UNIVERSITY OF RAJASTHAN
JAIPUR

SYLLABUS

Faculty of Science

M.A. / M.Sc. Geography

Semester Scheme

1st Semester Exam. December 2016
M.A./M.Sc. GEOGRAPHY

(Semester Scheme)

Scheme of Examination for I Semester December 2016:

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

\[ I(A) \]
# M.A. / M.Sc. Geography

## First Semester

<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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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Geo 101</td>
<td>Evolution of Geographical Thoughts (upto 1800 AD)</td>
<td>CCC</td>
<td>4</td>
<td>3 1 0</td>
<td>3</td>
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<tr>
<td>2.</td>
<td>Geo 102</td>
<td>Structural and Dynamic basis of Geomorphology</td>
<td>CCC</td>
<td>4</td>
<td>3 1 0</td>
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<tr>
<td>3.</td>
<td>Geo 103</td>
<td>Principles and Theory of Economic Geography</td>
<td>CCC</td>
<td>4</td>
<td>3 1 0</td>
<td>3</td>
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<td>4.</td>
<td>Geo 111</td>
<td>Practical</td>
<td>CCC</td>
<td>6</td>
<td>0 0 9</td>
<td>4</td>
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<tr>
<td>5.</td>
<td>GEO A01</td>
<td>Man and Natural Environment</td>
<td>ECC</td>
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<td>6.</td>
<td>GEO A02</td>
<td>Cultural Geography</td>
<td>ECC</td>
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<td>7.</td>
<td>GEO B01</td>
<td>Population Geography</td>
<td>ECC</td>
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<td>8.</td>
<td>GEO B02</td>
<td>Quantitative Techniques in Geography</td>
<td>ECC</td>
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<td>3</td>
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<td>9.</td>
<td>GEO C01</td>
<td>Geography of Rural Development</td>
<td>ECC</td>
<td>4</td>
<td>3 1 0</td>
<td>3</td>
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<td>10.</td>
<td>GEO C02</td>
<td>Disaster Perception and Management in India</td>
<td>ECC</td>
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<td>3 1 0</td>
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<td>11.</td>
<td>GEO D01</td>
<td>Practical</td>
<td>ECC</td>
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<td>0 0 9</td>
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<td>GEO D02</td>
<td>Practical</td>
<td>ECC</td>
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<td>4</td>
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<td>Total Credit</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


Section-C


Readings Recommended:


Jain, A.K. 2005: भौगोलिक विचार एवं विधि तंत्र। साहित्य भवन पपलकेश्वर, आगरा।

Jain, A.K. 2013: भौगोलिक विचार का इतिहास। मोतिलल एण्ड कम्पनी, जयपुर।


कीर्तिक, म.स. 2005-06, भौगोलिक विचाराधाराएँ एवं विधि तंत्र। स्वतंत्र पपलकेश्वर, भेरा, आदि संस्कृत इंग्लिश (संस्कृत-इंग्लिश)।

भारत, ए.ए. 2007, भौगोलिक विचार का इतिहास, प्रायाग पुस्तक भवन, इलाहाबाद।


सचिन, ए.स.इ. व रिवाज, ए.के. 2003, भौगोलिक दिवसत्त। राजस्थान हिंदी अकादमी, जयपुर।
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, Hacks, Morisawa, Schumnn.

Section-C

Readings Recommended:

गात्र, तृ.सि. 2004: भू-आकृति विज्ञान। रवि पुस्तक, जयपुर।
प्रदीप, आदित्री 2004: भू-आकृति विज्ञान। सरश्री पुस्तक, 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, alluminium industry, paper and pulp, cotton textile, chemical fertilizer and auto mobile.

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

Readings Recommended:
Bosch, H.: A Geography of World Economy.
Prasad, Rama 2007: कृषि पार्श्विकृतिक एवं निकीटिक। साधा प्रकाशन, वर्द़िणी।
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
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:

कृति, पी. अ. 2005: प्रयोजनक भूगोल। विश्वविद्यालय, गोरखपुर।
श्रीमान, जे.पी. 2010-11: प्रयोजनक भूगोल की स्पष्टता। रत्नपीठ प्रकाशन, गोरखपुर।
शिवारी, आ. र. 2. एवं सुधाकर, शिवारी 2009: प्रयोजनक भूगोल। प्रयोग पुस्तक अभ्यास, इलाहाबाद।
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:
Publication, Varanasi.
McMillan, London.
Tideman, E.M. 1996: Watershed Management. Guidelines for Indian Conditions, Omega,
New Delhi.
London.
Co-operation within the Himalayan-Ganga. Brahmaputra-Barak Basin, Oxford IBH, New
Delhi.
White, G.F.L. 1977: Environmental Effects of Complex River Development. Westriver Press,
Boulder, Colorado.

**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:**

Prasad, Gopal J. 1991: सांस्कृतिक भूगोल। शास्त्र संस्कृत भाषा, इलाहाबाद।
सिद्धो, मुक्कलली 2001: सांस्कृतिक भूगोल। राजस्थान हिंदी ग्रंथ अकादमी, जयपुर।

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 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 probabilites- 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-speaman'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-multicollinear 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 thiessen polygons.

Readings Recommended:
Delhi.
Maurice Yeats 1974: An Introduction to Quantitative Analysis in Human Geography. McGraw
Hill, New York.
Arnold, London.

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.
University Press.
Andreason, B. 1981: Farming Development and Space-World Agricultural Geography, New
York, Water Cryter.

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:

- जोसहाय, पी.अ. 2005: प्रौद्योगिक मूल्यांकन। वर्तमान प्रकाशन, जोधपुर।
- शर्मा, वी. 2010-11: प्रौद्योगिक मूल्यांकन की रुपरेखा। रसोई प्रकाशन, नेपाल।
- तिवारी, आ.सी. एवं युधिष्ठिर, तिवारी 2009: प्रौद्योगिक मूल्यांकन। प्रयाग पुस्तक भवन, इलाहाबाद।
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
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:

- Chaudhary, D.R. 2004: दरुस्लामदन तथा भौगोलिक सुविधा प्रणाली। शास्त्र पुस्तक प्रकाशन, इलाहाबाद।