968.
5. Goudie, A. : The Nature of the Environment, Oxford & Blackwell, London, 1993.
6. Garner, H.F. : The Origin of landscape- A Synthesis of Geomorphology, Oxford University Press, London, 1974.
7. Mitchell, C.W. : Terrain Evaluation, Longman, London, 1973.
8. Ollier, C.D. : Weathering, Longman, London, 1979.
9. Pitty, A.F. Introduction to Geomorphology, Methuen, London, 1971.
10. Stoddart, D.R. (ed.) : Process and Form in Geomorphology, Routledge, New York, 1996.
11. Skinner, B.J. & Porter, S.C.: The Dynamic Earth John Wiley, New York, 1995.
12. Sparks, B.W. Geomorphology, Longman, London, 1960.
13. Sharma, H.S. (ed.) : Perspectives in Geomorphology, Concept, New Delhi, 1980.
14. Singh, S. : Geomorphology, Prayag Publication, Allahabad, 1998.
15. Thornbury, W.D. Principles of Geomorphology, John Wiley, New York, 1960.
16. Alka Gautam : भू-आकृति विज्ञान : रस्तोगी प्रकाशन, मेरठ (उ.प्र.)

## I SEMESTER

### G-503 ~ Economics Geography : A Theoretical Approach

#### OBJECTIVES

- The economy of the world is changing in recent times. The changes in primary, secondary and tertiary stage is dynamic in Nature . In view of this, the objective of this course are to integrate the various factors of economic development to acquaint the students about dynamic aspects of economic geography.

#### COURSE CONTENT

##### UNIT - I

Definition and scope, approaches, methods concepts of economy, location of economic activities and spatial organization of economics, simple model of economy, structure of economy

##### UNIT -II

Location movement and interaction in the simplified economic landscape, Heterogeneous land surface, Spatial variations in resource quality and availability impact on economic activity and agglomeration.

##### UNIT - III

Spatial variation in the transport costs, location and structure of transport cost and the location of economic

activity, Transport development spatial variation in production cost, labour, capital technical knowledge, locational impact

#### UNIT – IV

Decision making process : A behavioral view of decision making, locational decision, Concept of economic regions in Indian economy and its impact.

#### Suggested Books and References :

1. Alexander, J.W. : Economic Geography, Practice Hall, New Jersey.
2. Chatterjee, S.P. : Economic Geography of Asia , Allied Book Agency ,Calcuta 1984.
3. Chorley, R.J. & Haggett,P.(ed) Network, Analysis In Geography, Arnold, 1969.
4. Berry J.L. Geography of Market Centres and Retail Distribution, Prentice Hall, New York, 1967.
5. Chatterjee, S.P. : Economic Geography of Asia, Allied Book Agency, Calcutta, 1984.
6. Chorley, R.J. and Haggett, P. (ed.) : Network Analysis in Geography, Arnold, 1969.
7. Dreze, J. and Sen, A. : India-Economic Development and Social Opportunity, Oxford University Press, New Delhi, 1996.
8. Eckarsley, R. (ed.) : Markets, the State and the Environment,

McMillan, London, 1995.

9. Garnier B.J. and Delobez, A Geography of Marketing, Longman, London, 1979.
10. Hamilton, F.E.I. : Spatial Perspectives on Industrial Organisation and Decesion Making, John Wiley, New York 1974.
11. Hamilton, I. (ed.) : Resources and Industry, Oxford University Press, New York, 1992.
12. Hurst E: Transport Geography-Comments and Readings, Mc Graw Hill, New York 1974.
13. Morgan, WB and Munton R.J.C. : Agricultural Geography, Methuen, London, 1977.
14. Pachuri, R.K. Energy and Economic Development in India, Praeger, New York 1977.
15. Robertson, D. (ed.) : Globalization and Environment, E. Elgar Co., U.K., 2001.
16. Rostow, W.W. : The Stages of Economic Growth, Cambridge University Press, London, 1960.
17. Singh J. and Dhillon. S. S. Agricultural Geography, McGraw Hill, India, New Delhi 1984.
18. Symons. L.: Agricultural Geography, Bell and Sons, London, 1972.
19. Wheeler, J.O. et. al.: Economic Geography, John Wiley, New York, 1995.

**I SEMESTER****G-504 ~ ADVANCE GEOGRAPHY OF INDIA****OBJECTIVES**

- To understand India in terms of various regional divisions, their important characteristics, Intra-regional and inter regional linkages to analyze the natural and human resource endowments, their conservation and management .
- To sensitize the students with development issues and policies and Programme designed for regional development.

**COURSE CONTENT****UNIT - I****BASIS OF REGIONALIZATION :**

Geo-political and Agro-climatic, Physiographic and Drainage-River system, Demographic Socio economic dimensions

**UNIT -II****SYSTEMATIC GEOGRAPHY**

Land Utilization, The Indian Monsoon - Climatic divisions, Soil- types, Characteristics, Distributions ,Conservation, Vegetation-Classification, distribution and conservation

**UNIT - III****ECONOMY:CHANGING NATURE OF INDIAN ECONOMY:**

Main Characteristics and problems of Indian Agriculture, Spatial aspects of irrigation development, Major crops:- Wheat, Maize, Cotton, Rice, Sugarcane, Mineral & power resources- Reserves and production, Problems of conservation, Iron, Copper, Coal, Petroleum and hydroelectricity.

**UNIT - IV****DEVELOPMENTAL ASPECTS :**

Manufacturing Industries - Textile industries, Iron and Steel industries, Software industries, Environment and tourism national parks, sanctuaries, Major industrial regions of India, Means of Transportation, Environment and tourism national parks Ganna sanctuaries

**Suggested Books and References :**

1. Singh R.L., (ed.) : India : A Regional Geography, National Geographical Society, India, Varanasi, 1971.
2. Gautam, Alka : Geography of India, Rastogi Publication, Merut.
3. Kundu, A & M Raja : Indian Economy : The Regional Diumention, Spectrum Publishers, New Delhi, 1982.
4. Mamoria, C.B. : Bharat ka Bhugol, Sahitya Academy, Allahabad.



5. Centre for Science & Environment (1988) State of India's Environment, New Delhi.
6. Deshpande C.D. India: a Regional Interpretation ICSSR & Northern Book Centre. 1992.
7. Dreze, Jean & Amartya Sen (ed.) India Economic Development and Social opportunity : Oxford University Press, New Delhi, 1996.
8. Kundu A. Raza Moonis : Indian Economy: the Regional Dimension. Spectrum Publishers, New Delhi, 1982.
9. Robinson, Francis : The Cambridge Encyclopaedia of India, Pakistan, Bangladesh, Sri Lanka Nepal, Bhutan & Maldives. Cambridge University Press, London, 1989.
10. Singh R. L. (ed.) India-A Regional Geography. National Geographical Society, India, Varanasi, 1971.
11. Spate OHK & ATA Learmonth - India & Pakistan Methuen, London, 1967.
12. Tirtha R. & Gopal Krishna, Emerging India Reprinted by Rawat Publications, Jaipur, 1996.



## I SEMESTER

### G-505 - PRACTICAL

#### OBJECTIVES

- To apprise the student with latest trends in the development of cartography as a tool in mapping thematic and quantitative data to facilitate spatial analysis and synthesis.
- To provide training in application of modern tools and techniques to data in a variety of topical and regional studies at local, regional and national levels.
- To attempt regional synothesis by the use of cartographic and quantitative techniques.
- Visits to local regions of interests should be undertaken to study the spatial and functional contiguity, process of development and transformation.

#### COURSE CONTENT

##### UNIT - I

The art and science of cartography, History of maps, materials, techniques and preparation of map, General Introduction.

##### UNIT -II

Maps and Diagrams(i) Isopleths, Choropleth and

Chorochromatic maps, (ii) Playgraph, Semi log and log graphs, Trilinear chart, circular graph Climatograph, climograph (Taylor/Fosters) Annual water deficiency and Water surplus graph.

### UNIT - III

Projections- Construction and characteristics of the following projection (Mathematical Construction), Conical Projection-, Cylindrical Projection- Mercator's, Gall's, Conventional Projection- Sinusoidal, Mollvid

### UNIT - IV

Survey Camp - At least 4 days intensive survey camp should be organized to collect primary data about socio-economic structure of human settlement which should be utilized for different kind of statistical diagrams and maps in support of the report of about 5000 words. (the students are expected to stay in the camp at night)

#### Suggested Books and References :

1. Dickinson, G.C. : Statistical Mapping and Statistics, London, 1969.
2. Lawrence, G.R.P. : Cartographic Methods, London, 1971.
3. Robinson & R.D. Sale : Elements of Geography, New York, 1969
4. Raisz Erwin : General Cartography, London.
5. R.L. Singh : Practical Geography

# Second Semester

## G-601 - CLIMATOLOGY AND OCEANOGRAPHY COURSE CONTENT

### OBJECTIVES

The aim of the course is to provide an understanding of weather phenomena; dynamics of climates and generation of climatic information and their application

### UNIT - I

The process of heating and cooling of earth's atmosphere, vertical & horizontal distribution of temperature : layer's of atmosphere (10L)

### UNIT -II

Temperature zones of the earth surface : Winds & global circulation (8L)

### UNIT - III

Cyclonic storms, Air masses, Weather fronts, Climatic classification : Thorn wait system and Koppen system of world climatic divisions (10L)

### UNIT - IV

Scope & importance of Oceanography, Submarine canyons, bottom relief of the ocean, Ocean deposits, Coral reefs and islands : Temperature of the oceans, Density of water,

Tides and tidal theories (12L)

**Suggested Books and References :**

1. Kendrew, W.G : The climates of the continents, Oxford University Press, New York
2. Critchfield , H.J : General Climatology
3. Trewartha, G.T.: Introduction of weather & climate
4. Austin, H: Climatology
5. Blair, T.A and fite R.C : Weather elements : A text book in elementary meteorology, Prentice hall
6. H.Lamberdan : Physical Climatology Pre-gray printing Co. U.S.A
7. Das, P.K : Monsoon , National Book trust
8. Paterson : Weater analysis and forecasting
9. Sharma. R.C :Oceanography for Geographers , Chatanya publishers, Allahabad
10. लाल, डी.एस. : जलवायु विज्ञान एवं समुद्र विज्ञान, शारदा पुस्तक भवन, इलाहाबाद



**II SEMESTER**

**G-602 ~ Economic & Resource Geography**

**COURSE CONTENT**

**OBJECTIVES**

- The economy of the world is changing in recent times. The changes in primary, secondary and tertiary stage is dynamic in nature. In view of this, the objectives of this course are to integrate the various factors of economic development to acquaint the students about dynamic aspects of economic geography.

**UNIT - I**

Principle Economic activities, Primary, Secondary & tertiary characteristic and distribution, Nature of Agriculture, Subsistence agriculture, Tropical plantation, Mixed farming, Mediterranean agriculture, Stock raising and its products.

**UNIT -II**

**Geographical conditions :-** Agriculture production, Distribution of crops(1) **Food crops** : Rice, Wheat (2) **commercial crops** : Cotton, Tea, Rubber

**UNIT - III**

Spatial distribution of mineral resources , Iron, Copper, Tin, Aluminum, Coal, Petroleum, Hydro electricity, Atomic energy

## UNIT - IV

Industries ; Iron & steel industries, Aluminum, Chemical, fertilizer, Cotton textile, trade & transportation, Inland waterways.

## Suggested Books and References :

1. Alexander, J.W : Economic Geography , Pentice Hall, New jersey
2. Hodder & lee : Economic Geography , Methyen 7 co. Ltd. London
3. Janki, V.a : Economic Geography , Concepts publishing company, New Delhi
4. Jones & Darkward : Economic Geography, Mac Milan Company, New York
5. Robson H: Economic Geography, Mac donle, London
6. lloyad p. & dicken : location in space: A theoretical approach to Economic Geography , Harper & Raw publisher, New york
7. Royen & Bengston : Fundamentals of Economic Geography, Prentice Hall of India Pvt. Ltd., New Delhi.
8. Chaudhari, M.R. : Economic Geography, Oxford & IBBII Publishing Co., New Delhi.
9. Dubey & Singh : Economic and Commercial Geography, Kitab Mahal

10. Maccarty Harold, H. Lodberor James B. : A preface to Economic Geography, Prentice Hall, New York.
11. Millere E. A Geography of Manufacturing, Prentice Hall New Jersey.
12. Roppke, H.G. : Readings in Economic Geography, Willey & Sons, New Year.
13. Zimmerman, E.W. : World Resource and Industires, Harper & Co., New York.
14. Statesman.
15. F.A.O. Year Book.
16. U.N.O. Statistical year Book.
17. Indian Year Book.

**II SEMESTER****G-603 ~ Political Geography****COURSE CONTENT****OBJECTIVES**

- To expose the students to the strategic importance of geographical parameters in the Political Science at global, regional and local level;
- To sensitize the students to geopolitical dimensions and the understanding of conflicts and regional cooperation; and to make them familiar with the political geography of selected countries.

**UNIT - I**

Nature of political Geography, Scope of political Geography, Subject matter of political Geography, Development of political Geography, Major Schools of thought

**UNIT -II**

Physical elements (territory) of state location, shape, Size of states, Human elements of state, Economic elements of states, Political Geography and Geo-politics

**UNIT - III**

Meaning and differences between frontiers & boundaries, classification of international boundaries, Maritime boundaries, Meaning, Function and types of capital

cities, Factors effecting capital cities

**UNIT - IV**

Geo- Strategic views:- Changing patterns of world, Spykemen's rimland theory, Meing, Heoson and de-seversky's view, Colonialism, decnialism, Neo-Colonialism, Water disputes - Farakka dam between India and Bangladesh

**Suggested Books and References :**

1. De Blij, H.J. : Systematic Political Geography, John Wiley, New York (Latest Edition).
2. Dikshit, R.D : Political Geography, a Contemporary Perspective, Tata McGraw Hill, New Delhi, 1982.
3. Pounds, N.J.G. : Political Geography, McGraw-Hill, New York, 1972.
4. Prescott, J.R.V. : Political Geography, Methuen & Co., London, 1972.
5. Taylor, Peter : Political Geography, Longman, London, 1985.
6. Alexander, L.M. : World Political Patterns, Ran McNally, Chicao, 1963.
7. Cohen, S.B. : Geography and Politics in a Divided World, Methuen & Co., London, 1968.
8. Deka, K.M. (Ed.) : Nationalism and Regionalism in North East India, Dibrugarh University, Dibrugarh, 1985.
9. Dikshit, R.D. : The Political Geography of Federation : An

- Inquiry into Origins and Stability, Macmillan, Delhi, 1975.
10. Fisher, C.A. (ed.) : Essays in Political Geography, Methuen and Co., London, 1968.
  11. Muir, R. : Modern Political Geography, Macmillan, London, 1975.
  12. Singh, G.S. : A Political Geography of India, Central Book Depot, Allahabad, 1969.
  13. Sukhwai, B.L. : Modern Political Geography of India, Sterling Publishers, New Delhi, 1968.
  14. Taylor, Peter and House, John : Political Geography : Recent Advances, Barnes and Noble Books, Totowa, N.J., 1984.
  15. Whittlesey, D. : The Earth and State, Henry Hort, New York, 1944.
  16. सक्सेना, एच.एस. : राजनैतिक भूगोल, रस्तोगी पब्लिकेशन्स, मेरठ (यू.पी.)
  17. अधिकारी, एस एवं रतन कुमार : राजनीतिक भूगोल, शारदा पुस्तक भवन, इलाहाबाद (यू.पी.)

## II SEMESTER

### G-604 - ENVIRONMENTAL GEOGRAPHY

#### COURSE CONTENT

##### OBJECTIVES

- The objective of this paper is to provide an overview of resource geography and its interface with environment. The course aims to provide an understanding of the existing reality of resource utilization and environmental depletion; further aims to sensitize the students to the concept of sustainable resource use and sustainable development.

##### UNIT - I

Environmental Geography : Scope, Concepts and Approaches, Environmental deterministic approach, teleological, Possibilistic economic deterministic and ecological.

##### UNIT -II

Man-Environment Relationship - A Historical overview

Period of Hunting and food gathering, Periods of Animal domestication and Pastoralism, Period of Plant domestication and Agriculture, Period of Science and Technology and Industrialisation.

Eco-system- Ecological concept and scope structure of Eco-system

Abiotic components, Biotic components, Autotropic components, Heterotropic components Tropic level, Food-chain and food web.

Ecological pyramid, Function of Eco System : (10 L.)

### UNIT – III

Environmental Degradation Process of Environmental Degradation, Deforestation, Causes, Effects & Conservation, Soil Erosion, Causes, Effects and Conservation, Sedimentation, Desertification, Natural Hazards and Disaster's Causes Effects and Controls. (10 L.)

### UNIT – IV

Environmental Pollution, Forms of Pollution – Water, Air, noise, land etc., Factors of Pollution, effect and control. (5 L.), Environmental Planning, Environmental Impact, Assessment, Resource Management (5 L.)

#### Suggested Books and References :

1. Adams, W.M. :, Green Development : Environment and Sustainability in the Third World, Routledge & Chapman Hall, New York, 1990.
2. Granfelt, T.R., Managing the Globalized Environment, J. & L. Composition Ltd, New York, 1999.
3. Holechek, J.L. et al : Natural Resources: Eulogy Economics & Policy, Prentice Hall, New Jersey, 2000.
4. Hooja, R. & Joshi, R.: Desert, Drought and Development,

Studies in Resource Mangement and Sustainability; Rawat Publication, Jaipur, 1994.

5. Howard, M.C. (ed), Asia's Environmental Crisis, Westview Press, Prouldar, 1993.
6. Kates, R.W. & Burton, I (eds) : Geography, Resources and Environment, Vol I & II, University of Chicago Press, Chicago, 1986.
7. McLaren, D.J. and Skinnet, B.J. (eds) : Resources and World Development, John Wiley & Sons, New York, 1986.
8. Newson,; M.D. : Land, water & Development: River Basin systems & Management, Routledge London, 1991.
9. Owen, S. & Ownes, P.L.: Environment Resources & Conservation, Cambridge University Press, New Yrok, 1991.
10. Peckford, John et. al. (ed.) : 1994, Water, Sanitation, Environment & Development, IT Publication, London, 1994.
11. Rees, J: Natural Resources: Allocation, Economics and Policy, Methuen, London, 1987.
12. Redclift, M: Sustainable Development: Exploring the Contradiction.: Methuen, London, 1987.
13. Simmons, I.G.: Earth, Air & Water: Resources and Environment in Late 20th Century Edward Arnold, New York, 1991.
14. Thoman, Alan et. al.: Environmental Policies & NGO Influence, Routledge, London, 2001.

**II SEMESTER****G-605 PRACTICAL : INTERPRETATION OF TOPOGRAPHICAL MAPS & AERIAL PHOTOGRAPHS****COURSE CONTENT****OBJECTIVES**

- Familiarize how topographic, cadastral maps or plans of any area are prepared to enhance the skill of the students in the field of survey for revenue purposes and understand the principles of map making.

**UNIT - I**

A brief history topographical Maps of the World with special reference to India and their interpretation. Detailed study of such toposheets including typical geomorphology and cultural landscapes.

**UNIT -II**

Aerial Photography – Introduction, Development and Aerial Photography, Terms used in Aerial Photography, Aerial Camera, Lens and Aerial Photography. Types of Photographs, Vertical Photographs, Horizontal or terrestrial photographs, oblique, Photographs. Scale of Photographs, Image displacement; use of Mirror stereoscope, Stereoscopic vision.

**UNIT - III**

Air photo interpretational exercise on the determination of height of plan, parallax, number of runs and number of

photographs, knowledge of stereoscopic vision, mosaics types of cameras, emulsion and stereoscope interpretation and identification of cultural and physical features on aerial photographs. Photo interpretation of land use and settlement in the field.

**Suggested Books and References :**

1. Kanethkar, T.P. & Kulkarni, S.V. : Surveying and Levelling Vol. 1, A.V. Gria Prakashan, Poona.
2. Deshpande, R.S. : A text books of Surveying and Levelling, United Book Corporation, Poona.
3. B.C. Punmia : Surveying and Field Work, Vol. 1, Standard Book Depot, Delhi.
4. Breed, C.B. and Hosmer, G.L. : The Principles of Surveying, Vol. I & II, New York.
5. Davis, R.E. and Foot, F.S. : Surveying Theory and Practice, McGraw Hill Book Col, New York.
6. T.R. Tracy : Surveying Theory and Practice, John Willey and Sons., Inc., New York.
7. Thrilfall, H.S.N. : Text Book of Surveying and Levelling, Charles Graffilin, London.
8. Roorkee Engineering College : Manual of Surveying.
9. N.C. Gautam : Urban Land Use Studies through Airphoto Interpretation Techniques, Pink Publishing House, Mathura.



# Third Semester

## G-701 ~ Population Geography

### OBJECTIVES

- To introduce the students to the complete dimension of population.
- To understand and evaluate the association between demographic and socio-economic attributes of population and the resultant levels of social well being and economic development.
- To understand the role and relationship between population and environment in ever changing space – time continuum.

### COURSE CONTENT

#### UNIT – I

Population Geography – Nature, Scope and significance, its relation with Demography, Historical development of population Geography as a field of specialization

#### UNIT –II

Source of population data, their level of reliability and problems of mapping of population data, population distribution– density and growth; India – population distribution, density & growth profile.

#### UNIT – III

Classical and Modern theories in population distribution and growth- Malthus, Recardo, Marx, concepts of under population, over population and optimum population , population regions of the world.

#### UNIT – IV

Population dynamics- Migration: National international patterns, migration in India ; population composition – Rural and urban, occupational structure; population policies in developed and less developed countries; Population and environment

#### Suggested Books and References :

1. Bogue , D.J.: Principles in Demography, John Wiley , New York 1969.
2. Bose, Ashish et. Al : population in India's development (1947-2000); Vikas publishing House New Delhi, 1974.
3. Census of India : A state profile, 1991,2001.
4. Chandha, R.C. : Geography of population ; concept , determinants and patterns, kalyni publishers, New Delhi, 2000.
5. Clarke , John I ; Population Geography, Pergamon Press Oxford 1973.
6. Crook, Nigel : Principals of population and development , Pergmon press, New York

7. Garnier, B.J. : Geography of Population , Longman, London, 1976.
8. Kochhar, B.J. : The Vedic people : Their History and Geography orient Longman Ltd. New Delhi .2000
9. Mamoria, C.B. : India's population problem, Kitab Mahal New Delhi, 1981.
10. Premi, M.K. : India's population : Heading Towards a Billion, B.R. Publishing corporation,1991.
11. UNDP : Human development Report : Oxford University Press, Oxford,2000
12. United Nations : Methods for projections of urban and Rural Population, No.VIII New York 1974.
13. Woods, R.: population Analysis In Geography, Longman London, 1979.



### III SEMESTER

## G-702 - AGRICULTURAL GEOGRAPHY

### COURSE CONTENT

### AGRICULTURAL GEOGRAPHY

### OBJECTIVES

- To familiarise the students with the concept, origin, and development of agriculture; to examine the role of agricultural determinants towards changing cropping patterns, intensity, productivity, diversification and specialization. The course further aims to familiarise the students with the application of various theories, models and classification schemes of cropping patterns and productivity.
- Its objectives is also to discuss environmental, technological and social issues in agricultural sector with special reference in India.

### UNIT - I

Nature , Scope and significance of Agricultural Geography, Origin and dispersal of agriculture. Elements of agriculture. Approaches to the study of Agricultural Geography - commodity, systematic and regional.

### UNIT -II

Determinants of agricultural land use physical economic, social, institutional and technological . Factors of recent agricultural dynamism; Green Revolution.

## UNIT – III

Von Thune's Theory of agricultural location and its recent modification. A critical review of Whittlesey's agricultural classification Agricultural types, their characteristics and world patterns.

## UNIT – IV

Land-use and land capability classification: measurement of Agricultural productivity. Methods of delimiting crop combination regions (J.C. Weaver - minimum deviation methods : K. Doi's method; least squares method; maximum positive deviation method)

**Suggested Books and References :**

1. Alexander, J.W. : Economic Geography, Prentice Hall, Englewood Cliffs, N.J.  
(Latest Edition)
2. Bahlla, G.S. and Alagh, Y.K. Performance of Indian Agriculture A District Wise study, Sterling Publishers, New Delhi. 1979.
3. Clark Colin and Haswell, Margaret : The Economics of Subsistence Agriculture st. Martin's London 1964.
4. Curwen, Eliot C. and Hatt, G : plough and pasture- The Early History of Farming H Schuman, New York, 1953.
5. Dumont rene : Types of Rural Economy, Prager New York, 1957.

6. Dunn, E.S. : The Location of Agricultural Production, University of Florida Press. Gainesville, 1954.
7. Bayliss Smith, T. P. : The Ecology of Agricultural Systems. Cambridge University Press, London, 1987.
8. Berry, B.J.L. et. al. : The Geography of Economic Systems. Prentice Hall, New York, 1976.
9. Brown, L. R. : The Changing World Food Prospects - The Nineties and Beyond. World Watch Institute, Washington D. C., 1990.
10. Dyson, T. : Population and Food - Global Trends and Future Prospects. Routledge, London, 1996.
11. Gregor, H. P. : Geography of Agriculture. Prentice Hall, New York, 1970.
12. Grigg, D.B. : The Agriculture Systems of the World. Cambridge University Press, New York 1974.
13. Hartshorn, T.N. and Alexander, J.W. : Economic Geography. Prentice Hall, New Delhi, 1988.
14. Mannion, A. M. : Agriculture and Environment Change. John Wiley, London, 1995.
15. Morgan W.B. and Norton, R.J.C. : Agricultural Geography. Methuen, London, 1971.
16. Morgan, W.B. : Agriculture in the Third World - A Spatial Analysis. Westview Press, Boulder, 1978.
17. Sauer, C.O. : Agriculture Origins and Dispersals. M.I.T. Press, Mass, U.S.A., 1969.

18. Singh, J. and Dhillon, S.S. : Agricultural Geography. Tata McGraw Hill Pub., New Delhi, 1988.
19. Tarrant, J.R. : Agricultural Geography. Wiley, New York, 1974:



### III SEMESTER

#### G-703 - URBAN GEOGRAPHY

#### COURSE CONTENT

#### OBJECTIVES

The objectives of the course are to motivate the students:

- To understand the growth and evolution of rural settlements;
- To recognise and analyse the distributions, patterns, morphology and functions of rural settlements;
- To analyse and suggest rural settlement planning in India;
- To examine the prevailing social and environmental issues in rural areas of India.

#### UNIT - I

Nature, Scope and significance of Urban Geography, different approaches to the study of urban Geography, recent trends. Origin and Growth of Urban Centers, Bases & processes of urbanization, factors associated with the growth of cities, Megalopolis.

#### UNIT -II

Urbanization in India, growth of urban centers, levels of urbanization, development of metropolitan cities.

## UNIT – III

Classification of Urban Centers on the basis of

- (a) Size
- (b) function comparative assessment.

(9L.) Economic base of Urban Settlement, Basic & Non-basic concepts, input Output models. Centripetal and Centrifugal forces in urban centers.(3L.)

## UNIT – IV

Urban Morphology- Land – Use models : (a) Burgess concentric zone model (b) Harris- Ullman multiple nuclei model (c) Hoyt's sector model. Functional land uses and planning: Central Business District and its characteristics. (7L.)Urban Fringe : its characteristics and development. Morphology of Indian cities umland, principles of urban planning and master plan of Udaipur city.

## Suggested Books and References :

1. Berry, B.J.L. & Horton F.E. : Geographic Perspectives on Urban Systems, Prentice Hall, Englewood Cliffs, N.J. 1970
2. Carter, Harold : The Study of Urban Geography , Edward Arnold Publishers Ltd. London, 1972.
3. Gibbs, Jack P. : Urban Research Methods D. Van Nostrand Company Inc. Princeton, New York 1961.
4. Johnson, K.H. : Urban Geography : An Introductory Analysis, Pergamon Press, London, 1967.

5. Ambrose, Peter, Concepts in Geography Vol.-I Settlement Pattern, Longman 1970.
6. Baskin, C., (Translator), Central Places in Southern Germany, Prentice-Hall Inc. Englewood Cliffs New Jersey, 1966. Originally written by C.W. Christaller in German with title Die Zentralen Orte Suddeutsch land in 1933.
7. Census of India, House types and Settlement Patterns of Villages in India. GOI, New Delhi, 1961.
8. Haggett, Peter, Andrew D. Cliff and Allen Frey (editor), Locational Models Arnold Heinemann 1979.
9. Kibria, I. Ishtiaq, J., Central Place Theory, Saga Publication, New Delhi, 1986.
10. Mayer, M. Harold and Clyde F. Kohn (editors), Readings in Urban Geography, Central Book Depot, Allahabad 1967.
11. Mitra, Asok, Mukherjee S and Bose R. Indian Cities Abhinav Publications, New Delhi 1980.
12. Nangia, Sudesh, Delhi Metropolitan Region, K. B. Publications, New Delhi, 1976.
13. Prakasa, Rao, V.L.S., Urbanisation in India; Spatial Dimensions, Concept Publishing Co., New Delhi, 1983.
14. Ramachandran, R., Urbanisation and Urban Systems in India, Oxford University Press, New Delhi, 1992.
15. Singh R. L. and Kashi Nath Singh (editors), Readings in Rural Settlement Geography, National Geographical Society of India, Varanasi 1975.
16. Brinivasan, K. and M. Vlassoff, (editors), Population-

- Development Nexus in India: Challenges for the New Millennium, Tata McGraw-Hill Publishing Co. Ltd., New Delhi 2001.
17. Ucko, M.J., Ruth Tringham and G.W. Dimbleby (editors), Man, Settlement and Urbanism, Duckworth 1972.
18. United Nations Centre for Human Settlements (HABITAT), An Urbanising World, Global Report on Human Settlements, Oxford University Press of HABITAT 1996.



### III SEMESTER

#### G- 704 :- Geography of Rajasthan

##### OBJECTIVES

- To understand Rajasthan in terms of various regional divisions, their important characteristics, Intra-regional and inter-regional linkages; to analyse the natural and human resource endowments, their conservation and management.
- To sensitize the students with development issues and policies and programmes designed for regional development.

##### UNIT - I

**Introduction** ; Historical background, Socio - Cultural structure of the state, Geological structure, Relief features, Drainage pattern, soils, Vegetation, National Park and Natural regions .

##### UNIT -II

**Agricultural Development** : Development of irrigation projects:- Chambal valley projects , India Gandhi canal Project, Mahi Bajaj Sagar Project . Agricultural production Major crops - Wheat, Bajra, Zaware, Mustard, livestock and Wood. **Mineral Distribution** ; Zinc, Marble, Sand stone .

## UNIT – III

**Industrial Development and Transport:-** Industrial development ; textiles , Woolen industries, Zinc Smelting, Copper Smelting , Cement industries & Planning regions. Transport Network – National Highways, Railways, Airways of Rajasthan. Major Tourist circuits.

## UNIT – IV

**Population Growth ;** Population Distribution , literacy, Urbanization , Development of Jaipur as Metro city; Major Tourist centers of Rajasthan ; Jaipur, Jodhpur, Udaipur and Ajmer. **Environmental Problems;** Desertification, and Drought.

**Suggested Books and References :**

1. Mishra, V.C. - Geography of Rajasthan, Delhi
2. Saxsena H.M. - राजस्थान का भूगोल, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर
3. भल्ला, जी. एस. - राजस्थान का भूगोल, कुलदीप प्रकाशन, अजमेर
4. Sharma , H.S. - Geography of Rajasthan, Rawat Publication, Jaipur
5. Bhalla, G.S. - Geography of Rajasthan, Kuldeep Prakashan, Ajmer

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## III SEMESTER

## G-705 PRACTICAL- FIELD SURVEY

Written Paper	:	30 Marks
Record Work	:	20 Marks
Vi-Voce	:	10 Marks
Camp - Field Survey	:	30 Marks
Camp- Field Survey Vi-Voce	:	10 Marks

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**Total** : **100 Marks**  
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**OBJECTIVES**

- Main objective of the field work is to provide the students with the understanding of ground reality of a chosen village/town by observation; mapping of land quality, land use and cropping pattern and conducting Socio-economic survey of the households with the help of a specially prepared questionnaire.

**COURSE CONTENT**

## UNIT – I

**Theodolite :** Its parts and function use of theodolite, theodolite - traverse and traverse computation, independent coordinates.

## UNIT -II

**Plane table and Clinometer** : Use and application of Plane table and Clinometer in small area surveys. Traverse, plane table, resectioning; two and three-point problems practical contouring by clinometers. (6L)

## UNIT - III

**Dumpy Level** Terms types and principles of leveling classification of leveling, profile, precise and other types of leveling. Use of Dumpy level, practical counteracting, cross sectioning, use and application of Abney level.(8L)

## UNIT - IV

**Camp - Field Survey** : A topographical survey of a settlement of about 500 acres of land will be done by organizing a camp at least for a week far away from the centre of the institution and maps and reports of the same will be prepared.(Students are expected to stay in the camp at night) (20L)

## Suggested Books and References :

1. Kanethkar, T.P. & Kulkarni, S.V. : Surveying and Levelling Vol. 1, A.V. Gria Prakashan, Poona.
2. Deshpande, R.S. : A text books of Surveying and Levelling United Book Corporation, Poona.
3. B.C. Punmia : Surveying and Field Work, Vol. 1, Standard Book Depot, Delhi.

4. Breed, C.B. and Hosmer, G.L. : The Principles of Surveying, Vol. I & II, New York.
5. Davis, R.E. and Foot, F.S. : Surveying Theory and Practice, McGraw Hill Book Col, New York.
6. T.R. Tracy : Surveying Theory and Practice, John Willey and Sons., Inc., New York.
7. Thrillfall, H.S.N. : Text Book of Surveying and Levelling, Charles Graffilin, London.
8. Roorkee Engineering College : Manual of Surveying.
9. N.C. Gautam : Urban Land Use Studies through Airphoto Interpretation Techniques, Pink Publishing House, Mathura.





# Fourth Semester

## G-801 ~ INDUSTRIAL GEOGRAPHY

### COURSE CONTENT

#### OBJECTIVES

- To understand the location of Major Manufacturing activities with the support of various industrial location theories & Models.
- To discuss Problems & impacts of Manufacturing industries with respect to relocation, environmental Pollution and occupational health & industrial hegarads.

#### UNIT - I

Locational factors in manufacturing, concept of optimum location. significance of cost and price. The least cost school and transports cost school : the market area school; the reduction of weight of materials. The copper industry, aluminum industry, cement industry.10.L

#### UNIT -II

New trends in industrial geography. Testing location theory, important industrial regions of the world; selecting one from each of USA, Japan, Britain and West Europe.10.L

#### UNIT - III

Important industrial regions of India, the changing character of Geographical concentration and impact of

technical change; formation of industrial regions, study of following regions; 8.L

1. The Hooghlyside industrail region.
2. The Damodar Valley industrial region.
3. The Mumbai – Ahmedabad industrial regions.
4. The Chainai – Banglore industrial regions.10.L

#### UNIT - IV

Influence of power and Geographical inertia in manufacturing industries :-

1. The textile industry
2. Iron and steel, Aluminum, Oil refining
3. Market oriented industries
4. Foot loose industries10.L

#### Suggested Books and References :

2. Llyod and Dicken : Location in space : A theoretical Approach to Economic Geography.
3. M.C. Cart and Lindberg, Hodder and Lee Graphy, Economic Geography A Preface of Economic Geography.
4. Smith, D.E. Cox, K.P. Man : Industrial Location. A Economic Geographical Analysis Location and Behavior = An introduction to Human Geography.
3. Reley, R.C. : Industrial Geography, 1973, Chailo and Windus, London.

6. Alexenderson Gunnar : Geography of Manufacturing , Englewood Cliffs. N.J.
7. Alexander, J.W. : Economic Geography, Prentice Hall, New York.
8. Bengston, N.A. : Fundamentals of Economic Geography, Prentice Hall, New York.
9. Besoh, H. : A Geography of World Economy, D. Van. Nostrand.
10. Britton, John. N.H. : Regional Analysis and Economics Geography, G.Bell and Sons. London.
11. Cartson, A.S. : Economic Geography of the Industrial Materials. Rinchart Pub. Corpn., New York.
12. Estall, R.C. and Buehanan R.O. : Industrial Activity and Economic Geography. Huy. Hinson and Co., London.
13. Ghose, B.C. : Industrial, London.
14. Hoover, E. M. : The location of Economic Activity. McGraw Hill Books Co., New York.
15. Lodha, R.M. : 2, Rajasthan Hindi Granth Akadami, Jaipur.
16. Patel, L. R. : Mineral Industrial & Environs, Signature Books International, Delhi

#### IV SEMESTER

### G-802 SOCIAL GEOGRAPHY WITH SPECIAL REFERENCE TO INDIA

#### COURSE CONTENT

#### OBJECTIVES

The main objectives of this course are :

- To familiarize the students with the understanding of the society through concepts and social theory, philosophical approaches and spatial processes;
- To examine the process of social region formats in India with the help of social cultural and historical factors.
- To examine social distortion and regionalise the various components of social well-being in India; to review problems and suggest alternatives to improve the social well-being in environmentally problematic areas.

#### UNIT - I

Nature, Scope and significance of Social Geography; its relation with social sciences; nature and problems of data for social geographic studies of India (8L.)

#### UNIT -II

Evolution of Social regions in India : perennial nuclear regions, regions of relative isolation and regions of isolation; evidence of the Mahajanpads. The peopling of India - racial evidence; archeological evidence. (8L.)

### UNIT – III

Spatial distribution of social groups in India (a) Tribals, (b) Caste (c) religious groups and (d) language and dialect. Role of tribe, caste, religion and language in region formation in India. (8L.)

### UNIT – IV

The processes and problems of social transformation; modernization and sanskritization; role of urban – rural interaction and the process of social change. (8L.)

#### Suggested Books and References :

1. Ahmad, Aijazuddin, Social Geography, Rawat Publication, New Delhi, 1999.
2. De Blij, H.D. Human Geography. John Wiley and Son, New York.
3. Dreze Jean, Amartya Sen, Economic Development and Social Opportunity Oxford University Press, New Delhi, 1996.
4. Dubey, S.C. : Indian Society, National Book Trust, New Delhi, 1991.
5. Grogory, D. and J.Larry, (eds.) Social relations and spatial structures, McMillan, 1985.
6. Haq. Mahbubul : Reflections on Human Development, Oxford University Press, New Delhi.
7. Maloney, Clarence : People of South Asia, Winston, New York, 1974.

8. Planning Commission, Government of India : Report on development of Tribal areas 1981.
9. Roa, M.S.A : Urban Sociology in India. Orient longmon, 1970.
10. Schwartzberg Joseph ; An Historical Atlas of South Asia University of Chicago Press Chieago, 1978.
11. Sen, Amartiya & Dreze Jean, Indian Development : Selected Regional Perspectives Oxford University Press, 1996.
12. Smith, David. : Geography : A Welfare Approach, Edward Arnold, London, 1977.
13. Sopher, David, : An Exploration of India, Cornell University Press, 1980.
14. Subha Rao, Personality of India : Pre and Proto Historic Foundation of India and Pakistan, M.S. University Baroda, Vadodara, 1958.



**IV SEMESTER****G-803 GEOGRAPHY OF WATER RESOURCE  
& THEIR MANAGEMENT****COURSE CONTENT****OBJECTIVES**

- The objectives of this course are to bring an awareness among the students about the finite nature of water resources; declining per capita availability of quality water; escalating demands and the looming water crisis. It stresses the need for better management of water resources through appropriate methods and conservation of water resources.

**UNIT - I**

Water as a focus of geographical interest; Hydrological cycle; Inventory of World's water resources; sources of water - surface and ground.

**UNIT -II**

Water demand and use : agriculture, industrial and domestic uses. Agricultural Use : Soil-water-crop relationship, irrigation, distribution of water to farm. Industrial Use: Unit wise demand and methods of estimation. Domestic Use : General trends in water supply to urban and rural areas.

**UNIT - III**

Problems of water resource management : Water logging, water pollution :- sources of pollution, water pollution in Ganga river, Ganga Action plan; Methods of Improving water quality.

**UNIT - IV**

Conservation and planning for the development of water resources ; integrated river-basin planning; reuse of water; international and inter-state water disputes-some case studies (Caveri and Furrakha).

**Suggested Books and References :**

1. Biswas, A.K. (ed.) ; System approach to water management, McGraw Hill, New York, 1976.
2. Eckstein, O. : Water Resource Development Harward University Press, Cambridge. Mars, 1965.
3. Singh, S. (1992) ; Water Management in Rural and Urban Areas, Agrotech Publishing Co.

#### IV SEMESTER

### G-804 NATURAL RESOURCES MANAGEMENT

#### OBJECTIVES :

The objectives of this course are :

- To understand concepts and approaches of natural resource management.
- To examine use and misuse of various resources and to analysis future prospects.
- To Study various methods and approaches of conservation and management of natural resources.
- To analysis natural resources scenario through different techniques, especially remote sensing and GIS.
- To understand the concept of sustainable and integrated resource management and application.

#### COURSE CONTENT

##### UNIT - I

Introduction : Concept, models and approaches to natural resource management, problems of resource utilization; population pressure, development and resource : natural hazards and risk management.

##### UNIT -II

Use and misuse of Resources : Global and Indian scenario historical backround and future prospects of various

resources; soil, water, minerals, Forests.

##### UNIT - III

Resource appraisal and policy making : appraisal of Land resources, Geophysical, geochemical, geobotanical : use of GIS and remote sensing in resource apprais institutional arrangements and policy models towards better management & conservation of resources.

##### UNIT - IV

Resource Development : sustainable Resource Management concept method dimension and sustainable system: Integration resource conservation and application.

#### Suggested Books and References :

1. Agarwal, A. et. al : The Citizen's Fifth Report. Centre for Science & Environment, New Delhi, 1999.
2. Alexander, John, W. : Economic Geography, Prentice Hall of India Ltd., New Delhi, 1988.
3. Allen, J.L.; Student Atlas of Environmental issues, Dushkin Pub., 1997.
4. Brown, L.R., : In the Human Interest, East-West Press, New Delhi, 1976.
5. Chandna, R.C. : A Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi, 1986.
6. Cutter, L., Renwick, H.L.: Exploitation, Conservation and

- Preservation: A Geographic Perspective and Natural Resources Use, Rowman and Allanheld, Totowa, N.J., 1985.
7. Global Environment Outlook. Earthscan., London, 2000.
  8. Hagget, Peter: Geography - A Modern Synthesis, Harper & Row Publishers, New York, 1975.
  9. Janaki, V.A. : Economic Geography, Concept Publishing Co., New Delhi, 1985.
  10. Liang G.C. and Nmorgen, G.C. : Human & Economic Geography Oxford University Press, London, 1982.
  11. Reid, D : Sustainable Development, Earthscan Pub., London, 1995.
  12. Sharma, H.S. : and Chattopadhyay, S.K., : Sustainable Developments - Concepts and issues; Concept, New Delhi, 2000.
  14. Simmons, I.G. : The Ecology of Natural Resrouces Edward Arnold, London, 1974.
  15. UNESCO : Use and Conservation of the Biosphere, Paris, 1970.
  16. Zelinsky, W. : A Prologue to Population Geography, Prentice Hall, Inc., Englewood Cliffs, N.J., 1966.

## IV SEMESTER

### G-805 REMOTE SENSING AND GIS

#### COURSE CONTENT

#### OBJECTIVES :

- To introduce GIS (Geographic Information System) as a tool of spatial science.
- To indicate the basic elements of GIS and methodology of GIS.
- To outline the steps and areas of application of GIS.

#### UNIT - I

Remote Sensing – Introduction, Origin of EMR, Stages of Remote Sensing, Satellite Imagery – Thermal imagery, Radar imagery, Spectral Characteristics of various objects. Concept of Signature, Spectral response of natural Resources, Remote sensors, Optical IR Sensors (QIR), Photographic Camera, Television Cameras, Optical Mechanical Scanners, Landsat, MSS, TM, SPOT, HRV, L& Z, IRS, 1A, 1B, LISS, I, II, III, Characteristics of each Satellite system.

#### UNIT -II

Microwave Remote Sensor – Digital Image Processing, Practical exercise on Analysis of Remotely sensed data study of vegetation, soil, water, urban expansion.

### UNIT - III

GIS – Introduction of GIS, Spatial analysis operations, spatial join overlay. Application of GIS on Analysis of land use, land capability assessment, location of settlement etc. GIS for planning and management.

#### Suggested Books and References :

1. Robert G. Reeves et al., Manual of Remote Sensing, Vol. I & II, American Society of Photogrammetry, Falls Church, 1986.
2. Worrall Les : GIS Spatial Analysis and Spatial Policy Using Geographical Information System CBS, Publishers & Distributors (P) Ltd.
3. Burrough, P., 1986 : Principles of Geographical Information Systems for Land Resources Assessment, Oxford, Oxford University Press.
4. Star, J. and J. Estes, 1990 : Geographical Information Systems : A Introduction, Englewood Cliffs, New Jersey, Prentice Hall.
5. Gautam : Urban land use Studies through Air Photo Interpretation Techniques. Pink Publishing House, Mathura, India.
6. Dickinson, G.C. : Maps and Airphotographs, London.
7. Vyas, P.R. : Natural Resource Management through Sattelite imageries, ecological crisis and environmental planning, Agrotech Publications, H.M. Sec. 4. Udaipur.



**M. PHIL.**

# M. PHIL.

## 901- Trends In Geography:

### UNIT - I

Philosophy of Geography -Definition, Concepts, Aim, approaches and methodology ; Place of Geography among social & natural sciences : Geography as an Initegrating science.

### UNIT - II

Concept of space - definition and types ; Systems - meaning & types ; Myth and reality about dualism - Determinism vs Possibilim and Quantitative vs Qualitative.

### UNIT - III

Applied Geography- concept and application.Problem approach in Geography.

### UNIT - IV

Theories and models ; Meaning and classification of Models, Location : theories: Von Thunen's theory of agricultural location, Christaller's Central Place Theory, Waber's theory of Industrial Location.

### UNIT - V

The Quantitative revolution ; Responses to positivism, behaviorism and, postmodernism.



**Suggested Books and References :**

1. Abler, Ronalo, 1. Adam, John S. Gould, Peter : Spatial Organization : The Geographer's View of the World, Prentice Hall, N. J., 1971.
2. Ali. S.M. : The Geography of Puranas, Peoples Publishing House, Delhi, 1966.
3. Amedeo, Douglas : An Introduction to Scientific Reasoning in Geography, John Wiley, U.S.A., 1971.
4. Dikshit, R.D. (ed.) : The Art & Science of 'Geography Intergrated Readings, Prentice Hall of India, New Delhi, 1994.
5. Hartshorne, R. : Perspectives on Nature of Geography, Rand McNally & Co., 1959.
6. Husain, M. : Evolution of Geographic Thought, Rawat Pub., Jaipur, 1984.
7. Johnston, R.J. : Philosophy and Human Geography, Edward Arnold, London, 1983.
8. Johnston, R.J.: The Future of Geography, Methuen, London, 1988.
9. Minshull, R. : The Changing Nature of Geography, Hutchinson University Library, London, 1970.



**902- Research methodology and Quantitative Techniques**

**UNIT -I STAGES OF INVESTIGATION AND COLLECTION OF DATA:**

Stages of investigation; Methods of Primary data collection, Sources of secondary data collection, Sampling : sampling investigation, purpose of sampling, Sampling techniques.

**UNIT-II DATA CLASSIFICATION :**

Frequency distribution (i) Variables (ii) Attributes, Tabulation ; Methods of tabulation , Histogram and Lornze curve, Statistical Average: kinds of Statistical average, mean, median, Mode, Measures of Dispersion: Mean, Deviation, Standard Deviation.

**UNIT - III STATISTICAL TECHNIQUES:**

Correlation; Types of Correlation, Degree of correlation, Karl pearson's coefficient of correlation, Spermam's ranking method, Regression Analysis: Utility of Regression Analysis, Types of Regression Analysis, Chi- sq. test.

**UNIT - IV FORMULATION OF RESEARCH PLAN.**

Cash study of Mining areas: Marble & Zinc, Cash study of Tourist centers: Udaipur city, Cash study of Tribal area; Tribal sub plan area; Tribal population, Human Settlement, Distribution, Types and pattern.

**UNIT - V METHODOLOGY:-**

Indicator of Regional development and measurement of levels of development, Methods of Delimitations of umland of urban areas : Udaipur city, Methods of Delimitations of rural -urban fringe : Udaipur city.

**Suggested Books and References :**

1. David Unwin, Introductory Spatial Analysis, Methuen, London, 1981.
2. Gregory, S. Statistical Methods and the Geographer, Longman, London, 1978.
3. Hammond R and P.S. McCullagh Quantitative Techniques in Geography: An Introduction, Clarendon Press, Oxford, 1974.
4. John P. Cole and Cuchlaine A.M. King, Quantitative Geography, John Wiley, London, 1973.
5. Johnston R.J., Multivariate Statistical Analysis in Geography, Longman, London. 1973.
6. Koutsoyiannis, Theory of Econometrics, Mcmillan, London, 1973.
7. Maurice Yeats, An Introduction to Quantitative Analysis in Human Geography, McGraw Hill, New York, 1974.
8. Peter Haggett, Andrew D. Cliff, & Allan Frey, Location Methods Vol. I and II, Edward Arnold, London, 1977.

**Paper - 903 Regional Development and Planning**

**Unit – I Definition, Scope and meaning of region:-**

Basic concept of region, approaches, methods, concept of regional planning Hierarchical order of service center , planning strategies and formulations of regional plan.

**Unit – II Agricultural development and planning:-**

Land use survey and classification, Von Thuner and Jhon Asson's Model , Agriculture region and regionalization, delimitation and methodology of agriculture regions , methodology cropping patterns, crop combination and diversifications, Productivity.

**Unit – III Economic Development and Planning :-**

Fundamental concept of economic development, location of economic activities, concept of economic regions and regionalization, economic regions of India and Planning; case study of any economic region.

**Unit – IV Urban Development & Planning :-**

Origin and growth of urban centers in the world, center place theory of christaler , Landuse planning in urban area, principles of urban planning and master plan of Udaipur and Jaipur city.

**Unit – V Industrial development and planning :-**

Concept, location factors, localization of industries, location theory by A. Webber, classification of industries – Resource base and foot loose industries, stages of industrial development, Industrial regions of India and Rajasthan, Udaipur & Kota.

Infrastruchral development in Industrial region.

**Suggested Books and References :**

1. Berry J.L. Geography of Market Centres and Retail Distribution, Prentice Hall, New York, 1967.
2. Chatterjee, S. P. : Economic Geography of Asia, Allied Book Agency, Calcutta, 1984.
3. Chorley, R.J. and Haggett, P. (ed.) : Network Analysis in Geography, Arnold, 1969.
4. Dreze, J. and Sen, A.: India-Economic Development and Social Opportunity, Oxford University Press, New Delhi, 1996.
5. Eckarsley, R. (ed.): Markets, the State and the Environment, McMillan, London, 1995.
6. Garnier. B. J. and Delobez, A Geography of Marketing, Longman, London, 1979.
7. Hamilton, F.E.I. : Spatial Perspectives on Industrial Organization and Decision Making, John Wiley, New York, 1974.
8. Hamilton, I. (ed.) : Resources and Industry, Oxford University Press, New York, 1992.
9. Hurst E: Transport Geography-Comments and Readings, Mc Graw Hill, New York, 1974.
10. Morgan, WB and Munton R.J.C.: Agricultural Geography, Methuen, London, 1977.
11. Pachuri, R. K. Energy and Economic Development in India, Praeger, New York 1977.
12. Robertson, D. (ed.) : Globalization and Environment, E. Elgar Co., U.K., 2001.
13. Rostow, W.W. : The Stages of Economic Growth, Cambridge University Press, London, 1960.
14. Singh J. and Dhillon. S. S. Agricultural Geography, McGraw Hill, India, New Delhi, 1984.
15. Symons. L : Agricultural Geography, Bell and Sons, London, 1972.
16. Wheeler, J.O. et. al. : Economic Geography, John Wiley, New York, 1995.

# **P.G. DIPLOMA IN GIS & REMOTE SENSING**

## P.G. DIPLOMA IN GIS & REMOTE SENSING

Paper No.	Paper Nomenclature	Max. Marks
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### SEMESTER - I

GIS - 101	Principles of Aerial Photography	100
GIS - 102	Basics of Remote Sensing	100
GIS - 103	Basics of Geographical Information System	100
GIS - 104	Practical	100

### SEMESTER - II

GIS - 201	Natural Resource Management & Remote Sensing	100
GIS - 202	Human Settlement & Remote Sensing	100
GIS - 203	Digital Image Processing & GIS Applications	100
GIS - 204	Practical	100

	Project Report & Viva Voce (Including Three Months Internship)	100
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# First Semester

## PAPER - GIS-101

### Principles of Aerial Photography

#### UNIT - I

History of Aerial Photography, Types of Aerial Photographs., Invention of Light Sensitive Emulsions and Methods of Permanently fixing the Image, Photography from Aerial Platforms, Comparison of Maps, Topographical Sheets and Aerial Photographs, Quality of Aerial Photographs.

#### UNIT - II

Aerial Photography : Vantage Point, Cameras, Filters and Films. Vertical and Oblique vantage points, Vertical Aerial Photography, Oblique Aerial Photography, Aerial Cameras : Components compared with the Eyes, Types of Aerial Cameras, Photography Filtration; Types, Size, Colors of Filters. Photography Films : Characteristics and Types, Planning Aerial Photography Mission, Photogrammetry: Introduction, Geometry of Aerial Photographs, Photographic Scale, Area Measurement.

#### UNIT - III

Photo Interpretation : Introduction; Elements of Visual Image Interpretation : Location, Size, Shape, Shadow, Tone, Texture, Pattern, Association; Requirements of Photo Interpreter.

### Suggested Books and References :

1. Barrett E.C. and L. F. Curtis, Fundamentals of Remote Sensing and Air Photo Interpretation, Mcmillan, New York, 1992.
2. David Unwin, Introductory Spatial Analysis, Methuen, London, 1981.
3. Hammond R. R and P. S. McCullagh Quantitative Techniques in Geography: An Introduction, Clarendon Press, Oxford, 1974.
4. Luder D Aerial Photograpy Interpretation: Princiles and Application, McGraw Hill, New York, 1959.
5. Maquire D. J. M.F. Goodchild and D.W. Rhind (eds.) Geographic Information Systems : Principles and Application. Taylor & Francis, Washington, 1991.
6. American Society of Photogrammetry, Munual of Remote Sensing. ASP, Falls Church, V.A., 1983.
7. चैनियाल, देवीदत्त (2004) : सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली, शारदा पुस्तक भवन, इलाहाबाद-2, भारत।

**SEMESTER -I**  
**PAPER - GIS-102**

**Basics of Remote Sensing**

**UNIT - I**

Historical Development of Remote Sensing, Stages of Remote Sensing, Energy Source and Radiation System, Data Acquisition and Interpretation, Remote Sensing : Advantages and Limitations, Remote Sensing Processes : Data Collection, Data Analysis, Information on Presentation.

**UNIT - II**

Multispectral Remote Sensing System

Types of Multispectral Remote Sensing System, Landsat Multispectral Scanner (MSS), Landsat Thematic Mapper TM SPOT Sensor System, Indian Remote Sensing System

**UNIT - III**

Digital Image Processing

Introduction, Image Enhancement, Image Classification – Supervised Classification, Unsupervised Classification, Global Positioning System

**Suggested Books and References :**

1. Campbell J. Introduction to Remote Sensing, Guilford, New York, 1989.

2. Curran, Paul J. Principles of Remote Sensing, Longman, Londonb, 1985.
3. Gregory, S. Statistical Methods and the Geographer, Longman, London, 1978.
4. Hord R.M. Digital Image Processing of Remotely Sensed Data, Academic, New York. 1989.
5. Pratt W. K. Digital Image Processing. Wiley, New York, 1978.
6. Rao D. P. (eds.) Remote Sensing for Earth Resources, Association of Exploration Geophysists, Hyderabad, 1998.
7. Remote Sensing of the Environment, Pearson Publications, John R. Jensen (2005).



**SEMESTER - I**

**PAPER - GIS-103**

**Basics of Geographical Information System**

**UNIT - I: SPATIAL SCIENCE**

Geography as a Spatial Science, Cartography and Spatial Information, Origin and Development of GIS, Components of GIS, Definition, Scope, Objectives and Function of GIS

**UNIT - II : SPATIAL DATA**

Spatial Data, Elements of Spatial Data, Sources of Data : Primary and Secondary, Census and Sample Data, Raster and Vector Data Structure, Quality and Error Variations

**UNIT - III : ELEMENTS OF GIS**

Comparison of Raster and Vector Database, Representation of spatial information, GIS Data Formats for Computer Environment, Progress in GIS; Major application areas ; Softwares; Uses, Common terminology in GIS

**Suggested Books and References :**

1. Aronoff S. Geographic Information Systems : A Management Perspective, DDL Publication Ottawa. 1989.
2. Burrough P.A. Principles of Geographic Information Systems for Land Resource Assessment Oxford University Press, New York. 1986.

3. Fraser Taylor D. R. Geographic Information Systems. Pergamon Press, Oxford, 1991.
4. Maquire D. J. M. F. Goodchild and D. W. Rhind (eds.) Geographic Information Systems; Principles and Application. Taylor & Francis, Washington. 1991.
5. Mark S. Monmonier. Computer-assisted Cartography. Prentice-Hall, Englewood Cliff, New Jersey, 1982.
6. Peuquet D. J. and D. F. Marble, Introductory Reading in Geographic Information Systems. Taylor & Francis, Washington. 1990.
7. Star J. and J. Estes. Geographic Information Systems: An Introduction. Prentice-Hall, Englewood Cliff, New Jersey, 1994.



# Second Semester

## PAPER - GIS-201

### Natural Resource Management & Remote Sensing

#### UNIT-I

Introduction to Natural Resources management:

Definition, meaning and scope of Natural Resource management. Approaches and its application. Classification of Natural Resources. Status of Natural Resources – a global, regional, local perspective. Problem of resources utilization, conservation of natural resources. Population resource regions of the world.

#### UNIT -II

Remote sensing application in Forest, Soil and Geology:

Soil - Soil horizons, soil grain size texture and types, taxonomy, and its properties Geology- Rock types, mineral resources. Forest -Types of forest, Forest covers mapping and boundary monitoring.

#### UNIT-III

Remote sensing application in Water and Agricultural mapping: Agriculture- Land use and Land cover mapping, Crop identification and using spectral signatures and field pattern Surface water: temperature, Sources of surface water,

precipitation and identification of drainage pattern. Ground water: Occurrence of ground water in nature; advantage and limitation of Remote sensing Technique in ground water search and identification of ground water prospective sites, data requirement for ground water exploration, Stages of Hydrogeomorphological mapping.

#### Suggested Books and References :

1. Jensen J.R, 2003 : Remote sensing of the Environment-An Earth Resource Perspective.



URBAN LANDUSE ZONING

URBAN PLANNING



## SEMESTER -II

### PAPER - GIS-202

#### Human Settlement & Remote Sensing

##### UNIT -I

##### URBAN LANDUSE AND LEVELS IDENTIFICATION:

Urban landuse theories and their application, Metropolitan cities of India, Remote sensing of urban environment, Image interpretation, Elements of image interpretation, Levels of identification.

##### UNIT -II

##### URBAN LANDUSE ZONING :

Landuse and Land cover mapping, Urban landuse zoning, Urban population and Estimation, Role of Remote sensing in monitoring urban sprawl- Chandigarh City, Morphology of Udaipur City.

##### UNIT -III

##### URBAN PLANNING :

Slum areas, Urban landuse structure-transport system., Approaches of development plan and the role of various agencies in plan implementation process, Case studies of Noida, Delhi, Udaipur and Gandhinagar City.

#### Suggested Books and References :

1. Branch, Mevillie C.1971 City planning and aerial information Cambridge, Harvard University Press.
2. Chakraborty A.K 1989 Role of water management in urban hydrology problem inventories, Dehradun IIRS and ESCAP/UNDP.
3. Gautam N.C urban Landuse studies of Bikaner technique through Aerial-Photo Interpretation Technique, Mathura Pink Publishing House.
4. Lindgren D.T, Landuse planning and Remote sensing, Boston Martinus Nijhoff publishers.
5. Curran ,P.J Principles of Remote Sensing ,London, ELBS



## SEMESTER -II

### PAPER - GIS-203

#### Digital Image Processing & GIS Applications

##### UNIT -I

Digital image processing: Digital Image, Digital Image formats: Image Restoration: Geometric and Radiometric correction: Image enhancement: contrast enhancement, filtering, Information extraction -Band combination and ratioing, Multi-spectral Image Classification: Supervised and Unsupervised classification.

##### UNIT -II

Fundamental of GIS: Definition and Terminology: Component and functions of GIS conceptual framework of GIS, levels of scales.

Spatial and Data models: Stages of GIS data modeling, Graphical representation of spatial data Raster and Vector data presentation: Types of Raster GIS model-GRID, IMIGRID and MAP; Compaction of Raster data -Run length encoding, Raster chain coding, Block codes, Quadtree; Vector GIS models- Spaghetti model, Topological model

##### UNIT -III

Data input and editing: Data stream, data input methods -Scanning and Digitization, data editing- errors cleaning and

topology building, Data reduction and generalization, edge-matching and rubber sheeting.

Spatial analysis: Reclassification, Buffering, Overlay analysis; 3-D modeling surface: Digital terrain Model (DTM), Triangulated Irregular Network (TIN)

Global positioning Systems: GPS satellite constellation; Space segment, Control segment, User segment, GPS application.

#### Suggested Books and References :

1. Anji Reddy: Textbook of Remote sensing and Geographical Information System.
2. Aronoff.S: Geographical Information System: A Management perspective, WDL Publication, Ottawa, Canada.
3. Bernhardsen .T: Geographical In formation System, VIAKIT, Norway
4. Lawrini.R and Thompson .D: Fundamental of Spatial Information System, Academic, and London.

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## NOTES

# सामाजिक विज्ञान एवं मानविकी संकाय माणिक्यलाल वर्मा श्रमजीवी महाविद्यालय, उदयपुर द्वारा संचालित नियमित पाठ्यक्रम

वर्तमान में कला-संकाय के अन्तर्गत निम्नांकित पाठ्यक्रम संचालित हैं-

- (1) कला स्नातक (बी.ए.) तीन वर्षीय
- (2) बी.जे.एम.सी.
- (3) स्नातकोत्तर (दो वर्षीय) - हिन्दी, अंग्रेजी, संस्कृत, राजनीति विज्ञान, भूगोल, समाजशास्त्र, इतिहास, अर्थशास्त्र, प्राचीन भारतीय संस्कृति एवं पुरातत्त्व।
- (4) एम.फिल. - हिन्दी, अंग्रेजी, संस्कृत, राजनीति विज्ञान, भूगोल, समाजशास्त्र, इतिहास, अर्थशास्त्र, प्राचीन भारतीय संस्कृति एवं पुरातत्त्व।
- (5) पी.एच.डी. - हिन्दी, अंग्रेजी, संस्कृत, राजनीति विज्ञान, भूगोल, समाजशास्त्र, इतिहास, अर्थशास्त्र, प्राचीन भारतीय संस्कृति एवं पुरातत्त्व।

डिप्लोमा एवं सर्टिफिकेट पाठ्यक्रम

- (1) पी.जी. डिप्लोमा इन जी.आई.एस. एण्ड रिमोट सेंसिंग।
- (2) बेचलर ऑफ जर्नलिज्म एण्ड मास कम्यूनिकेशंस।
- (3) सर्टिफिकेट कोर्स इन स्पोकन इंग्लिश।
- (4) सर्टिफिकेट कोर्स इन प्रोफिशियेंसी इन इंग्लिश एण्ड कम्यूनिकेशंस स्किल्स।
- (5) डिप्लोमा - पुरातत्त्व एवं संग्रहालय विज्ञान।

### Institution/Faculties of the University

**M.V. SHRAMJEEVI COLLEGE**

(P.G. College comprising Faculties of Humanities, Social Science, Commerce & Management)

**UDAIPUR SCHOOL OF SOCIAL WORK**

(Master of Social Work & P.G. Diploma in HRM)

**LOKMANYA TILAK TEACHERS TRAINING COLLEGE**

(M.Ed., B.Ed., & B.Ed. - Child Development, STC, M.A. Education)

**INSTITUTE OF RAJASTHAN STUDIES (SAHITYA SANSTHAN)**

(Research Institute)

**LOK SHIKSHAN PRATISHTHAN**

(Social and Adult Education)

**Faculty of Computer Science & IT**

**DEPARTMENT OF COMPUTER EDUCATION & INFORMATION TECHNOLOGY**

(M.C.A., M.Sc., B.C.A. & P.G.D.C.A.)

**Faculty of Management Studies**

**DEPARTMENT OF MANAGEMENT STUDIES**

**DEPARTMENT OF HUMAN RESOURCE MANAGEMENT**

(M.B.A., PGDRM & M.H.R.M.)

**Faculty of Medicine**

**DEPARTMENT OF HOMEOPATHY & HOSPITAL**

(B.H.M.S.)

**DEPARTMENT OF PHYSIOTHERAPY**

(B.P.T.)

**DEPARTMENT OF DISTANCE EDUCATION**

(Different programmes through distance learning in discipline of Arts, Commerce, Science, Medicine, Engineering)

**MAHARANA KUMBHA KALA KENDRA**

(Department of Music & Performing Arts)