UNIVERSITY OF RAJASTHAN
JAIPUR

SYLLABUS

M.A. / M.S.C. GEOGRAPHY

Semester Scheme

I/II Semester Exam 2017-2018
III/IV Semester Exam 2018-2019

Dy. Registrar
(Academic)
University of Rajasthan
JAIPUR
M.A./M.Sc. GEOGRAPHY

(Semester Scheme)

Scheme of Examination for I Semester

Part-I (Course and Internal Assessment)
- The student will require to earn minimum 120 credits out of total 144 credits, in four semesters, for PG degree.
- Each student has to earn minimum 30 credit per semester (i.e. 120 credits in four semester for PG degree).
- Each semester of PG courses shall have credits. There will be three core papers and three elective papers (4 credits each) and one core laboratory and one elective laboratory (6 credits each).
- Core papers (Theory and Practical) are compulsory papers for the students of M.A./M.Sc. (Geography).
- In theory papers, 15 hrs of contact classes is equal to one credit.
- In practical, 45 hrs of laboratory work is equal to 2 credits.
- Each semester will have continuous assessment (CA). The continuous assessment (CA) consists of two parts, namely (i) Internal Assessment and (ii) Sessional Test(s) in the ratio 30:70. The Internal Assessment component comprises of assessment of student's performance on the basis of factors like Attendance, Class Room Participation, Quiz, Home Assignment etc.

Part-II (Examination Pattern)
- Each theory paper CCC and ECC shall carry 100 marks.
- The CCC and ECC will be of 3 (Three) hrs duration for each theory paper and 4 hrs duration for each practical paper.
- Part A of theory paper shall contain 10 (ten) Short Answer Questions, covering entire syllabus and each question will carry 2 (two) marks i.e. part A will be of total 20 marks.
- Part B of the Question Paper will consist of four (04) questions with internal choice and weightage of 20 marks each i.e. total of 80 marks one from each section.
- Each Practical CCC and ECC will be of four hours duration and involve written test on Lab work (04 questions) 60 Marks and Record work and Viva-voce 40 Marks (30+10)

The details of the courses with code, title and the credits assigned are as given below:

Course Category
CCC: Compulsory Core Course
ECC: Elective Core Course

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University of Rajasthan
Jaipur
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Subject Code</th>
<th>Course Title</th>
<th>Course Category</th>
<th>Credit</th>
<th>Contact Hours Per Week</th>
<th>EOSE Duration (Hrs.)</th>
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<tbody>
<tr>
<td>1. Geo 101</td>
<td>Evolution of Geographical Thoughts (upto 1800 AD)</td>
<td>CCC</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>0</td>
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<tr>
<td>2. Geo 102</td>
<td>Structural and Dynamic basis of Geomorphology</td>
<td>CCC</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>0</td>
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<tr>
<td>3. Geo 103</td>
<td>Principles and Theory of Economic Geography</td>
<td>CCC</td>
<td>4</td>
<td>3</td>
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<td>4. Geo 111</td>
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<td>CCC</td>
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<td>5. Elective – I</td>
<td>GEO A01</td>
<td>Man and Natural Environment</td>
<td>ECC</td>
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<td>3</td>
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<td>6. Elective – II</td>
<td>GEO A02</td>
<td>Cultural Geography</td>
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<td>7. Elective – III</td>
<td>GEO B01</td>
<td>Population Geography</td>
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<td>8. Elective – III</td>
<td>GEO B02</td>
<td>Quantitative Techniques in Geography</td>
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<td>9. GEO C01</td>
<td>Geography of Rural Development</td>
<td>ECC</td>
<td>4</td>
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<tr>
<td>10. GEO C02</td>
<td>Disaster Perception and Management in India</td>
<td>ECC</td>
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<td>11. Elective – Practical</td>
<td>GEO D01</td>
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<td>12. Elective – Practical</td>
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</table>
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

Implications of dark age in Europe, development and nature of Geography during medieval period: Contributions of Al-Biruni, Al Muquaddasi, Al-Masudi and Al Idris, Ibn Battuta and Ibn Khaldun.

Section-C


Readings Recommended:


Dikshit, R. 2007: भौगोलिक विचार के मूल तत्त्व। भौगोलिक प्रकाशन, नेटह।


दोल, ए.ए. 2005: भौगोलिक विचार एवं विधि तंत्र। साहित्य भवन प्रकाशन, आजमगढ़।


मौलिक, एल.के. 2005-06. भौगोलिक विचारधाराएं एवं विधि तंत्र। स्तूपसंस्कृति प्रकाशन, मेरठ, आदाय संस्कृतम् (एनसिक्लीपिया)।

मौलिक, एल.के. 2007. भौगोलिक विचार का इतिहास, प्रशासन पुस्तक भवन, इलाहाबाद।


सत्येन्द्र, एल.के. 0 शिक्षारी, एल.के. 2003. भौगोलिक विचार। राजस्थान हिंदी विद्या अकादमी, जयपुर।

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Paper code: Geo 102: Structural and Dynamic Basis of Geomorphology

Section-A

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:
Jadoo, 2004: भू-आकृति विज्ञान। शत्रुङ्ग पतिनकेशान, जयपुर।
Pradhan, 2004: भू-आकृति विज्ञान। शतरंग पुस्तक भवन, इलाहाबाद।
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:
Boeish, H.: A Geography of World Economy.
Prasad, Rama 2007: कृषि परिदृश्यिकृ एवं विद्युतम. राष्ट्रवर्त, बजार लिकली।
Paper code: Geo 111: Practical

Minimum Marks: 36

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 constriction of projections: cylindrical equal area, Mercator’s and Gall’s stereographic

Section-B
conical (with one standard parallel, two standard parallels, Bonne’s, polyconic and modified polyconic (international).

Section-C
Mathematical construction of projections: zenithal (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:

वैद्य, पी.आर. 2005: प्रयोगात्मक भूगोल। यथाबिध प्रकाशन, ऋषिकेश।

शर्मा, जे.ए. 2010-11: प्रयोगात्मक भूगोल की समस्याएं। संस्कृति प्रकाशन, भोपाल।

रिहाल, आर.सी. एवं सुमधुर, त्रिपाठी 2009: प्रयोगात्मक भूगोल। प्रवाण पुस्तक भवन, इलाहाबाद।

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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 forest resources management, water management, wildlife conservation, biodiversity and its conservation, environmental awareness and education, international efforts of environmental conservation.

Readings Recommended:

गुल्लाम, आमृत. 2001: पर्यावरण बुनित्व. एंड टिएल. प्रकाशन, अयूपुर।
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 sta 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, 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 B01: 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 ratio; 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 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, 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 thieszen polygons.

Readings Recommended:

Paper code: Geo C01: Geography of Rural Development

Section-A
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-irrigation 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.

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University of Rajasthan
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Paper code: Geo C02: Disaster Perception and Management in India

Section-A
Concept of disaster management, institutional framework of disaster management in India, stakeholders in disaster management, hazards, risks, vulnerability and disasters, types of hazards and disasters: manmade and natural, livelihoods and climate change.

Section-B
Floods, drought, earthquakes, landslides, cyclones, forest fore and Tsunamis, forest degradation, construction of dams, diversion of river channels, mining and quarrying, haphazard urban growth and unplanned industrial development, coping with manmade disaster.

Section-C
Management authorities and community participation: pre disaster phase, emergency phase and post disaster management, disaster preparedness, mitigation and response, disaster management and risk reduction mechanism in India: public awareness, agencies, resources, early warning system, policies, action plans and training in disaster management.

Readings Recommended:

Paper code: Geo D01: Practical

Minimum Marks: 36  
Bifurcation of Marks  
Max. Marks: 100

Written Test on Lab.Work (4 Questions)  
60

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

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:

पंजाब, ज. 2006: सुनामी का विज्ञान। नवन कार्यक्रम, नई दिल्ली।

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University of Rajasthan
JAIPUR
Paper code: Geo D02: Practical

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<th>Minimum Marks: 36</th>
<th>Bifurcation of Marks</th>
<th>Max. Marks: 100</th>
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<tr>
<td>Written Test on Lab.Work (4 Questions)</td>
<td>60</td>
<td>4 Hours</td>
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<tr>
<td>Record Work &amp; Viva-Voce</td>
<td>25+15</td>
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<td>Total</td>
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</table>

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 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:
- पुलिकल, श्री. 2004: दूरस्थशैली तथा भौगोलिक सूचना प्रणाली। शाश्त्र पुस्तक प्रकाशन, इंडियावाद।
M.A./M.Sc. GEOGRAPHY

(Semester Scheme)

Scheme of Examination for II Semester

Part-I (Course and Internal Assessment)

- The student will require to earn minimum 120 credits out of total 144 credits, in four semesters, for PG degree.
- Each student has to earn minimum 30 credit per semester (i.e. 120 credits in four semester for PG degree).
- Each semester of PG courses shall have credits. There will be three core papers and three elective papers (4 credits each) and one core laboratory and one elective laboratory (6 credits each).
- Core papers (Theory and Practical) are compulsory papers for the students of M.A./M.Sc. (Geography).
- In theory papers, 15 hrs of contact classes is equal to one credit.
- In practical, 45 hrs of laboratory work is equal to 2 credits.
- Each semester will have continuous assessment (CA). The continuous assessment (CA) consists of two parts, namely (i) Internal Assessment and (ii) Sessional Test(s) in the ratio 30:70. The Internal Assessment component comprises of assessment of student's performance on the basis of factors like Attendance, Class Room Participation, Quiz, Home Assignment etc.

Part-II (Examination Pattern)

- Each theory paper CCC and ECC shall carry 100 marks.
- The CCC and ECC will be of 3 (Three) hrs duration for each theory paper and 4 hrs duration for each practical paper.
- Part A of theory paper shall contain 10 (ten) Short Answer Questions, covering entire syllabus and each question will carry 2 (two) marks i.e. part A will be of total 20 marks.
- Part B of the Question Paper will consist of four (04) questions with internal choice and weightage of 20 marks each i.e. total of 80 marks one from each section.
- Each Practical CCC and ECC will be of four hours duration and involve written test on Lab work (04 questions) 60 Marks and Record work and Viva-voce 40 Marks (30+10)

The details of the courses with code, title and the credits assigned are as given below:

**Course Category**

CCC: Compulsory Core Course
ECC: Elective Core Course
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Subject Code</th>
<th>Course Title</th>
<th>Course Category</th>
<th>Credit</th>
<th>Contact Hours Per Week</th>
<th>EOSE Duration (Hrs.)</th>
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<tbody>
<tr>
<td>1.</td>
<td>Geo 201</td>
<td>Modern and Contemporary Geographical Thought (19th century onwards)</td>
<td>CCC</td>
<td>4</td>
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<td>2.</td>
<td>Geo 202</td>
<td>Principals of Climatology</td>
<td>CCC</td>
<td>4</td>
<td>L 3 T 1 P 0</td>
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<td>3.</td>
<td>Geo 203</td>
<td>Principles and Theory of Economic Geography</td>
<td>CCC</td>
<td>4</td>
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<td>4.</td>
<td>Geo 211</td>
<td>Practical</td>
<td>CCC</td>
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<td>GEO A01</td>
<td>Geography of Rural Settlements</td>
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<td>GEO A02</td>
<td>Plant Geography with Special Reference to Tropics</td>
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<td>GEO B01</td>
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<td>Geographical Perspectives on Sustainable Development</td>
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<td>GEO C01</td>
<td>Geography of Tribes with Special Reference to Rajasthan</td>
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<td>GEO C02</td>
<td>Geography of Crime</td>
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<td>Elective – Practical</td>
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<td>GEO D02</td>
<td>Practical</td>
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Total Credit: 36
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 thoughts, Foundations of modern geography: German school (Humboldt, Ritter, Ratzel, Richtfesen, Hettner, Schlueter), 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: (Semple and Hartsome) implications of geography as spatial science, relationship between geography, economics and planning (regional science) paradigms and revolutions: quantitative revolution, behaviouralism, radical geography, approaches of integrated geography and modern synthesis.

Section C

Philosophical pluralism: empiricism, positivism, humanistic geography (idealism, phenomenologism and existentialism) and structuralism, post-modernism and various paradigms/ schools of geographical thought during post-modern period, dualism in geography: physical and human geography, systematic and regional geography environmentalism and possibilism, qualitative and quantitative, idiothetic and nomothetic, Indian geography: development, emerging trends and professional challenges.

Recommended Readings:


Hari, गृह 2013: नौगतिक विद्वान का इतिहास. विशिष्ट कॉपी के लिए, जयपुर।

Jain, जैन 2005: नौगतिक विद्वान एवं विद्वान के प्रति अभिव्यक्ति. साहित्य मणि प्रकाशन, आगरा।


मैन, एरिक, 2007: नौगतिक विद्वान का इतिहास। प्राणा पुस्तक मणि, इलाहाबाद।


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Paper Code: Geo 202: Principles of Climatology

Section A


Section B


Section C


Recommended Readings:

Further Reading:

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 organization of land use: laws of return, concept of rent, Von Thunen's general theory of landuse, dynamic agricultural location theory, Thunian 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 areas, loss and uniform plain, modification of Christaller's model.

Recommended Readings:

Gangadhar, A., Modern Economic Geography, Rupkothi Prakashan, Meerut.
Haldar, R. 2006: संसाधन भूगोल। बन्दूकपथ प्रकाशन, गोरखपुर।
Jait, P. 1998: आर्थिक भूगोल। विज्ञान नागरिक, जयपुर।
Kamleshwar Singh, K. and Singh, P. 1998: आर्थिक भूगोल के पूरा तत्त्व। बन्दूकपथ, गोरखपुर।
Prasad, Rana et al 2007: वृक्ष पारिवर्तितक एवं नियोजन। राष्ट्र प्रकाशन, नई दिल्ली।
Shrawan Chaitya, V. 2008: आर्थिक भूगोल। राष्ट्र प्रकाशन, नई दिल्ली।
Paper Code: Geo 211: Practical

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<th>Minimum Marks: 36</th>
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<td>32</td>
<td>4 hours</td>
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<tr>
<td>Record Work &amp; Viva-Voce</td>
<td>16+08</td>
<td></td>
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<tr>
<td>Project Report &amp; Viva-Voce</td>
<td>16+08</td>
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<td>Internal Assessment</td>
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<td></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 at case. 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, frequenc polygon, frequency curve and cumulative frequency curve or ogive, finding skewness, computation of mean, median and mode, dispersions: mean and standard deviation an computation 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 an isochrone map, population potential surface map, population pyramids map and cartograms.

Section C

Three dimensional diagrams: spherical and block plie, drawing of polygraphs, semi-log ant 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

Sarma, J.P. 2010–11: प्रयोगात्मक भूगोल की सुरूचिः। रस्तोत्तर पस्तिकेयाण्त, मेरठ।
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:**


Books for further reading:

Paper code: Geo B01: Geography of Tourism and Recreation

Section A
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:
Singh, S.N.(1986): Geography of Tourism and Recreation, Inter India, New Delhi

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:
Essential Readings:
Barbier, E.B. (1987), The Concept of Sustainable Development, Environmental

Further Readings:

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:
Chkravarty,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

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:


Pain, R., (2000), ‘Place, social relations and the fear of crime, a review’, Progress in Human Geography 24(3)


Websites:
www.google (Crime and Development in Africa by Lamin Sesay
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 perceptional 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:
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 girdle 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 Ginni'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.
M.A./M.Sc. GEOGRAPHY

(Semester Scheme)

Scheme of Examination for III Semester

Part-I (Course and Internal Assessment)

- The student will require to earn minimum 120 credits out of total 144 credits, in four semesters, for PG degree.
- Each student has to earn minimum 30 credit per semester (i.e. 120 credits in four semester for PG degree).
- Each semester of PG courses shall have credits. There will be three core papers and three elective papers (4 credits each) and one core laboratory and one elective laboratory (6 credits each).
- Core papers (Theory and Practical) are compulsory papers for the students of M.A./M.Sc. (Geography).
- In theory papers, 15 hrs of contact classes is equal to one credit.
- In practical, 45 hrs of laboratory work is equal to 2 credits.
- Each semester will have continuous assessment (CA). The continuous assessment (CA) consists of two parts, namely (i) Internal Assessment and (ii) Sessional Test(s) in the ratio 30:70. The Internal Assessment component comprises of assessment of student’s performance on the basis of factors like Attendance, Class Room Participation, Quiz, Home Assignment etc.

Part-II (Examination Pattern)

- Each theory paper CCC and ECC shall carry 100 marks.
- The CCC and ECC will be of 3 (Three) hrs duration for each theory paper and 4 hrs duration for each practical paper.
- Part A of theory paper shall contain 10 (ten) Short Answer Questions, covering entire syllabus and each question will carry 2 (two) marks i.e. part A will be of total 20 marks.
- Part B of the Question Paper will consist of four (04) questions with internal choice and weightage of 20 marks each i.e. total of 80 marks one from each section.
- Each Practical CCC and ECC will be of four hours duration and involve written test on Lab work (04 questions) 60 Marks and Record work and Viva-voce 40 Marks (30+10)

The details of the courses with code, title and the credits assigned are as given below:

**Course Category**

CCC: Compulsory Core Course

ECC: Elective Core Course
## M.A. / M.Sc. Geography
### III Semester

<table>
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<tr>
<th>S.No.</th>
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<th>Course Title</th>
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<td>ECC</td>
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<td>ECC</td>
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<td>Contemporary Issues in Human Geography</td>
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<td>ECC</td>
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</table>

Dy. Registrar (Academic)
University of Rajasthan
JAIPUR
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

Resources potential and evaluation, water resources & Multi-purpose irrigational projects, vegetation 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.
Kurdue, A. & Raza, Moonis: Indian Economy the Regional Dimension.
मोरियार, सी. 1999: आर्थिक भारत का पृथ्वी तृणमूल | साहित्य भवन प्रसिद्धिवर्धक, आगि |
Mahesh Chaud and V.V. Puri, Regional Planning in India.
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 Bhuí, 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, trend 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 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 prominent 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 & ullah, mann, 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:


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

N.V. Somani: Urbanization and Urban India. Asia publishing House, Bombay.

P.C. Malhotra: Survey of Bhopal City and Bairagach (Asia publishing Bombay)


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


Minimum Marks: 36

Written Test on Lab. Work (4 Questions) 48
Record Work & Viva-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 Profile, 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 exercise 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 paradigms, 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 dispersal 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 sphere 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:

- आहुजा, क. 2010: राष्ट्रीय अनुसंधान। राजस्थान प्रकाशन, नई दिल्ली।
- नवप्रतीक 2006: नागरिक सम्पदा रूपांतरण। शारदा पुस्तक, नई दिल्ली।
- बिश्वविद्यालय एवं प्रशासन 2008: भूगोल की साइंटिफिक विधियाँ। अलीगढ़ प्रकाशन, अलीगढ़।
- विश्वविद्यालय एवं प्रशासन 2001: वैज्ञानिक प्रशासन, वैज्ञानिक प्रशासन, औद्योगिक प्रशासन। अलीगढ़ प्रकाशन, अलीगढ़।

Dy. Registrar
(Academic)
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, Spykman, Meinig, Hooson, De Severisky, World’s geostrategic 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 barriers, India, 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, 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 geography, study of India, political geography of administration, political-geographical implications of space research, function, methods and trends of political geography: voter’s participation before voting prediction, conceptual model of the voting decision, operationalisation of conceptual decision, gerrymandering in relation to India.

Recommended Readings:

शास्त्र, एवंएव: स्थानीय साम्य व विद्युत, राज्यीय साम्य व विद्युत, राज्यीय साम्य व विद्युत.
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, orogenic structures with reference to the evolution of Himalaya, various models of landscape evolution (Davis, Penck, King, Hacks, Morisawa, Schumm, polythetic 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) unit, land 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: Population and Development Planning

Section-A


Section-B


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.
Singer, Milton and B.S. Cohn (ed.): Structure and Change in Indian Society, Aldine, Chicago, 1968.
Atreya, B.L. et al. (ed.): Indian Culture, Universal Publications, New Delhi, 1966.
Sen, Amartya, and Dreze Jean: Indian Development: Selected Regional Perspectives, Oxford University Press, Delhi, 1996.
M.A./M.Sc. GEOGRAPHY

(Semester Scheme)

Scheme of Examination for IV Semester 2018:

Part-I (Course and Internal Assessment)

- The student will require to earn minimum 120 credits out of total 144 credits, in four semesters, for PG degree.
- Each student has to earn minimum 30 credit per semester (i.e. 120 credits in four semester for PG degree).
- Each semester of PG courses shall have credits. There will be three core papers and three elective papers (4 credits each) and one core laboratory and one elective laboratory (6 credits each).
- Core papers (Theory and Practical) are compulsory papers for the students of M.A./M.Sc. (Geography).
- In theory papers, 15 hrs of contact classes is equal to one credit.
- In practical, 45 hrs of laboratory work is equal to 2 credits.
- Each semester will have continuous assessment (CA). The continuous assessment (CA) consists of two parts, namely (i) Internal Assessment and (ii) Sessional Test(s) in the ratio 30:70. The Internal Assessment component comprises of assessment of student's performance on the basis of factors like Attendance, Class Room Participation, Quiz, Home Assignment etc.

Part-II (Examination Pattern)

- Each theory paper CCC and ECC shall carry 100 marks.
- The CCC and ECC will be of 3 (Three) hrs duration for each theory paper and 4 hrs duration for each practical paper.
- Part A of theory paper shall contain 10 (ten) Short Answer Questions, covering entire syllabus and each question will carry 2 (two) marks i.e. part A will be of total 20 marks.
- Part B of the Question Paper will consist of four (04) questions with internal choice and weightage of 20 marks each i.e. total of 80 marks one from each section.
- Each Practical CCC and ECC will be of four hours duration and involve written test on Lab work (04 questions) 60 Marks and Record work and Viva-voce 40 Marks (30+10)

The details of the courses with code, title and the credits assigned are as given below:

Course Category
CCC: Compulsory Core Course
ECC: Elective Core Course

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<table>
<thead>
<tr>
<th>S.No.</th>
<th>Subject Code</th>
<th>Course Title</th>
<th>Course Category</th>
<th>Credit</th>
<th>Contact Hours Per Week</th>
<th>EOSE Duration (Hrs.)</th>
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<tbody>
<tr>
<td>1.</td>
<td>Geo 401</td>
<td>Geography of Rajasthan</td>
<td>CCC</td>
<td>4</td>
<td>3</td>
<td>1</td>
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<tr>
<td>2.</td>
<td>Geo 402</td>
<td>Agricultural Geography</td>
<td>CCC</td>
<td>4</td>
<td>3</td>
<td>1</td>
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<td>3.</td>
<td>Geo 403</td>
<td>Applied Geography</td>
<td>CCC</td>
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<td>3</td>
<td>1</td>
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<td>4.</td>
<td>Geo 411</td>
<td>Practical</td>
<td>CCC</td>
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<td>0</td>
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<td>5.</td>
<td>GEO A01</td>
<td>Bio Geography</td>
<td>ECC</td>
<td>4</td>
<td>3</td>
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<tr>
<td>6.</td>
<td>GEO A02</td>
<td>Industrial Geography</td>
<td>ECC</td>
<td>4</td>
<td>3</td>
<td>1</td>
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<tr>
<td>6.</td>
<td>GEO B01</td>
<td>Regional Planning and Development</td>
<td>ECC</td>
<td>4</td>
<td>3</td>
<td>1</td>
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<tr>
<td>7.</td>
<td>GEO B02</td>
<td>Geography of Water Resources</td>
<td>ECC</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>8.</td>
<td>GEO C01</td>
<td>Applied Climatology</td>
<td>ECC</td>
<td>6</td>
<td>0</td>
<td>0</td>
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<tr>
<td>8.</td>
<td>GEO C02</td>
<td>Principles and Applications of Remote Sensing and Geographical Information System</td>
<td>ECC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>GEO D01</td>
<td>Dissertation</td>
<td>ECC</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total Credit</td>
<td></td>
<td></td>
<td>36</td>
<td></td>
<td></td>
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</table>
IV SEMESTER

Paper Code: Geo 401: Geography of Rajasthan

Section-A

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

Section B

Economics 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: hydropower, 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.
Gujar, R.K 1992: Geography of Indira Gandhi Canal. Rajasthan Hindi Granth Academy,
Jat,B.C.2014, Rajasthan Manchitraval, RBD Publication, Jaipur.
Maheshwari, D. 2008: Geography of Rajasthan. Shahiya Bhawan Ppublication, Hospital Road, Agra.
Sharma B.L. 1984: Agricultural Typology of Rajasthan.
Sing, R.L. 1977: Regional Geography of India.
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:

Ali Mohammad : Dynamics of agriculture Development in India. Concept Publication Co.,
Delhi.
ICAR : Soil Conservation of India.
Singh, Jasbir : Agricultural Geography of Haryana.
Noor Mohammad : Agricultural Land use in India. Inter-India Public, Delhi.
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 socio-economic 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, review of policies related to decentralized planning formulation at national, state, district, block and grass root level.

Recommended Readings:

Paper Code: Geo 411: Practical

Minimum Marks 36
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 clinometer.

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:
Gaustan, N.C.: Urban Land use studies through Airphoto Interpretation.
Techniques: Pink Publishing House, Madura.

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JAIPUR
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 zoo-geographical region, biogeography of the seas: island biogeography.

Section C

Conservation and management of forest and wildlife 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 pollutions.

Recommended Readings:


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


शिक्षा पत्र 2013: जीव पृथ्वी. प्रवाल पुस्तक भवन, इलाहाबाद।
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 inertia, 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. Cart and Lindberg Hodder and Lee Economic Geography: A preface to Economic Geography.


Alexanderson Gunil: Geography of Manufacturing. Englewood Cliffs, N.J.


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 poles 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 (TVA), 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.
शीलाल, शार्मा एवं चौहान 2008: प्रामाणिक नियोजन और संगठित विकास। विज्ञान एवं पक्षय, गोरखपुर।
www.academia.edu/Papers/in/Economic_Geography
www.jstor.org/stable/143805

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JAIPUR
Paper Code: Geo B02: Geography of Water Resources

Section A

Definition and scope of water resource 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:


Jat, B.C., 2007: Water resources, India. Pustak Parikh, Jaipur.


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JAIPUR
Paper Code: Geo C01: Applied Climatology

Section-A


Section-B


Section-C


Recommended Readings:


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(Academic)
University of Rajasthan
JAIPUR
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 & Th, Spot, Noaa-Avhh, Ira, Modis, Radaran, Ikons, 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 system, raster and vector data infrastructure and analysis, integration of remote sensing and GIS.

Recommended Readings:

Dhir, d.2004: दुर्गम स्थलों के लिए विज्ञानीय प्रोसेसिंग. राजस्थान संस्थान, जयपुर।

Paper Code: Geo D01: Dissertation

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(Academic)
University of Rajasthan
JAIPUR