University of Rajasthan
Jaipur
SYLLABUS
M.Sc. Geography
(Semester Scheme)
I & II SEMESTER -2020-21
III & IV SEMESTER -2021-22

Dy. Registrar (Acad.)
University of Rajasthan
JAIPUR
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<th>S.No.</th>
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<td>Quantitative Techniques in Geography</td>
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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


Readings Recommended:

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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 orogenetic- 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, Hakes, Morisawa, Schumm.

Section-C

Readings Recommended:
प्रदर्शक, गणेश 2004: भू-आकृति विज्ञान। शास्त्र पुस्तक भवन, हल्लेहावाड़।
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, aluminium 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 block, 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.

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Jaipur
Minimum Marks: 36

Bifurcation of Marks

| Written Test on Lab. Work (4 Questions) | 60 |
| Record Work & Viva-Voce | 25+15 |
| Total | 100 |

Max. Marks: 100

4 Hours

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

Elementary trigonometry, classification of map projections and their specific uses. Mathematical constrictions of projections: Cylindrical Equal Area, Mercator’s and Gall’s stereographic conical (with one standard parallel), Azimuthal, Equidistant, Gnomonic, Polyconic and Modified Polyconic (International).

Section B

Mathematical construction of projections: Conical (E Question: 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:


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Jaipur
Paper code: Geo A01: Man and Natural Environment

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, forest conservation, biodiversity and its conservation, environmental awareness and education, international efforts of environmental conservation.

Readings Recommended:
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 state theory.

Section-B

Beginning of plant domestication, animal domestication and their regions, evolution of civilization: Mesopotamian, Nile, Indus and Hwang 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, bases 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:
**Paper code: Geo 601: Population Geography**

**Section-A**


**Section-B**

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.

**Section-C**

India: population characteristics and relationship with development; population control movement and policies; urbanization and population explosion; post Independence.
Development-reproductive and child health programme, contemporary issues - ageing of population; declining sex ration; hiv/aids.

Readings Recommended:
www.who.int/ageing/en/
UNAIDS Report on Global AIDS Epidemic, 2010

Paper code: Geo B02: Quantitative Techniques in Geography

Section A
Probability: theory of probability - 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 hypothesis-testing of fit and significance and confidence levels-parametric and non-parametric procedures, contingency tables, chi-square test, binomial test, t-test, mann-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 thilissen 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 initiative and land development schemes, drought prone areas scheme; 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 C02: 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:

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University of Rajasthan
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.

Platforms:
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:

वेषान, ए.आर. 2005: प्रश्नात्मक भूगोल। व्यवसाय प्रकाशन, गोरखपुर।
Sharma, B. 2010-11: प्रश्नात्मक भूगोल की गतिविधियाँ। राजस्थान प्रकाशन, जयपुर।
Shah, A. and Singh, P. 2009: प्रश्नात्मक भूगोल। प्रकाशन गुलाम भारत, इंदौर।

Paper code: Geo D02: 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.

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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:

- पुलिक, ही. 2004: दूरसंवादन तथा भौगोलिक धारणा प्रणाली. शारदा पुस्तक प्रकाशन, इलाहाबाद।
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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, Riehl); French school (Blache, Brunhes); British school (MacKinder) 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: (Staats and Hanshorne) implications of geography as spatial science, relationship between geography, economics and planning (regional science) paradigms and revolutions: quantitative revolution, behaviourism, radical geography, approaches of integrated geography and modern synthesis.

Section C

Philosophical pluralism: empiricism, positivism, humanist geography (idealism, phenomenology and existentialism) and structuralism, post-modernism and various paradigms; schools of geographical thought during post-modern period, evolution in geography: physical and human geography, systems and regional geography; environmentalism and possibility; qualitative and quantitative, ethnographic and cartographic, Indian geography: development, emerging trends and professional challenges.

Recommended Readings:


जी. सुलेमान. 2005: भौगोलिक निर्माण एवं विधि वाङ्ग। साहित्य भवन प्रकाशन, भारत।


मंगल, न. 2007: भौगोलिक निर्माण का इतिहास। प्राग कुलक निर्माण, इलाहाबाद।


[Signature]

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Jaipur
Paper Code: Geo 202: Principles of Climatology

Section A


Section B


Section C


Recommended Readings:

Further Reading:

[Signature]
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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


Section C

Spatial organisation of land use: laws of rent, concept of rent, Vondthunen's general theory of landuse, dynamic agricultural location theory, Thunnen location theory in the late 20th century world, classical central place theory; range of good, threshold, central place systems and hierarchy, Christaller's hexagonal trade areas, loss and uniform plain, modification of Christaller's model.

Recommended Readings:

Cheng, T.-Y. 1980: Theoretical Approaches to Economic Geography.

Paper Code: Geo 211: Practical

Minimum Marks: 36

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<td>1</td>
<td>Written Test on Lab. Work (4 Questions)</td>
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<td>Record Work &amp; Viva-Voce</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 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 analysis of correlation: 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


Dr. Registrar (Acad.)
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Jaipur
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.
Recommended Readings:

Books for further reading:

23
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: problems and 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 Grossp Brazil, Rawat Publications, Jaipur
Paper code: Geo C02: Geography of Crime

Section A

Spatio-Social Perspectives on Crime:

Section B

Place and Space in Crime
Emplacement in Crime- The built environment, Local subculture and locales of crime - Mobility conditions and places of crime and criminals - Regional patterns of crime in India. Systemic violence- Implications of sex, age, religion, race, caste and class: illustrations of sexual violence, child abuse, racist violence; homophobic violence, elder abuse - World trends. Geographies of crime and fear- Use of space; Place, space and social identity - socio-spatial exclusion. Gender and crime- patriarchy and sexual violence- Femininity, masculinity and spatial expression of fear of violence - Rapes, domestic violence, homosexuality and 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
Black Swan Further Reading
Routledge
Pain, R. (2000), 'Place, social relations and the fear of crime, a review', Progress in Human
Geography 24(3)
32(4). 403- 12
New York
and Development, Publication No. 36, Rome.
submitted to BRS, TISS, Mumbai. - Theories of Crime, Entire report.
Water de Gruyter.
Thoms, D.C. (1992): 'Fragmenting Societies', Routledge,
Development', Basil Blackwell.
Harvey D. 2001, 'Spaces of Capital Towards a critical Geography', Edinburgh University
Press
David Atkinson, Peter Jackson, David Sibley and Nell Washbourne, (2005): Cultural
Herod Andrew and Wright Melisa, (eds.), 2002, 'Geographies of Power-Placing Scale',
Blackwell
Bagchi Amiya Kumar (1982), 'The Political Economy of under-development', Cambridge
G. S. Bajpai (ed.), 2002. 'Development without disorders: Criminological view points,
Vishwavidyalya prakashan.
Websites:
Competing perspectives on cross-National Crime: An Evaluation of Theory and
www.geog.le (Crime and Development in Africa by I amin Ssey)
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 perception qualitative data based, ethnographic survey method,

Section B

Data recording – codification for computer based analysis, Data compilation and analysis.

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:
Peter J. (1977): Quantitative Methods in Geography, Houghton and Mifflin co., Boston
Introduction, Oxford University Press, London.
New Delhi.
York.

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Dy. Registrar (Acad.)
University of Rajasthan
JAIPUR
Paper code: Geo D02: 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

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 grid 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
Recommended Readings:
Peter 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:
Bansi1, B.C. 1975: Agricultural Problems in India, Delhi.
India 2004, Ministry of Information and Broadcast Casting, Govt. of India, New Delhi.
Kundu, A. & Raza, Moonia: Indian Economy the Regional Dimension.
मोहनदास, ल. 1999: आमुलक भारत का हृदय पूर्वोत्तर। साहित्य भवन पत्रिकापत्र, आगरा।
Mahesh Chand and V.V. Puri, Regional Planning in India.
Miz Noor., Perspectives in Agricultural Geography, New Delhi.

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 towns, 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 urbanization in the world, urbanisation in India since 1901 and its problems, definitions of urban centres, chief characteristics of modern town, city, comparison metropolitan and megapolis, 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 p.m. 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 places theory (christaller and losch) and models of urban structure theory of urban structure (burgess, hoyt, harriett & ullah, men, 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 of Jaipur city, principles of regional planning.

Recommended Readings:


Harold M. Mayer: Readings in Urban Geography, Central Book Depot, Allahabad.


P.C. Mathura: Survey of Bhagal City and Bhalager (Asia Publishing Bombay)


Shah Manzoor Alam: Hyderabad and Secunderabad, Twin City Studies in Urban Geography. Aftid Published, Delhi.


Paper code: Geo 311: Geography Practicals

Minimum Marks: 36
Written Test on Lab. Work (4 Questions) 48
Record Work & Vide-Voce 20+12
Internal Assessment 20
Total 100

Max. Marks: 100
4 hours

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 slope, 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 results, 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, biogeochemical 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:

Arora, A. 2010: सागरिक अनुसंधान। प्रवा प्रकाशक, नई दिल्ली।

Devi, S. 2008: सूत्र कविता व वैज्ञानिक नयी उपड़े। नास्थित्क पुस्तक, इलाहाबाद।


वीरवल्ली नारायण 2008: शृमण की जीवनकल्याणी निरूपण। बागमती प्रकाशन, पोखरेल।

नरेंद्र प्रमाण 2001: रिसर्च पैथोलॉजी। पंचवीं प्रकाशन, भिक्रौली। प्रकाश, श्रीपुर।

36
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 view: views of Mackinder, Spykman, Meinong, Hoess, De Seyfer, world's gestrategic regions, types of approaches, trends of politics in the world modern phase (19th to 20th 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 barriers, limits 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, supranationalism: 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 electoral geography: voter's participation before voting, prediction, conceptual model of the voting decision, operationalisation of conceptual decision, gerrymandering in relation to India.

Recommended Readings:


Dy. Registrar (Acad.)
University of Rajasthan
Jaipur
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, volcanicity, orogenetic structures with reference to the evolution of Himalaya; various models of landscape evolution (Davis, Penck, King, Haak, Morisawa, Schumm, poly cyclic evolution of landscapes).

Section B

Geomorphic processes, dynamics of fluvial, glacial, Aeolian, marine, and karst processes and resultant landforms, poly cyclic landforms, various models of slope development (Wood, Davis, Penck, King, R. Savage, Strahler, Fisher-Leisman, Young), concept of morphogenetic region, systems in geomorphology, models in geomorphology, erosion surfaces, techniques of identification and correlation.

Section C

Terrain evaluation, geomorphic mapping, geomorphic hazards and mitigation measures; Digital Elevation Model (DEM) and Triangulated Irregular Network (TIN) unit, 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:


Section-A


Section-B


Section-C


Recommended Readings:
Davis, R.L. (1976) Marketing Geography, Methuen, London,
Dixit, R.S. (1984) Marketing Centers and their spatial development in the Umland of Kanpur, Allahabad
Losch, A. (1954) Economics of Location. Yale University press, New Heaven,
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.
Singer, Milton and B.S. Cohn (ed.): Structure and Change in Indian Society, Aldine, Chicago, 1968.
Sen, Amartya, and Dreze Jean: Indian Development: Selected Regional Perspectives, Oxford University Press. Delhi, 1996.

Paper Code: Geo D01: Project Work

Dy. Registrar (Acad.)
University of Rajasthan
Jaipur
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Total Credit: 36
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 bujaj sager 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: hydroelectricity, 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. Oovt. of Rajasthan Publication.
Lodha, R & Maheshvar, D. 2001: Geography of Rajasthan. Shahiya Bhawan Publication, Hospital Road, Agra.
Maheshvar, D. 2003: Geography of Rajasthan. Shahiya Bhawan Publication, Hospital Road, Agra.
Sharma, B.L. 1984: Agricultural Typology of Rajasthan.
Singh, R.J. 1977: Regional Geography of India.

Raj

[Signature]

Ry. Registrar (Acad.)
Govt. of Rajasthan
ALIPUR
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 agriculture 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:

ICAR : Soil Conservation of India.
Singh, Jasbir : Agricultural Geography of Haryana.
Noor Mohammad : Agricultural Land use in India. Inter-India Public, Delhi.

Dy. Registrar (Acad.)
University of Rajasthan
Jaipur
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 indigenous development; special purpose regions—river valley regions, national capital region, problem regions—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 decentralised planning formulation at national, state, district, block and grassroots level.

Recommended Readings:


Bhavn O. and Carroll, M. C. 2009: Local Economic Development: Analysis, Principles, and Globalisation. SECOND EDITION, SAGE PUBLICATIONS, INC.


Minimum Marks: 36
Bifurcation of Marks

Written Test (Four Hours): 32 Marks
Record Work and Viva-voce: 12+04
Field Survey and Viva-voce: 2 hours: 12+04
Camp Work and Viva-voce: 12+04
Internal Assessment: 20
Total: 100 Marks

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 abney level, 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:

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

Recommended Reading:

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 zo-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:

Anjuneupulu, Y 2004: Introduction to Environmental Science. B.S. Publications, Hyderabad

विष्णु, एस. २०१२ ओड़ा गुजरात। राजस्थान पुस्तक योजना, विश्वविद्यालय, जयपुर।

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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 areas 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 of 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 losses, multi-location industries, market oriented industries, foot loose industries, raw material oriented industries, manufacturing industries, processing industries.

Recommended Readings:

- Lloyd and Dicken: Location in Space: A theoretical Approach to Economic Geography.
- M.C. Cochrane: Location: An Economic Geography, A professor to Economic Geography.
- Saxena, Economic Geography.
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.


www.academia.edu/Papers/in/Regional%20Geography

www.jstor.org/stable/1438015

Dy. Registrar (Acad.), University of Rajasthan, Jaipur.
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

Salt, 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 crises.

Recommended Readings:


Bharati, Jyotindra, 1998: भारत की पानी की संसाधन। मशहूर गुंडे ऑफ टाइम, भारत विज्ञान।


Bhattacharya, K., 1999: Flood in India: A Model for Generating Futures. Capoon PII EA.


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- MRS & TM, Spot, Noaa-Avhis, 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: meanonal databases, data structure and formats, projections and coordinate system, raster and vector data infrastructure and analysis, integration of remote sensing and GIS.

Recommended Readings:

American society of Photogrammetry 1983: Manual of Remote sensing, ASP, Falls Church, Va.,
नैतिकादिवि, लोहा, 2004: पृथ्वीविद्या सत्स रामनाथन निधि, प्रयाग.

Paper Code: Geo D01: Dissertation