UNIVERSITY OF RAJASTHAN
JAIPUR

SYLLABUS

M.Sc. GEOGRAPHY

Semester Scheme

I/II Semester Examination 2019-20
III/IV Semester Examination 2020-21
# M.A. / M.SC. GEOGRAPHY

## First Semester

<table>
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I SEMESTER

Paper code: Geo 101: Evolution of Geographical Thoughts (upto 1800 AD)

Section-A

Beginnings and geosophical nature of geography: ancient Indian geographical thought (the puranic geography), Ancient classical period: contribution of Greeks scholars (Herodotus and Eratosthenes), Greeko-Roman scholar (Posidonius), Romans scholars (Strabo and Ptolemy), and Chinese scholars.

Section-B


Section-C

Impact of renaissance on geography: main inventions, discoveries and explorations, cosmographic tradition and position of geography among sciences; Sebastian Munster, Ptolomeus, Cluverius, Nathanael Carpenter, Valerius, John Paton; Robert Hooke, Christopher Rief and Conrad Malte Brun.

Readings Recommended:


Hartshorne, R. 1987: Perspective on the Nature of Geography Scientific Publishers, Jodhpur (Copyright 1959 by the Association of American)


University of Rajasthan
Jodhpur
Paper code: Geo 102: Structural and Dynamic Basis of Geomorphology

Section-A
Interior structure of the earth, thermal state of the earth's interior, Isostasy: views of Airy, Pratt, Hayford and Bowie, Joly and Holmes, Origin of the continents and oceans, earth movements: epeirogenic and orogenic- Mountain building theories of Jeffreys, Kober, Joly, Daly, Holmes and Plate Tectonics.

Section-B
Definition, nature and scope of geomorphology, major concepts in geomorphology, Denudation: weathering, mass movements, erosion and sediment regimes, various models of landscape evolution: Davis, Penck, King, Hacks, Morisawa, Schumm.

Section-C

Readings Recommended:
प्रदर्शन, ग्राम्य २००४: सूचनात्मक विभाजन। शादा पुस्तक भवन, इलाहाबाद।

Dy. Registrar (Acad.)
University of Rajasthan
JAIPUR
Paper code: Geo 103: Principles and Theory of Economic Geography

Section-A
Changing nature of economic geography, approaches to economic geography, agricultural typology—with special reference to: subsistence plantation agriculture, mediterranean agriculture, mixed farming, commercial grain farming, livestock rearing.

Section-B
Energy resources: detailed study of conventional and non-conventional energy resources, spatial patterns and supply problems, industries: iron & steel, alluminium industry, paper and pulp, cotton textile, chemical fertilizer and auto mobile.

Section-C
Decision making process: location decision—behavioural view, international trade: major regional trade and economic integration black, major trends and patterns, economic region: concept and methods of delineation, need of economic regionalization for area development and planning-economic regions of India.

Readings Recommended:
Booth, H.: A Geography of World Economy.
Paper code: Geo 111: Practical

Minimum Marks: 36

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<tr>
<td>Written Test on Lab. Work (4 Questions)</td>
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<tr>
<td>Record Work &amp; Viva-Voce</td>
<td>25+15</td>
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Max. Marks: 100

N.B.: In written test there shall be 2 questions from each section. Candidates have to answer 4 questions selecting at least one question from each section. All questions carry equal marks. Examination be conducted in batches of not more than 20 candidates in any case. 09 hours for teaching practicals be provided for a batch of 20 students per week.

Elementary trigonometry, classification of map projections and their specific uses. Mathematical construction of projections: cylindrical equal area, Mercator's and Gall's stereographic conical (with one standard parallel, bipolar, equidistant, tridal, Bonne's, polyconic and modified polyconic (international).

Mathematical construction of projections: conical (equidistant-polar and equatorial case, equal area-polar and equatorial case, Gnomonic-polar and equatorial case, Stereographic-polar and equatorial case and orthographic-polar and equatorial case).

Readings Recommended:


S. K. Jain
Dy. Registrar (Acad.)
University of Rajasthan
Jaipur
Section-A

Definition and scope of environmental geography, its relation with other subjects, elements of the environment, man and environmental relationships: environmental determinism, possibilism and neo determinism, biosphere and its components, concept of ecology and ecological succession, types of ecosystems, energy flow in the ecosystem, soil system, geobiochemical cycles, major biomes of the world.

Section-B

Environmental degradation and natural disasters, environmental crises: ozone depletion, green house gas effects, El-Nino, global warming and climate change, water scarcity, acid rain, sea level change; desertification, environmental pollutions: water, air, soil, noise and radioactive.

Section-C

Environmental quality, sustainable development, environmental management, soil and water resources management, water management, wildlife conservation, woodlands and its conservation, environmental awareness and education, international efforts of environmental conservation.

Readings Recommended:


Dy. Registrar (Acad.)
University of Rajasthan
Paper code: Geo A02: Cultural Geography

Section-A

Definition, nature and scope of cultural geography, the evolutionary approaches and conceptual framework, evolution of man and human society from Palaeolithic to Pleistocene period, rise and dominance of homo-sapiens and their spatial distribution over the continents, distribution and characteristics of primary races of the world, zone and stata theory.

Section-B

Beginning of plant domestication, animal domestication and their regions, evolution of civilization: Mesopotamian, Nile, Indus and Huang Ho valley with respect to racial, ethnic, religious, linguistic, demographic and organizational characteristics. School of cultural determinism, cultural adaptation, assimilation, integration, diffusion and environmental perception. Major cultural hearths, realms and regions of the world, basic similarities and differences.

Section-C

Major linguistic families and their distribution in the world, base of cultural diversity: race, religion, language and nationalism, culture and environment, human settlements-origin, types, pattern and distribution, westernization, sanskritization and cultural urbanization.

Readings Recommended:
Population Geography: definition, nature and scope and interdisciplinary study, theories of population growth – pre-Malthusian views, Malthus' theory, Marxist theory, Optimum population theory, demographic transition model, world population distribution, growth trends and determinants.

Migration: history, theories, trends and patterns of international and internal migration, population dynamics: fertility and mortality measurement, determinants and distribution, world population composition and characteristics, world population urbanization, trend pattern and challenges.

India population characteristics and relationship with development; population control movement and policies; urbanization and population explosion; post Independence.
Readings Recommended:
www.who.int/ageing/en/
UNAIDS Report on Global AIDS Epidemic, 2010

Paper code: Geo 802: Quantitative Techniques in Geography

Section-A
Probability: theory of probabilities- law of addition and multiplication probabilities of distribution: normal, binomial, poisson-sampling: basic concepts, sample units and design, sampling frame and procedures, standard error and sample size, testing the adequacy of samples, hypothesis testing; needs and types of hypotheses: goodness of fit and significance and confidence levels-parametric and non-parametric procedures; contingency tables, chi-square test, binomial test, t-test, man-Whitney U test.

Section-B
Bivariate analysis; forms of relation and measuring the strength of association and relation-construction and meanings of scatter diagram simple linear and regression analyses-spearman's rank and product moment correlation coefficients-the ordinary least square method of fitting a regression line-construction of regression line: interpolation, prediction, explanation and residual-statistical tests of significance of the estimates; residuals and their mapping.

Section-C
Multivariate analysis; basics of multiple regression-partial correlation coefficient regression analysis, analysis of variance and anova-testing the overall significance of a regression auto correlation-multicollinearity-basis principles and elements of factor analysis and principal...
Component analysis, surface and models: gravity potential; model-spatial interpolation and trend surface analysis-simulation models: random walk and diffusion models-markov chain model similarity indices and region building-construction of thlissen polygons.

Readings Recommended:

Paper code: Geo C01: Geography of Rural Development

Geography and rural development; agriculture and rural development, rural land use; agriculture pastoral, forestry and land use competition. Landuse and landscape. Approaches to rural development, growth centre approach infrastructure reformist. Rural settlement, housing, population and employment rural transport, service provision, derivation, recreation; health and nutrition.

Section-B
Rural planning and land management; resource development and integrated rural development: crop and soil management live stock range and management; water management, ecological management.

Section-C
Rural development in Rajasthan; rural development schemes initiation and land development schemes, drought prone areas schemes; desert development programme; integrated rural development in Rajasthan, MNREGA and tribal areas development; wasteland development.

Readings Recommended:
Association of Country Councils 1979: Rural Deprivation, London ACC.
Paper code: Geo C08: Geography of Soils

Section-A

Soils: Definition, origin. Pedology, distinction between soil and sediment. Weathering and soils: soil formation; soil forming factors; soil profile. Soil taxonomy

Section-B


Section-C

Classification of tropical soils. Major soils in India - Black, soils and red soils - their characteristics and distribution. Soils and environmental problems — soil erosion, salinization, pollution

Recommended Readings:

Dy. Registrar (Acad.)
University of Rajasthan
@JAIPUR
Paper code: Geo D01: Practical

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<th>Bifurcation of Marks</th>
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<td>Written Test on Lab.Work (4 Questions)</td>
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<td>Record Work &amp; Viva-Voce</td>
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History of cartography, types of maps, enlargement and reduction and finding of area on map using planimeter.

Section-B

Study of geological maps and preparation of their cross sections and interpretation, interpretation of weather maps and weather forecast.

Section-C

Conventional: Projection Sinusoidal and Mollweide, map policy of India and projections used for map output in India.

Readings Recommended:

वीरसंघ, पी.आर. 2005: प्रश्नात्मक भूगोल। विद्यापीठ प्रकाशन, गोरखपुर।
राहि, व.सी. 2010-11: प्रश्नात्मक भूगोल की साधनाएं। सिनेमा, विनिर्देशक संस्थान।
विपणी, आ.सी. एंव सुधाकर, त्रिपुरी 2009: प्रश्नात्मक भूगोल। प्रश्नात्मक पुस्तक अभ्यास, हिन्दी अध्याय।

Paper code: Geo D02: Practical

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Dy. Registrar (Acad.)
University of Rajasthan
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Section-A
Elementary knowledge of computer, software & hardware, file format, graphic in computer.

Section-B
Elements of digital cartography, data input, data capture, scanning, digitization and map compilation.

Section-C
Map though AutoCade, ArcGIS, GIS, QGIS, Erdas and Arcmap.

Readings Recommended:

- "नूतन खंडन तथा भौगोलिक बुद्धि प्रणाली" शास्त्री पुस्तक प्रकाशन, इलाहाबाद।
# M.A. / M.Sc. Geography

## Second Semester

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II SEMESTER

Paper code: Geo 201: Modern and Contemporary Geographical Thought
(19th century onwards)

Section A

Definition, scope, purpose and philosophy of geography, themes and basic concepts in
geography; impact of Darwinism on Geographical thought. Foundations of modern
geography: German school (Humboldt, Ritter, Ratzel, Riesroft, Hettner, Schleuter),
French school (Blaug, Brunnings) British school (Blackie and) and Russian scholars during the 19th
century. Focus on geography as a science of chorology and landscape morphology.

Section B

Rise of Anglo-American School of geography: (Simpson and Hanfords) implications of
guessry as spatial science, relationship between geography, economics and planning
(regional science) paradigms and revolutions: quantitative revolution, behaviouralism, radical
guessry, approaches of integrated geography and modern synthesis.

Section C

Philosophical pluralism: empiricism, positivism, humanistic geography (idealism,
phenomenology and existentialism) and structuralism, post-modernism, and various
paradigms of geographical thought during post-modern period, dialogue in
geography: physical and human geography, systematics and regional geography,
environmentalism and sustainability: qualitative and quantitative, cartography and navigational,
Indian geography: development, emerging trends and professional challenges.

Recommended Readings:

India Private Limited, New Delhi.
Doi’s R. D. 2002: Geographical Thought: A Spectrum of Compilation to Coherence. Bachelor
Book House (Pvt) Ltd., Jaipur.
Hall at India Private Limited, New Delhi.
Haggie’s P. 2001: Geography: A Global Synthesis. Prentice Hall Pearson Educational,
New York.
(Copyright 1959 by the Association of American Geographers.
Angeles, London.
Krishna, K. 2005: भौगोलिक विज्ञान एवं रेडियो भौगोलिक विज्ञान। अनुव.।
London.
Sarab, P. 2007: भौगोलिक विद्वान का इतिहास। प्रोफेसर पुलक चाद, इब्राहिमाबाद।
Publications, Jaipur and New Delhi.
Paper Code: Geo 202: Principles of Climatology

Section A


Section B


Section C


Recommended Readings:

Further Reading:

Dy. Registrar (Acad.)
University of Rajasthan
JAIPUR
Paper code: Geo 203: Principles and Theory of Economic Geography

Section A

Simple model of economy, environmental relations of the economy, spatial structure of economy, geographical basis of economic activities, evolution of world economic system.

Section B

Manufacturing: factors of production, theories of plant location: Weber's Least cost theory, Losch's economics of location, Isard's space economy, Smith's spatial margins, webber's uncertainty effect, industries-iron & steel, aluminium, paper and pulp, cotton textile, chemical and phosphoric fertilizer, spatial variation in transport costs: location of transport routes and structure of transport costs.

Section C

Spatial organization of land use: laws of rent, concept of rent, Von Thunen's general theory of landuse, dynamic agricultural location theory, Thunen location theory in the late 20th century world, classical central place theory: range of good, threshold, central place system and hierarchy, Christaller's hexagonal trade area, small and uniform plain, modification of Christaller's model.

Recommended Readings:


Dy. Registrar (Acad.)
University of Rajasthan
Jaipur
Minimum Marks: 36  Bifurcation of marks  Max. Marks: 100
Written Test on Lab. Work (4 Questions)  32  4 hours
Record Work & Viva-Voce  16+08
Project Report & Viva-Voce  16+08
Internal Assessment  20
Total  100

N.B. In written test there shall be 2 questions from each section. Candidates have to answer 4 questions selecting at least one question from each section. All questions carry equal marks. Examination be conducted in batches of not more than 20 candidates in an hour. 12 hours of teaching practicals be provided for a batch of 20 students per week.

SYLLABUS

Section A
Preparation of frequency table, graphical representation of data: histogram, frequency polygon, frequency curve and cumulative frequency curve or ogive, finding skewness, computation of mean, median and mode, dispersions: mean and standard deviation an assumption of correlations: Karl Pearson’s and Spearman’s rank, coefficient of variability, theoretical basis of nearest neighbour analysis and exercises.

Section B
Locational analysis of urban centres, measurement of disparities, using latest data base: state district, tehsil and development block level, preparation of choropleth, isopleths and isochrone map, population potential surface map, population pyramids map and cartograms.

Section C
Three dimensional diagrams: spherical and block pile, drawing of polygraphs, semi-log and log graphs, network analysis, trilinear chart, circular graph, climatograph, annual water budget graphs (surplus and deficiency).

Project Report: A candidate is to prepare project report of a village area for one week away from the Headquarter of the institution. The marking on the project report will be awarded by the external examiner in consultation with the internal examiner concerned. The project should be based on primary data obtained by the candidate. The data should be represented by suitable cartographic methods.

Books recommended

Paper code: Geo A01: Geography of Rural Settlements

Section A

Significance and scope of settlement geography; Development of settlement geography. Methodological advances in the study of settlement geography; Approaches to the study of settlements: Evolutionary, spatial, and ecological; Types of settlement: Clustered and dispersed.

Section B

Rural Settlements: Definition and characteristics; Site and situation. The evolution of field boundaries and field patterns. Types and materials of farm fencing; Folk housing and folk architecture; Traditional building materials.

Section C

Indian Village: Nature and characteristics; A model of Indian village by Spate; Study of rural settlements in India with special reference to their morphological characteristics; Approaches to the morphogenesis of Indian villages. Orientation and segregation of castes in villages; Dichotomy in built environment: Mohammad Habib and Budha Prakash Debate; Study of landscape as a text.

Recommended Readings:


**Paper code: Geo A02: Plant Geography with Special Reference to Tropics**

**Section A**

Evolution as a discipline, scope and content, Links with other disciplines, Relevance to Geography, Recent trends and need for phytogeographical research, Distinguishing characteristics. Indigenous and exotic flora, Bio-diversity of the tropics.

**Section B**

Terrestrial - forests, grasslands, deserts, Marine and aquatic – mangroves, coastal, Vegetation types of India.

**Section C**

Degradation and depletion of tropical vegetation, Need for conservation and management, Methods - protected area network – effectiveness, Green belts and zones in urban areas.

**Recommended Readings:**


Leisure, recreation and tourism - definitions and relationships - Tourist Mobility and Gazes-Space and Place Context, Evolution of Tourism - historical origins- modernisation- mass tourism- Globalisation and Tourism- opportunities, risks and constraints, Contemporary world patterns- core regions in Global North and South, Tourism and Tourism Spaces- Approaches- areas of research- Role of tourism in development.

Section B
The nature of tourism production- Tourism capitalist relationships and regulation theory Dynamics of globalization, Organisation - Models of production- micro firms and MNCs- Spatial fixity and factors of, Supply- Infrastructure, services and marketing, Tourism labour process-flexibilisation- spatio-social context, Tourism consumption-motivational factors-commodification of tourists' experiences, typologies of tourists' consumptions- Spatial context.

Section C
Impact of tourism- Changing perspective- Commodification of places- Environmental dimension, Economic impact-Employment, labour, Sectoral linkages and hierarchy, Social construction of tourism places- Commodification of culture- Stages; Structuring of tourists' gazes and place image- Tourists- community relationships, Tourism impact assessment, Tourism development in Rajasthan: Policy and perspective.

Paper code: Geo B01: Geography of Tourism and Recreation
Recommended Readings:
Books for further reading:
Paper code: Geo B02: Geographical Perspectives on Sustainable Development

Section A
Sustainable Development: Definition, concept and historical developments; difference between economic growth, economic development and sustainable development; economic theories of sustainable development, reconciliation between political and theoretical discourses.

Section B
Geography and Sustainable Development: Sustainable development in disciplinary perspective, sustainable development and geographical agenda, geography and the pursuit of sustainable development. Sustainable Development and the Spatial Scale and Spatial Interaction: Structuring global scale, achieving sustainable development at local, regional, national and global scales, sustainable development and open economies, interaction between different spatial scales.

Section C
Climate change, Energy, and Sustainable Development: Climate change as a threat to sustainable development, current and future climate regimes, mitigating climate change. Sustainable Development and International Relations: International relations theories, climate change and global discourse, discourses in conflict at international forums. Future Perspectives: Existing strategies for sustainable development, consensus and contest, challenge of sustainable development, sustainable development and societal change.

Recommended Readings:

Further Readings:
Bhoovigyan Vikas Foundation (2001), International Conference on Sustainable Life Styles
Paper code: Geo C01: Geography of Tribes with Special Reference to Rajasthan

Section A
Tribes and tribal communities- Perspectives in time and space.: (A Historical Perspective)
Race, Ethnicity and Tribes – Contemporary Global Distribution of Tribes, Differentials in tribal living. Location, environment, economy, society and culture of tribes. Social organisation and control.

Section B
Tribes in Rajasthan
Tribes of Rajasthan- Locational and environmental, – Demography of tribes : Major and minor areas of concentration – Characteristics and classification. Differentials in characteristics - Economic activities and associated status Occupational characteristics of tribals in Rajasthan – Social mobility – Case studies. Issues of integration and marginalization – Analysis of development projects and the placement or Displacement and resettlement of tribals.

Section C
Tribals and mainstream development
Study of scheduled and non scheduled tribes, Tribals in various sectors of economy and society, Tribal movements – Historical perspectives – Social, economic, political and ecological issues. Tribal Development Policies in India- Colonial and post- colonial policies: Nature, parameters and objectives - Impact of such policies on tribals- A Review.

Recommended Readings:
Chakravarty, M. Mukherjee,D,(2009), Indian Tribes, SAraswat library, Calcutta.
Chaudhury, B.(1982): Tribal Development in India: problemsand Prospects,
Chaudhary SN (ed) (2012), Tribal Health and Nutrition, Rawat Publication, Jaipur
Vyas,N.N. and Mann,R.S.(2008), Indian Tribes in Transition, Rawat Publications, Jaipur
Vyas, N.N. and Mann, R.S.(2008). Indian Tribes of Northern Mato Grosso Brazil, Rawat Publications, Jaipur

Dy. Registrar (Acad.)
University of Rajasthan
JAIPUR
Paper code: Geo C02: Geography of Crime

Section A

Spatio-Social Perspectives on Crime:

Section B

Place and Space in Crime

Section C

Scale, Power, Social Space and Crime; Inter-relations

Recommended Readings:
Shaban Abdul, 2010, 'Mumbai Political Economy of Crime and Space', Hyderabad, Orient Blackswan Further Reading
Pain, R, (2000), 'Place, social relations and the fear of crime, a review', Progress in Human Geography 24(3)
Websites:
www.geourg (Crime and Development in Africa by Iamin Sesay

By. Registrar (Acad.)
University of Rajasthan
JAIPUR
Paper code: Geo D01: Practical

Minimum Marks: 36  Bifurcation of Marks  Max. Marks: 100
Written Test on Lab. Work (4 Questions)  60  4 Hours
Record Work & Viva-Voce  25+15
Total  100

N.B.: In written test there shall be 2 questions from each section. Candidates have to answer 4 questions selecting at least one question from each section. All questions carry equal marks. Examination be conducted in batches of not more than 20 candidates in any case. 09 hours for teaching practicals be provided for a batch of 20 students per week.

Section A

Design of questionnaire (Field based): Types: closed and open-ended, Planning, designing and constructing questionnaire for field work- quantifiable data based and perceptual qualitative data based, ethnographic survey method,

Section B


Section C

Network Analysis: Topological graphs -Connectivity- Calculations of Alpha, beta and gamma indices, Mapping of relative accessibility and connectivity – Matrices- point of minimum aggregate travel distance.

Recommended Readings:
Paper code: Geo D02: Practical

Minimum Marks: 36

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N.B.: In written test there shall be 2 questions from each section. Candidates have to answer 4 questions selecting at least one question from each section. All questions carry equal marks. Examination be conducted in batches of not more than 20 candidates in any case. 09 hours for teaching practicals be provided for a batch of 20 students per week.

Section-A

Network Analysis: Topological graphs - Connectivity - Calculations of Alpha, beta and gamma indices, Mapping of relative accessibility and connectivity - Matrices - point of minimum aggregate travel distance.

Section-B

Mental Maps and diagrams: Typology of distance and direction of space - Construction of Maps, Imagining Place and space: Perception - mapping and interpretation, Interpreting political context of maps, cartographic techniques, diagrams, pictures and cartoons.

Section-C

Techniques Regionalization and Patterns: Identification of regional boundaries, Boundary gridule technique and synthetic mapping, Index of concentration: location quotient and concentration, Index of similarity and dissimilarity and inequality - Construction and applicability of Lorenz curve - Interpretations - Calculation of Gini's co-efficient of concentration

Dy. Registrar (Acad.)
University of Rajasthan
Jaipur
Recommended Readings:
Peters J. (1977): Quantitative Methods in Geography, Houghton and Mifflin co., Boston
Introduction, Oxford University Press, London.
New Delhi.
York.
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III SEMESTER

Paper code: Geo 301: Advanced Geography of India

Section A
Geological structure and its relation with distribution of minerals, physiographic divisions; climate - various seasons and weather associated with these seasons, mechanism of Indian monsoon, major climatic regions; soil - characteristics, distribution and major soil regions; drainage system and watersheds.

Section B
Resource potential and evaluation, water resources & Multi-purpose Irrigational projects, vegetational resources, agriculture: typology, major crops, changing pattern of crops and green revolution, animal resources, mineral resources, human resources & population policies.

Section C
Resources development and utilization: power, industries and transport, river basins of India, riverine problems of sharing water and their planning, industrial regions and economic regions of India, regional problems.

Recommended Readings:

Bansil, B.C. 1975: Agricultural Problems in India, Delhi.
India 2004, Ministry of Information and Broad Casting, Govt. of India, New Delhi.
Kundu, A. & Raza, Moonia: Indian Economy the Regional Dimension.
मलेस्वर, ली. 1999: अरथरीक भारत का सुस्थ पृथ्वी। साहित्य भवन प्रकाशकाले, आगरा।
Mahesh Chand and V.V. Puri, Regional Planning in India.
M. Noor., Perspectives in Agricultural Geography. New Delhi.
Misra, R.P., Regional Planning: Concepts, Techniques and Policies

Dy. Registrar (Acad.)
University of Rajasthan
JAIPUR
Paper Code: Geo 302: Fundamentals of Natural Hazards and Disaster Management

Section-A


Section-B

Regional Dimension of Hazard: Occurrence and trends with special reference to northwest India. Case Studies: Floods in Delhi, Major Fires in Kolkata, Earthquakes in Bhuj, Rail Accidents in India.

Section-C


Recommended Readings:

Godschalk, D.R. et.al. (1999), Natural Hazard Mitigation: Recasting Disaster Policy and Planning, Island Press, Washington, D.C.
Kapur, Anu and Others (2005), Disasters in India: Studies of Grim Reality, Rawat, Jaipur.
Paper Code: Geo 303: Urban Geography

Section A

Meaning, aims, importance and scope of urban geography, factors affecting recent trends in the growth of town cities different historical periods during neolithic period, greek and roman period, dark ages, medieval period renaissance period, industrial revolution, and modern times, chief characteristics of the towns, trends of urbanisation in the world, urbanisation in India since 1901 and its problems, definitions of urban centres, chief characteristics of modern town, city conurbation metropolitan and megalopolis, spatial pattern and distribution of urban centres origin and evolution of urban settlement, types of cities-central placed, urban transportation.

Section B

Functions and functional classification of towns, urban rank-size relationship, concept of urban economic functions and its urban hierarchy based on functions law of promate city, urban morphology, unplanned growth of towns, urban master plans, morphology of Indian cities, functional structure of towns, characteristics of C.B.C. residential area, and other functional areas central place theory (christaller and losch) and models of urban structure theory of urban structure (burgess, hoyt, harris & ullahman, mcn, white).

Section C

Centrifugal and centripetal forces in urban geography, development of suburbs, rural, urban fringe, satellite towns, ring towns, sphere of urban influence (umland) and its delimitation control of urban problems: environmental, urban poverty, slums, transportation, housing, crime, principles of town planning, preparation of a master plan, study of master plan Jaipur city, principles of regional planning.

Recommended Readings:

A.E. Smiles: The Geography of Towns, Hutchinson, University Library, London.
Abecrombie: Town and Country-Planning, Oxford University Press, London. 2010: नागरिक बीमा, भौगोलिक विभाग, पंजाब।
Harnold M. Mayer: Readings in Urban Geography, Central Book Depot, Allahabad.
N.V. Soman: Urbanisation and Urban India, Asia publishing House, Bombay.
P.C. Mathora: Survey of Shivalik City and Balagarh (Asia publishing Bombay).
Shah Manzoor Alam: Hyderabad and Secunderabad, Twin City Studies in Urban Geography. Allied Published, Delhi.

Dy. Registrar (Acad.)
University of Rajasthan
Jaipur
Minimum Marks: 36

Written Test on Lab. Work (4 Questions) 48
Record Work & Vive-Voce. 20+12
Internal Assessment 20
Total 100

N.B. In written test there shall be 2 questions from each section. Candidates have to answer 4 questions selecting at least one question from each section. All questions carry equal marks. Examination be conducted in batches of not more than 20 candidates in any case. 12 hours of teaching practicals be provided for a batch of 20 students per week.

SYLLABUS

Section A

Methods and techniques of representation of relief: methods and techniques of depicting relief: Profiles, gradients and calculation of slopes, Block diagrams, field sketching, hypsographic curves, altimetric frequency graphs.

Section B

Interpretation of topographical maps: a brief history of topographical maps of the world with special reference to India and their interpretation, detailed study of such topographical sheets which depict typical geomorphological and cultural landscapes, scanning and digitization of maps (Raster-Vector Image).

Section C

Calculation of scale, number of runs/strips and aerial photographs in a strip, knowledge of stereoscopic vision and use of stereoscope, Air photo Interpretation and exercises on the determination of height on Air photo using Parallax Bar.

Recommended Readings:

Paper Code: Geo A01: Research Methodology

Section A

Research: meaning, objectives, significance, types of research, research approaches, problems of geographical research, relevant and applied research, hypothesis and its basic concepts, testing of hypothesis, models and paradigm, formulation of research proposal and research design, types of research projects and report writing.

Section B

Sources of data, methods of data collection, processing, analysis and result, observation and interview questionnaire and field schedule, sampling theory, sample size, sampling techniques, selected techniques of spatial analysis, concentration and dispersion of economic activities, interaction theories, scaling techniques, measurements of disparities and inequalities, methods of delimitation of economic, industrial, agricultural and planning regions.

Section C

Regional population analysis, population projections, network analysis, delimiting spheres of city influence, core and marginal area, morphometric analysis, drainage basin analysis and slope analysis, biogeohchemical cycles, integrated area development planning, use of software for quantitative geographical analysis, introduction to remote sensing and geographical information system in land use analysis.

Recommended Readings:

Academia, R. 2010: सांस्कृतिक अनुकूलन। प्रदर्शण विधिकक्रम, नई दिल्ली।
V.S. वीणुवाल 2008: सूचना संबंधी तथ्यों और लोगों की जानकारी। गार्डियन साबित, नई दिल्ली।

Sedrick, S.M. 2008: व्यक्तिगत तंत्रज्ञान। भारत तंत्रज्ञान, गोरखपुर।
Sharma, V.P. 2001: दीवारी नीतियों। पंचायत प्रज्ञान, गोरखपुर, पृष्ठ 36.

Registrar (Acad.)
University of Rajasthan
JAIPUR
Paper Code: Geo A02: Political Geography

Section A

Definition, scope nature and importance of political geography: its relation with other social sciences, history and development of political geography: pre-modern phase (before 19th Century), geopolitics and German school of thought. Global strategic views: views of Mackinder, Spemann, Melting, Hoxton, De Seyssye, World's geopolitical regions, types of approaches, trends of politics in the world modern phase (19th to 2000 AD).

Section B

State and nation, idea of state: elements of the state: territory, population, organization and power, concept of nation, nationalism, heart of the state: core areas, the focus: capital city, frontiers and boundaries: definitions, classification and concepts, boundaries as economic barrier, inland, borders and their problems, buffer zones, the concept of territorial sea and maritime boundaries, landlocked states: problem of access, growth of nations and disintegration of empires: unitary and federal states, the dying colonialism and resurgent nationalism, super nationalism: form state of blocks.

Section C

Extending dimensions of political geography, politics and transportation, geography of foreign aid & economic development, emergence of third world block, political-geographical study of India, political geography of administration, political-geographical implications of space research. Function, methods and trends of elector geography: voter's participation before voting, prediction, conceptual model of the voting decision, operationalisation of conceptual decision, gerrymandering in relation to India.

Recommended Readings:

Sarma, A. 2001: राज्यनवीन व राजस्थान राज्य के राज्यपाल। सारस्य विस्तरण।
Paper Code: Geo B01: Advanced Geomorphology

Section A

Fundamental concepts of geomorphology; schools in geomorphology, recent trends in geomorphology, earth movements: epigenetic, orogenetic types and classification of weathering, mass movement erosion, plate tectonics, seismicity, vulcanicity, orogenetic structures with reference to the evolution of Himalaya, various models of landscape evolution (Davis, Penck, King, Haaks, Morisawa, Schumm, poly cyclic evolution of landscapes.

Section B


Section C

Terrain evaluation, geomorphic mapping, geomorphic hazards and mitigation measures; Digital Elevation Model (DEM) and Triangulated Irregular Network (TIN) units, field capability and land suitability classification, hydro-geomorphology, urban geomorphology, environmental geomorphology, geomorphic hazards.

Recommended Readings:

Paper Code: Geo B02: Contemporary Issues in Human Geography

Section-A

Human Geography: Changing nature or perspectives, issues and debates, critical understanding of social theory and human geography. Conceptualizing Space and Place: Structure and dynamics of space; relational framework of space and place; social construction of space and time; ethics of space and place.

Section-B

Geography of Difference and Exclusion: Geographies of identity and difference related to class, religion, caste, gender and location; social justice and political geography of difference. Geographical Organisation of Power: Spatial meaning and definitions of power; dynamics of spatio-social interactions and power; geopolitics of power-territoriality and globalization.

Section-C

Geography of Development: Meaning, definitions and approaches; construction of development indicators; linking globalisation and new forms of development; local initiatives towards development. Geography of social action and movements: Reasons and approaches to social movements; aspects of social security; social-environmental movements in India.

Recommended Readings:

Paper Code: Geo C01: Marketing Geography

Section-A


Section-B

Trade, Classification and structure: Local, Regional, National, and International. Historical Development of Trade, Factors of Development of Trades.

Section-C


Recommended Readings:
Paper Code: Geo C02: Social Geography

Section-A


Section-B


Section-C


Recommended Readings:

Khare, R.S.: Cultural Diversity and Social Discontent, Sage India, New Delhi, Sage India, 1998.
Sen, Amartya, and Dreze Jean: Indian Development: Selected Regional Perspectives, Oxford University Press, Delhi, 1996.

Paper Code: Geo D01: Project Work

[Signature]
Dy. Registrar (Acad.)
University of Rajasthan
Jaipur
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IV SEMESTER

Paper Code: Geo 401: Geography of Rajasthan

Section A

Physical aspects of Rajasthan: geological structure, relief, climate, drainage, natural vegetation, environmental pollution - causes and types, drought, desertification, soils, soil erosion and conservation, availability, problems and conservation of water resources.

Section B

Economic aspects: irrigation, sources, types, irrigation intensity, crop wise irrigation, quality of irrigation water, problems, irrigation projects: detailed study of Indira Gandhi canal project, Chambal valley project, Mahi Bajaj Sagar project on physical and socio-economic aspects.

Agriculture: development under five year plans, problems of agriculture development, general land use: live-stock and dairy development, minerals, industries: textile, sugar, cement, marble and granite, fertilizer, zinc and copper smelting, power & energy: hydro-electricity, coal, petroleum, solar energy, bio-energy, transport & trade, development of tourism, desert development programme, tribal areas development programme, Aravali hill development programme.

Section C

Cultural and development aspects: population-number, growth, distribution and density, rural and urban, male and female population, literacy status, occupational structure, schedule castes and schedule tribes, population problems, study of Bhil, Meena and Garsia, settlement types, building materials and house types and factors affecting settlements in Rajasthan.

Recommended Readings:


Govt. of Rajasthan Techno-Economics Survey of Rajasthan. Govt. of Rajasthan Publication.


Lodha, R & Maheshwari, D. 2001: Geography of Rajasthan. Shahitya Bhawan Publication, Hospital Road, Agra.

Maheshwari, D. 2008: Geography of Rajasthan. Shahitya Bhawan Publication, Hospital Road, Agra.


Sharma B.L. 1984: Agricultural Typology of Rajasthan.

Singh, R.K. 1997: Regional Geography of India.

Raj [Signature]

Ny. Registrar (Acad.)

University of Rajasthan
Paper Code: Geo 402: Agricultural Geography (Elements & Applied)

Section A

Agriculture geography: nature and development, origin dispersal and development of agriculture, field survey and mapping in agriculture geography, geographical determinants of agricultural land use: relief and climate, soils, human determinants of agriculture.

Section B

Models in agricultural geography, diffusion of agriculture innovations, land use and land capability classification, agricultural efficiency productivity, agricultural evaluation, techniques, crop ranking intensity, crop diversification and crop combination regions.

Section C

Agricultural regionalization, agricultural typology, green revolution, agricultural scenario in India, agro-climatic zones: India and Rajasthan, agricultural policy in India.

Recommended Readings:

All Mohamnad: Situation of Agricultural, Food and Nutrition in Rural India. Concept Publishing Co., Delhi.
All Mohamnad: Dynamics of agriculture Development in India. Concept Publication Co., Delhi.
ICAR: Soil Conservation of India.
Kostowickie, Z.: Agricultural Typology, Polish Academy, Warsaw.
Symons Lesia 1967: Agricultural Geography, G. Gelf and Sons Ltd., London.
Singh, Jasbir: Agricultural Geography of Haryana.
Noor Mohammad: Agricultural Land use in India. Inter-India Public, Delhi.

Dy. Registrar (Acad.)
University of Rajasthan
JAIPOUR
Paper Code: Geo 403: Applied Geography

Section A

Meaning, nature and scope, principles and approaches, application of geographical methods of survey and geospatial tools in analysis of resource base, its appraisal, micro, regional planning and demographic attributes.

Section B

Delineation of resource regions, regional divisions according to variations in levels of industrial development, special purpose regions—river valley regions, national capital region, problem region—hilly regions, tribal regions, regions of drought and floods.

Section C

Planning for a region's development, state capital region (Jaipur), indicators of development and their data sources, measuring levels of regional development and disparities—case study of Rajasthan. Land use policy implications in India with special reference to India, reviews of policies related to de-centralized planning formation at national, state, district, block and gram panchayat level.

Recommended Readings:


45
Paper Code: Geo 411: Practical

<table>
<thead>
<tr>
<th>Minimum Marks 36</th>
<th>Bifurcation of Marks</th>
<th>Max. Marks 100</th>
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<tbody>
<tr>
<td>Written Test (Four Hours)</td>
<td>32 Marks</td>
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<tr>
<td>Record Work and Viva-Voce.</td>
<td>12+04</td>
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<tr>
<td>Field Survey and Viva-Voce. 2 hours</td>
<td>12+04</td>
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<tr>
<td>Camp Work and Viva-Voce.</td>
<td>12+04</td>
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<tr>
<td>Internal Assessment</td>
<td>20</td>
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<tr>
<td>Total</td>
<td>100 Marks</td>
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N.B. In written test there shall be 2 questions from each section. Candidates have to answer 4 questions selecting at least one question from each section. All questions carry equal marks. Examination be conducted in batches of not more than 20 candidates in any case. 12 hours of teaching practicals be provided for a batch of 20 students per week.

SYLLABUS

Section A

The art of surveying, history of surveying, scope and utility, problems and classification of surveying, use of plane table survey, types of traversing, resectioning in plane table survey, two and three point problems, use of Indian pattern theodolite.

Section B

Use of dumpy level, practical contouring cross sectioning, use and application of surveying theodolite: its parts and their functions, use, traverse and traverse computation, independent coordinates.

Section C

Use of total station and GPS, interpretation and identification of cultural and physical features on aerial photographs, photo interpretation of land use and settlements in the field.

Camp Work: A topographical survey of about 100 hectares in a settlement for one week away from the headquarter of the institution. Survey reports of the same will be prepared with the help of computer technology (word programme & AutoCAD). The marking on the survey report will be awarded by the external examiner in consultation with the internal examiner concerned.

Recommended Reading:


Ganam, N.C.: Urban Land use studies through Airphoto Interpretation


Paper Code: Geo A01: Bio Geography

Section A

Definition, scope and significance nature, approaches, history, recent trends and developments, plant and animal ecology forms and functions of eco system, ecosystem with special reference to mountain and desert factors influencing distribution of flora, taxonomical and ecological classification of plant, ecological succession, ecotone and community, patterns of distribution of world vegetation.

Section B

Nature and classification of animals, dispersal and migration of animals: type and causes — case studies, geographical isolation, the eco-geographical region, biogeography of the seas: island biogeography.

Section C

Conservation and management of forest and wild life with reference to India, process of desertification, its consequences and management principles, projecting into the future: climate change: biogeographical consequences of global change; changing communities and biomes, effect of climate change on biological diversity, environmental hazards and problems of pollution.

Recommended Readings:


शिक्षा प्रशासन संस्था प्रशासन परीक्षा रूपांतरण । राजस्थान, भवन, काराबाग, ।

Dy. Registrar (Acad.)
University of Rajasthan
JAIPUR
Paper Code: Geo A02: Industrial Geography

Section A

Evolution of industrialization (India and World), location factors of industries, theories: least cost school, transport cost school, market area school, marginal location school and behavioural school, new trends in industrial geography, concept of entrepreneur, significance of enterprise and firm, significance of cost and price.

Section B

Formation and delineation of industrial regions, industrial complexes, industrial regionalization, industrial regions in India: Hooghly side industrial regions, Damodar valley industrial regions, Delhi-Mumbai industrial corridor, industrial policies of India, liberalization, privatization and globalization (special reference to India); special economic zones, industrial regions of World: Ruhr basin industrial region, Great lakes industrial region.

Section C

Industries: cotton, jute, textile, iron and steel, aluminium, fertilizer, paper and pulp, copper, chemical and pharmaceutical, ship building, automobile, cottage and agro-based industries, tourism industry, concept of optimum location, geographical location, multi-location industries, market oriented industries, foot loose industries, raw material oriented industries, manufacturing industries, processing industries.

Recommended Readings:

* Ford and Dicken: Location in Space: A theoretical Approach to Economic Geography.
* M.C. Curt and Lindberg Hoolder and Lee Economic Geography: A profess to Economic Geography
* Glaess, B.C.: Industrial London.
* Saxena, Economic Geography.

Dy. Registrar (Acad.)
University of Rajasthan
Jaipur
Paper Code: Geo B01: Regional Planning and Development

Section A

Conceptual and theoretical framework of regional planning: principles and determination of regional planning, multi-level planning and inter-regional stresses, regional hierarchy, role of geography in preparation of a regional plan, significance of the term integration (political, economic and spatial) for regional planning.

Section B

The process of regional development: indicators of development; levels of regional development and disparities, strategies for development: 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.

Section C

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 (TVAA), regional planning in India (DVC and NCR) regional planning in Netherlands, Principles of town and country planning.

Recommended Readings:


Journal of Geography and Regional Planning (JGRP) is an open access.


शीलदेस 3 वें अह 2002: प्रदेशिक नियोजन और स्थानिक विकास। एमप्रोक्स प्रकाशन, गोरखनगर.

www.academia.edu/Papers/in/Regional Geography

www.jstor.org/stable/1437805

Dy. Registrar (Acad.)
University of Rajasthan
JAIPUR

49
Paper Code: Geo B02: Geography of Water Resources

Section A

Definition and scope of water resources geography, inventory and distribution of world's water resources, water resources of India, groundwater, hydrological cycle, demand and use of water, irrigation methods.

Section B

Salinity, alkalinity, overexploitation of groundwater and arsenic problem, water pollution, river water pollution, demand and water supply in industries, flood management, drought and dry land farming.

Section C

Water conservation/participatory approach, traditional methods of water conservation in India and Rajasthan, integrated basin planning, watershed management, river water disputes, water management by remote sensing technology, environmental disasters and water crisis.

Recommended Readings:


Nath, T. N., 1998: जल जीवितता। साइनल ड्राइवर ओफ़ साइनल बिज़नेस, नई दिल्ली।


Dr. Registrar (Acad.)
University of Rajasthan
JAIPUR
Paper Code: Geo C01: Oceanography

Section - A

Oceanography – nature, scope and development, distribution of land and water, Ocean bottom topography, bottom relief of Pacific, Atlantic and Indian Ocean.

Section - B


Section - C

Ocean deposits and coral reefs: sources, types and distribution of ocean deposits, coral reefs – formation, condition of growth, type and theories of origin.

Recommended Readings:

King, C.A., Oceanography for Geographers, Edward Arnold Pub.
Paper Code: Geo C02: Principles and Applications of Remote Sensing and Geographical Information System

Section A

Remote sensing: definition and scope of remote sensing, elements of remote sensing: electromagnetic radiation and interaction with earth surface features, data products and users, atmospheric windows, remote sensing systems: platforms, sensors, resolution and radiometric characteristics, elements of image interpretation and keys, types of aerial photographs, aerial cameras types of mosaics, relief displacement and parallax, Satellites: Landsat- Mss & Ti, Spot, Noaa-Avhiir, Irs, MODIS, Radarsat, Ikonos, Quickbird & Cartosat.

Section B

Digital image processing and classification: pre-processing and image enhancement techniques, rectification and restoration, contrast manipulation, density slicing, spatial filtering and band ratio, classification supervised and unsupervised, post-classification analysis and accuracy assessment, microwave remote sensing, advantages over optical, unique capabilities of microwave, SAR & SLAR.

Section C

RS applications: mapping and monitoring of land use and land cover, forestry and desertification, soil and water resources, remote sensing and hazard mapping and environmental monitoring, introduction to GIS, Fundamentals of GIS: Geospatial databases, data structure and formats, projections and coordinate systems, raster and vector data infrastructure and analysis, integration of remote sensing and GIS.

Recommended Readings:

पूर्वोक्त, जी. आर. 2004: वायरल जानकारी प्रमाण तत्त्व, बराबर ज्ञान तत्त्व. बांद्रा प्रकाशन, दिल्ली.