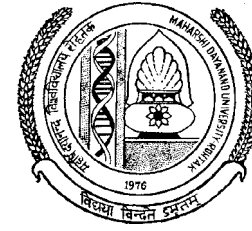


Maharshi Dayanand University Rohtak



Ordinances, Syllabus and Courses of Reading for M.A. Geography I & II Semester Examination

Session 2008-2009

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M.A. Geography, 2008-09 onwards

SCHEME OF EXAMINATION AND COURSE STRUCTURE

M.A. Geography shall be of two years duration spread over four semesters. Each Semester shall consist of four theory papers and one practical paper of 100 marks each. All the theory papers shall be of three hours duration and practical paper of two external examiners appointed by the Vice-Chancellor on the recommendation of the P.G. Board of Studies in Geography. Marks of Internal assessment shall be awarded as per the laid down norms of the University. The department will provide for the optional papers according to its administrative and academic convenience.

Outlines of course structure and syllabi shall be as under :

Course Structure

Semester - I

Paper	Nomenclature	M.Marks	Time
Paper-I	Geomorphology	100	3 Hrs.
Paper-II	Climatology	100	3 Hrs.
Paper-III	Resources Geography	100	3 Hrs.
Paper-IV	Any one of the following i) Population Geography ii) Urban Geography iii) Geography of Rural Settlement iv) Geography of Health	100	3 Hrs.
Paper-V	Practical : Morphometric Analysis	100	4 Hrs.

Semester - II

Paper	Nomenclature	M.Marks	Time
Paper-VI	Geographical Thought-I	100	3 Hrs.
Paper-VII	Geography of Transport	100	3 Hrs.
Paper-VIII	Statistical Methods in Geography	100	3 Hrs.
Paper-IX	Any one of the following IV (i) i) Agricultural Geography IV (ii) ii) Political Geography IV (iii) iii) Social Geography IV (iv) iv) Geography of Tourism	100	3 Hrs.
Paper-X	Practical : Thematic and Computer Aided Cartography	100	4 Hrs.

M.A. Geography : Semester-I**Paper-I****Geomorphology**

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT-I

Geomorphology - Definition, Nature and scope, History and development of geomorphic ideas : Fundamental concepts - uniformitarianism, geological structure, process and stage. The Earth's interior - structure and constitution, Recent Views. Plate tectonics-meaning and concept; plates, plate margins and boundaries; plate motion; Tectonic activities along the boundaries and Distribution of plates.

UNIT-II

Endogenetic processes - Faulting, folding and their geomorphic expressions. earthquake concept, causes, classification, intensity and magnitude, Geographical distribution. Vulcanism - concept, mechanism and causes; Volcanoes- classification, volcanic materials; Topography associated with vulcanicity and geographical distribution.

UNIT-III

Exogenetic : Weathering and mass wasting - meaning and concept, controlling factors, classification and significance. Dynamics of fluvial, aeolian, glacial and karst processes and resulting landforms.

UNIT-IV

Applied geomorphology - meaning; Applications of Geomorphology in Regional planning, engineering projects, mineral exploration and hydrology. Regional Geomorphology of Punjab plain, Aravalli Region and Thar desert of India.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire. All questions carry equal marks.

Recommended Readings :

1. Bloom, A.L. (1992) **Geomorphology**, Second Edition, Prentice Hall of India, New Delhi.
2. Dayal, P. (1990) **A Text Book of Geomorphology**, Shukla Book Depot, Patna.
3. Husain Majid (2002), **Fundamentals of Physical Geography**, Second Edition, Rawat Publications, Jaipur and New Delhi.
4. Singh Savindra (1993), **Physical Geography**, Prayag Pustak Bhawan, Allahabad.
5. _____(1998), **Geomorphology**, Prayag Pustak Bhawan, Allahabad.
6. Strahler, A.N. and Strahler, A.H.(1996), **Introducing Physical Geography**, John Wiley and Sons, New York.
7. Strahler, A .N. (1988), **Earth Sciences**, Harper and Row Publishers,N.D.
8. Thornbury, W.D. (1991), **Principles of Geomorphology**, John Wiley, New Delhi (Indian reprint)
9. Wooldridge, S. W and Morgan, R.S. (1991), **An Outline of Geomorphology**, Orien Longmans, Calcutta.

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M.A. Geography : Semester-I

Paper-II

Climatology

Theory Paper : 80 marks
 Internal Assessment : 20 marks
 Total : 100 marks
 Time : 3 hrs.

UNIT-I

General Climatology and Climatic Phenomena : Nature and Scope of Climatology Climatic elements - atmospheric temperature, pressure, moisture (evaporation, condensation, precipitation formation types), general atmospheric circulations - planetary winds, seasonal winds, local winds, jet stream; clouds-formation and types.

UNIT-II

Weather system and disturbances - airmass, fronts, Cyclones, Tornadoes, ; Ocean atmospheric interaction- El mino, Southern Oscillation (ENSO) and La nina, Monsoon winds.

UNIT-III

Global climate system - Approaches to climatic classification ; Classification of Koppen, Thornthwaite and Trewartha (theoretical aspects only) Major climate of the world-tropical and polar.

UNIT-IV

Applied Climatology - Climatic changes - evidences, possible causes, global warming and future changes in earth temprature; atmospheric pollutants and their impact- problems of acid rain.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight

6

short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Aggarwal, S.K. (1972), **Fundamentals of Ecology**, Ashish Publishers, New Delhi.
2. Barry, R.G. and Chorely, R.J., **Atmosphere, Weather and Climate**, ELBS, Methuen & Co. Ltd. London.
3. Bhutani Smita, (2000) **Our Atmosphere**, Kalyanai Publishers, New Delhi.
4. Critchfield, H.J. (1987) **Climatology**, Prentice Hall of India, New Delhi.
5. Griffith, J.F. and Driscell, D.M. (1982) **Survey of Climatology**, Charles Merril.
6. Lal, D.S. (1993) **Climatology**, Chaitanya Publishing House, Allahabad.
7. Riehl, H. (1968), **Introduction to Atmosphere**, Mc Graw Hill, New York.
8. Robinson, P.J. and Henderson Sellers (1986) **Contemporary Climatology**, Longman, London.
9. Trewartha, G.T. (Latest edition) **Introduction to Climate** McGraw Hill, New York.

M.A. Geography : Semester-I

Paper-III

Resource Geography

Theory Paper : 80 marks Total : 100
 Internal Assessment : 20 marks Time : 3 hrs.

UNIT-I

Nature, scope and significance of the Geography of Resource; Definition and concept of Resources, Classification of Resources.

UNIT-II

Models of Natural Resources Process : Zimmermann's

Primitive and Advance Models of natural resource process, Kirk's Decision Model, Brookfield System Model.

UNIT-III

Use and Misuse of Resources - Soil Resource; Water Resource; Forest Resource and Mineral Resources; Future prospects of Natural resources

UNIT-IV

Conservation and Management of Natural Resources : Meaning and Concept of conservation of Natural Resources; Resources Conservation and Management Methods of Natural resources- Soil Resource, Water Resource, Forest Resource and Mineral Resources'; Problems of Natural Resource Management in India.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire Syllabus. All questions carry equal marks.

Recommended Readings :

1. **Borton, I. and R.W. Kates. (1984) Readings in Resource Management and Conservation**, University of Chicago Press, Chicago.
2. **Bruce, Mitchell (1989) Geography and Resource Analysis**, John Wiley and Son, New York.
3. **Eliot Hurst, M.E. (1972) A Geography of Economic Behaviour : An Introduction**, Duxbury Press, California.
4. **Guha, J.L. and P.R.Chattroj (1994) Economic**

geography- A Study of Resources, The World Press Pvt. Ltd. Calcutta

5. **Martin, R.H. and F.L. Warren. (1959) Natural Resources**. McGraw Hill Book Co. London.
6. **Martino, R.L. (1969) Resource Management**. Mc Graw Hill Book Co., London.
7. **Negi, B.S.(2000) Geography of Resources**, Kedar Nath and Ram Nath, Meerut
8. **Owen, Oliver, S.(1971) Natural Resource Conservation : A Ecological Approach**. Mc Million New Delhi.
9. **Raja, M. (1989) Renewable Resources, Development**, Concept Pub. New Delhi.
10. **Ramesh, A.(1984) Resource Geography (Ed.) R.P. Misra**, Contribution to Indian geography, Vol Heritage Publishers, New Delhi.
11. **Singh, A and Raja, M. (1982) Geography of Resources and conservation** (Hindi Edition) Pargati Parkashan, Meerut.
12. **Zimmermann, E. W. (1951) World Resources and Industries**, Harper and Brothers, New Delhi.

M.A. Geography : Semester- I

Paper- IV (i)

Population Geography

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT-I

Human elements in Geography and the emergence of population geography as a field of specialisation ; population geography- definition, nature and scope;

demography and population studies; sources of data-census, vital statistics and sample surveys.

UNIT-II

Distribution and growth : Concept of distribution and density, its measures and mapping; measures of growth rate; Theories of population growth; pre-Malthusian views, Malthus Theory, views of social writers, optimum population theory, demographic transition model.

UNIT-III

Components of population change fertility, mortality and migration; concept and measurement of fertility and mortality; theories of fertility; Migration concept and measures ; migration types; theories of migration; population composition and characteristics - age and sex composition and its measures.

UNIT-IV

Population and development- HDI (Human Development Index) and its components, population growth and economic development; population growth and environmental quality; population policies and its types.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Beaujen- Garnier J (1966) **Geaography of Population**; Longman, London.
2. Bhende Asha A and Kanitkar (2002) **Principles of Population Studies**, 14th Edition, Himalaya Publishing

House, Mumbai.

3. Chandana, R.C. (2002) **Geography of Population** : Concepts, determination and patterns, Kalyani Publishers, New Delhi.
4. Clarke, J.I. (1992) **Population Geography**, Second Edition, Pergamon Press, Oxford England.
5. Hassan, M.I. (2005) **Population Geography**, Rawat Publications Jaipur.

M.A. Geography : Semester- I

Paper- IV (ii)

Urban Geography

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT-I

Definiton, nature and scope of urban geography; different appraoches and recent trends in urban geography; Origin and evolution of urban places in Ancient, Medieval, Modern and Post- Modern periods factors, stages, evolution and characteristics

UNIT-II

Aspects of urban places : location and site- definition, nature and significance; Urban ecological processes; theories of city structure-concertric zone theory, sector theory, multiple nuclei theory and social area analysis.

UNIT-III

Settlement system : the rank- size distribution of cities, Primate city distribution, central place theory of Christaller and Losch; the rural-urban fringe- definition, delimitation and structure; city region relationship.

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UNIT-IV

Urbanization : definition and measures of urbanization, factors affecting urbanization, the urbanization of the globe (Regional aspects of world urbanization), urbanization and economic growth; urbanization cycle, the political economy of urbanisation.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Bala, Raj (1986), **Urbanisation in India**, Rawat,Publication Jaipur.
2. Cadwallader, Martin (1986), **Urban Geography**, Prentice Hall, New Jersey.
3. Carter, Harold (1995) **The Study of Urban Geography**, Arnold London
4. Dickinson, R.E. (1964) **City and Region** Routledge London.
5. Gibbs, J.P. (1961) **Urban Research Methods** D. van Nostrand Co. Inc. Princeton, New Jersey.
6. Harvey, David (1989) **The Conditions of Post modernity**, Blackwell Oxford.
7. Kundu, A (1992) **Urban Development and Urban Research in India**, Khanna Publication, New Delhi.
8. Mayer H.M. and Kohn, C.F. (eds.)(1958), **Reading**

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Urban Geography. University of Chicago Press, Chicago.

9. Pacione, Michael (2001), **Urban Geography - A Global Perspective**, Routledge, London.
10. Ramachandran, R. (1989), **Urbanisation and Urban Systems in India**, Oxford, New Delhi
11. Singh, K. and Steinberg, F. (eds.) (1987) **Urban India in Crisis**, New Age International, New Delhi.
12. Smailes A. E. (1953), **The Geography of Town**, Hutchinson, London.
13. Short, J.R. (1996) **The Urban Order**,Oxford : Blackwell.

M.A. Geography : Semester- I

Paper- IV (iii) Geography of Rural Settlement

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT-I

Definiton, nature and scope of rural settlement geography; trends in rural settlement geography with special reference to India; Approaches to rural settlement geography

UNIT-II

Culture-Historical Perspective ; Archaeological finds and settlements - Mesopotamia, the Nile valley, the Indus valley; historical development of rural settlements (based on major cultural periods) in India. Analysis of Place names and environments.

UNIT-III

Morphology of rular settlements in India : Religio-ritual model, Secular - dominance model; Types and patterns of rural

settlements in India and causes of diverse types of rural settlements.

UNIT-IV

Functions of rural settlements; Rural service centers; their nature and hierarchy; Basics of Rural Settlement Planning; Rural Settlement Planning of India.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Alam, S. M. et. al. (1982), **Settlement System of India**, Oxford and IBH Publication Co. New Delhi.
2. Chisholm, M. (1967), **Rural Settlements and Land Use**, John Wiley, New York.
3. Clout, H.D. (1977) **Rural Geography of Settlements**, Mac Donald & Evans, New York.
4. Hudson, F.S. (1976), **A Geography of Settlements**, Mac Donald & Evans, New York.
5. Mandal, R.B. (1988), **System to Rural Settlements in Developed Countries**, Concept Publication, New Delhi.
6. Mandal, R.B. (2001), **Introduction to Rural Settlements**, Concept Publication, New Delhi.
7. Misra, H.N. (1987) **Rural Geography**, Vol. IX, Contributions to Indian Geography, Heritage Publishers, New Delhi.
8. Singh, R.L. and K.N. eds. (1975), **Readings in Rural Settlements Geography**, NGS, Varanasi

9. Singh, R.L. (1976), **Geographic Dimensions of Rural Settlements**, NGS, Varanasi
10. Singh, R.Y. (1994), **Settlements**, NGS, Varanasi.
11. Singh, R.Y. (2005), **Adhiwas Bhugol**, (in Hindi) Rawat Publication, New Delhi.
12. Wanmali, S. (1983), **Service Centres in Rural India**, B.R. Publication, New Delhi.

M.A. Geography : Semester- I

Paper- IV (iv) Geography of Health

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT - I

Concept of Health; Geographic approach to study health; Nature scope and significance of Geography of Health. Historical development of Geography of Health and Medical Sciences; Geography Health and Medical Geography.

UNIT - II

Human Health and Diseases-Physical Factors :

- (i) Physical factors- relief, climate, soils and vegetation
- (ii) Environmental factors - water, air and noise pollution and solid waste.

UNIT - III

Human Health and Diseases-Social and Economic Factors :

- (i) Social factors- population density, literacy, urbanization, social customs and poverty.
- (ii) Economics factors - Occupation, Income, food and nutrition and standard of living.

UNIT - IV

Concept of Diseases; Classification of diseases; genetic,

communicable and non communicable; occupational and deficiency diseases, WHO classification of disease, pattern of world distribution of major diseases (Polio, AIDS, Malaria and Tuberculosis)

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Cliff, A. and Hagett, P.(1989) **Atlas of Distribution**, Basil Blackwell, Oxfod.
2. Digby, A and Stewrt (eds.) (1996) **Gender, Health and Welfare**, Routledge, New York.
3. Learnmonth A.T.A (1978), **Patterns of Diseases and Hunger. A Study in Medical Geography**, David & Charles, Vict.
4. Lenitian J. and Fletcher, W.W. (eds.) (1976), **Health and Enviornment and Man**, Vol.3, Blackie, Glagow.
5. Mathur, J.S. (1971), **Introduction to Social and Preventive Medicine**, Oxford and IBH Pub. Co., Delhi.
6.(1959), **Ecology of Human Diseases**, M. D. Pub., New York.
7. May, J.M. (1961) **Studies in Disease Ecology**, Hafner Pub., New York.
8. McGlashan, N.D. (1972), **Medical Geography**, Methuen, London.
9. Misra. R.P. (2007), **Geography of Health Concept** New Delhi

10. Philips. D.R. (1990) **Health and Health Care in Third World**, Longman London.
11. Pyle. G. (1979) **Applied Medical Geography**, Winston Halsted Press, Silver Springs, Md. USA.
12. Soal, S.C. (Ed. (1971), **Text Book of Preventive and Social Medicine**, Allied Agency, Calcutta.

M.A. Geography : Semester- I

Paper- V Practical : Morphometric Analysis

Distribution of Marks

Lab Work Test : 60

Record on Lab Work : 20

Viva-Voce : 20

Max.Total : 100

Time : 4 hrs.

UNIT - I

Morphometric Anlaysis of Drainage basin - its geographical significance; basin morphometry of fluviially originated drainage basin.

Linear Aspects : Stream ordering based on Horton and Strahler, Bifurcation ratio;

Areal Aspects : Geometry of basin shape, Basin Perimeter, Length and Area, Stream frequency and Drainage density

UNIT - II

Relief Aspects : Hypsometric analysis- Hypsometric curve and Integral Hypsometric curve, clinographic analysis, Altimetric analysis.

Slope Analysis - Avergae Slop (Wentworth's method), Relative relief (Smith's method), Dissection Index.

Profile Analysis -Longitudinal profile.

Note :

The question paper shall contain six questions in all, including three questions from each unit. Candidate(s)

are required to attempt three questions in all selecting at least one question from each unit. All questions carry equal marks.

Recommended Readings :

1. Monkhouse, F.J. and H.R. Wilkinson (1980), **Maps and Diagrams**, B. I. Publications, Bombay.
2. Singh, R.L. (1979), **Elements of Practical Geography**, Kalyani Publishers, New Delhi.
3. Singh, S. (1997), **Geomorphology**, Prayag Pustak Bhawan, Allahabad.

Paper- VI Geographical Thought-I

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT - I

The field of geography - its place in the classification of sciences, relations of geography with other natural and social science : subject matter of geography; selected concepts in the philosophy of geography - distributions, relationships, areal differentiation and spatial organization.

UNIT - II

Dualisms in geography : Physical and Human geography; Systematic and Regional geography ; Systematic geography and its relation with Systematic Sciences and with Regional geography; Darwin's influence on geography; Historical geography and the study of change.

UNIT - III

Kuhn's model of 'paradigm of Science' ; Dominant paradigms in geography ; exploration, environmental determination and possibilism, regionalism and spatial analysis.

UNIT - IV

Scientific Explanation : the routes to scientific explanation

(inductive/deductive); major modes of explanation in geography : Cognitive description, cause and effect, temporal, functional/ ecological and system.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Abler, Ronald; Adams, John S. Gould, Peter, (1971), **Spatial Organization : The Geographer's View of the World**, Prentice Hall, N.J.
2. Agnew, John et. al. (ed.) (1996), **Human Geography**, Blackwell Publishers London.
3. Dikshit, R.D. (ed.) (1994) **The Art & Science of Geography Intergated Readings**, Prentice Hall of Indian, New Delhi.
4. Dikshit, R.D. (1999), **Geographical Thought - A Contextual History of Ideas** : Prentice Hall of India, New Delhi.
5. Hartshorne, R. (1959), **Perspective on Nature of Geography**, Rand Mc Nally & Co.
6. Harvey, David (1969), **Explanation in Geography**, Edward Arnold, London.
7. Harvey, Milton E and Brian P. Holly (1981), **Themes in Geographic Thought**, Croom Helm, London.
8. Hubber, Phil et. al. (2002), **Thinking Geographically Space Theory and Contemporary Human Geography**, Continuum, New York.

9. Husain, M. (2001), **Evolution of Geographic Thought** (fourth edition), Rawat Publication Jaipur.
10. Johnston, R.J. (1988) **The Future of Geography**, Metuen, London.

Paper- VII Geography of Transport

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT - I

Nature and scope of transport geography, Geographic relevance of transportation, Transport and development; conceptual frameworks; Theoretical framework and (iii) The Taffe, Morrill and Gould Model.

UNIT - II

The Modes of Transport : Introduction to the modes of transport; modal characteristics; roads, railways, pipelines, ropeways and cableways, waterways and airways.

UNIT - III

Structural analysis of transport networks : Topological, Networks, Connectivity of Networks (Cyclomatic number, Diameter), measures of individual elements of transportation networks; Mileage, Nodality Matrix, Weighted Mileage Matrix, Weighted Nodality Matrix, Gross accessibility.

UNIT - IV

Transport Policy, development and planning : Transport development in India, Rail transport Railways and the Plan, Problems and Issues in railways development; Road Transport, Importance of Road Transportation India, Problems of Road transport in India, Road transport and regional development.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire. All questions carry equal marks.

Recommended Readings :

1. Bamford, C.G. and Robinson, H. (1978) **Geography of Transport**, Macdonald and Evans, London.
2. Bhaduri S. (1992) **Transport and Regional Development**, Concept Publishing Company, New Delhi.
3. Chorley, R.J. and Haggett, P. (1967) **Modes in Geography**, Methuen and Company, London.
4. Eliot Hurst, M.E. (1972) **A Geography of Economic Behaviour : An Introduction**, Duxbury Press, California.
5. Hammond, R. and Mc Cullagh, P.S. (1989) **Quantitative Techniques in Geography ; An Introduction**, Clarendon Press, Oxford.
6. Hay, A. (1973), **Transport Economy**, Macmillan, London.
7. Hoyle, Band Knowles, R. (2000), **Modern Transport Geography**, John Wiley and Sons, New York.
8. Hoyle, B.S. (1973) **Transport and Development**, Macmillan , London.
9. Husain, M. and Zaidi, S.S.H. (1996), **Environmental Management in India**, Concept Publications Pvt. Ltd. New Delhi.

10. Raza, M. and Aggarwal, Y.P. (1985), **Transport Geography of India Concept Publishing Company**, New Delhi.
11. Singh, J. (1994) Indian : **A Comprehensive Systematic Geography**, Radha Publication, New Delhi.
12. Taffe, E.J. and Gauthier, H.L. (1973) **Geography of Transportation**, Prentice Hall Englewood Cliff, New Jersey.
13. Vaidya, B.C. (1998), **Readings in Transport Geography**, Devika Publications, Delhi.
14. White, H.P. and Senior M.L. (1983) **Transport Geography**, Longman, London.

Paper- VIII Statistical Methods in Geography

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT - I

Statistics, Geography and Statistics; Significance of Statistics in geographical studies; Statistical Data : source , types and classification; levels of data measurement : nominal, ordinal, interval, and ratio; frequency distributions and graphic presentation- frequency curve, frequency polygon, ogives, bar-diagram, histogram.

UNIT - II

Concept of Normal Distribution : Parametric and Non-Parametric Statistical (general introduction); Measures of Central Tendencies : Arithmetic Mean, Median, Mode and their geographical significance; Centographic techniques : mean centre and median centre.

UNIT - III

Measures of dispersion and concentration : Range, quartile

deviation, means deviation standard deviation and variance ; coefficient of variability, Lorenz Curve and Gini's Co-efficient, standard distance; location Quotient.

UNIT - IV

Correlation and regression : Scatter diagram, correlation by Spearman's Rank Difference and Karl Pearson's Product Moment, Significance testing of Correlation Regression analysis regression equations construction of regression line, computation of residuals and mapping.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Bart James E and Gerld M. Barber (1996), **Elementary Statistical for Geographers**, The Guilford Press, London.
2. Cressie, N.A.C. (1991) **Statistical for Spatial Analysis**, Wiley, New York.
3. David M. Smith (1975), **Patterns in Human Geography**, Penguin, Harmondsworth.
4. Elhance, D.N.(1972), **Fundamentals of Statistics**, Kitab Mahal, Allahabad.
5. Elidon D (1983) **Statistics in Geography : A Practical Approach**, Blackwell, London.
6. Gregory, S. (1978) **Statistical Methods and the Geographer** (4th Edition), Longman, London.

7. Gupta, C.B. (1971), **An Introduction to Statistical Methods**, Ram Parsad and Sons, Agra.
8. Gupta, S.P. : **Statistical Methods**, Sultan Chand and Sons, Latest Edition.
9. Haining, R.P. (1990) **Spatial Data Analysis in the Social and Environmental Science**, Cambridge University Press, Cambridge Press, Cambridge.
10. McGrew, Jr and Caharles, B.M. (1993), **An Introduction to Statistical Problem Solving Geography**, W.C. Brocan Publishers, New Jersey.
11. Mathews, J.A. (1987) **Quantitative and Statistical Approaches to Geography** ; Practical Manual, Pergmon, Oxford.
12. Pal, S.K. (1998) **Statistical for Geoscientists; Techniques and Applications**, Concept Publishing Company, New Delhi.
13. Peter, J. Taylor (1977), **Quantitative Methods in Geography**, Houghton Mifflin Company, Boston.
14. Robert Hammond and Patrik Mc. Crlagh (1974), **Quantitative Methods in Geography**, Clarendon Press, Oxfords.
15. Peter Haggett, Andrew D. Cliff and Allan Frey (1977), **Locational Models**, Vols I and II, Arnold Heinnemann, New Delhi.
16. Yeates, Mauris (1974), **An Introduction to Quantitative Analysis in Human Geography**, Mc Graw Hill , New York.

Paper- IX (i) Agricultural Geography

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT - I

Defintion, nature, scope and significance of agricultural

geography; approaches to the study of agriculture in geography-commodity, deterministic, systematic and regional.

UNIT - II

Factors Influencing Agricultural Pattrens; Physical factors- terrain, climate, soils and water resources; Institutional factors- demographic, land holding, farm family structure, caste, religion, peasant way of life, infrastructural services; Technological factors irrigation, traditional and mechanical inputs.

UNIT - III

Agricultural Systems of the world; Whittlessey's Classification - shifting cultivation, Planntation farming system, Mediterranean Agriculture, Commercial grain farming system, Subsistence system; Agricultural Region; Concept and Techniques; Normative Technique, Empirical Technique; Single Element technique and Statistical Techniques (Cluster and Combinational Analysis)

UNIT - IV

Nature, signifiacnce and classification of agricultural models, Working clssification of models of agricultural ativities; Economic and Descriptive models, Food Security Sustainable agriculture, WTO and Agriculture.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Andreae, B. (1981) **Farming Development and scope : A World Agricultural Geography**, Water de Grytar, New York.
2. Grigg, D (2007), **Agricultural Geography**, Longman Ontario.
3. Husain Majid (1997), **Systematic Agricultural Geography**, Rawat Publications, Jaipur and New Delhi.
4. Rummey, T.A. (2005), **Study of Agricultural Geography : A scholarly Guide and Bibliography**, Scarecrow Publishers, New York.
5. Singh J and S.S.Dhillon (1984) **Agricultural Geography**, Tata Mc Graw Hill, New Delhi.
6. Sharma, B.L. (1990) **Agricultural Geography** Rawat Publications, Jaipur.

Paper- IX (ii) Political Geography

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT - I

Nature, scope of Political geography : perspectives : Political Economy, World Systems, Place and Globalisation.

UNIT - II

Concepts of Nation, State, Nation- State, Nationalism and Nation- Building; Emergence and Growth of territorial state; Globalisation and the Crisis of the Territorial State; Forms of Governance : Unitary and Federal; Neo Imperialism; Borders in a borders in a borderless world.

UNIT - III

Rise and Demise of German Geopolitics; Cold War as a Geopolitical world order Geopolitical transition to the Cold war; Phases of the Cold war; Geopolitics in the post Cold War World - S.B. Cohen's model of Geopolitics : Critical Geopolitics; Ecopolitics between developed and developing countries.

UNIT - IV

Electoral Geography as field of learning : Continuity and Change; Themes of Study; Geography of Voting; Geographical Influences in Voting and Geography of Representation. A World Systems Interpretation of elections : Electoral Geography contrasts between core and periphery.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Agnew, J.A. (1987), **Place and Politics**, Boston : Allen and Unwin
2. Agnew, J.A (1998), **Geopolitics**, London : Routledge
3. Blacksell, Mark (2003), **Political Geography**, London Routledge.
4. Cox, Kevin R. (2008) **The Sage Handbook of Political Geograph**, New Delhi sage.
5. Dicken, Peter (2003), **Global; Shift**, New Delhi : Sage

6. Dikshit, R.D. (2000) **Political Geography : The Spatiality of Politics**, New Delhi : Tata Mc Graw Hill
7. Dodds, Klaus and David Atkinson (2000) **Geopolitical Traditions**, London : Routledge
8. Jones, Martin Rhys Jones and Michael Woods (2003), **An Introduction to Political Geography**, London : Routledge
9. Khor, Martin (2001) **Rethinking in Globalization**, London : Zed Books.
10. Nash, Kate (2000), **Readings in Contemporary Political Sociology**, Oxford ; Blackwell.
11. Painter J. (1995) **Politics, Geography and Political Geography**, London : Arnold.
12. Taylor, P.J. and colin Flint (2001), **Political Geography**, New Delhi : Pearson.
13. Taylor, P.J. and R.J. Johnston (1979), **Geography of Elections** Hammondswoth : Penguin.

Paper- IX (iii) Social Geography

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT - I

Space an Society; Nature and Development of Social geography; Philosophical bases of Social Geography - Positivists, Structuralist; Radical, Humanist, Post Modren and Post Structuralist.

UNIT - II

Towards a social geography of India ; Social differentiation and reigon fomation evolution of socio cultural regions of India;

bases of social regions formation; role of caste, religion and languages ; social transformation and change in Indian.

UNIT - III

Social Well-being : Concepts of social well being, Human Development Index; Rural urban deprivation in India with respect to helath care; education and housing.

UNIT - IV

Gender Issues of social Well Being : Female Literacy, family Planning, Women Health and Sex Ratio, Women Empowerment and Employment.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Ahemd, Aijazuddin (1999) **Social Geography**, Rawat : New Delhi.
2. Dreze, Jean and Amartya Sen (9196) **Economic Development and Social Opportunity**, New Delhi : Oxford University, Press.
3. Gregory, D and Larry (eds) **Social Relations and Spatial Structures**, Oxford : Macmillan
4. Harvey, David (1989) **The Conditions of Post-Modernity**, Blackwell : Oxford
5. Jackson, Peter and Susan J Smith (1984), **Exploring**

Social Geography, Geography Allan and Unwin : London

6. Rao, M.S.A. (1970) **Urban Sociology in India**, New Delhi : Orient Longman
7. Schwarzberg, Joseph (1978), **An Historical Atlas of South Asia**, Chicago
8. Smith David (1977), Geography : **A Welfare Approach, London** : Edward Arnold.
9. Sopher, David(1980), **An Exploration of India**, Cornell University Press.

Paper- IX (iv) Geography of Tourism

Theory Paper	: 80 marks
Internal Assessment	: 20 marks
Total	: 100 marks
Time	: 3 hrs.

UNIT - I

Nature and Concept of Tourism : Defining Tourism; factors influencing tourism Historical, Natural, Socio- cultural and Economic, Motivating factors for Pilgrimages Leisure and Recreation; Tourism as an Industry.

UNIT - II

Nature and Scope of geography of Tourism : Areal and locational dimensions of Tourism : physical, cultural, historical and economic; Tourism types; cultural natural and adventure tourism, National and international Tourism : Globalisation and Tourism

UNIT - III

Indian Tourism :Regional Domensions of Tourist Attraction; Hill Stations in India (Colonial legacy) Accommodation and supplimentary accommodation; other facilities and amenities; Agencies and Intermediacies; Indian Hotel Industry

UNIT - IV

Physical, economic and social Perceptional positive negative impacts. Environmentals laws and tourism; Role of foreign

capital and impact of globalization on Tourism in India.

Note :

The question paper will have five units. Each of the first four units of question paper will contain two questions from each unit of the syllabus. Candidate(s) are required to attempt one question from each unit. The unit five shall be compulsory and shall contain eight short answer type questions covering entire syllabus. All questions carry equal marks.

Recommended Readings :

1. Bhatia A.K. : (1996), **Tourism Development** : Principles and Practices, Sterling Publishers, New Delhi.
2. Bhatia A.K. : (1991), **International Tourism - Fundamentals and Practices**, Sterling Publishers, New Delhi.
3. Bonaface B.G. and C, Cooper : (1994), **The Geography of Travel and Tourism**. Heinemann, Butterworth
4. Carter E. and G. Lowman : (1994), **Ecotourism, John Wiley and Sons**, New York.
5. Hunter C. and H. Green : (1995), **Tourism and the Environment : A Sustainable Relation ship**, Routledge, London.
6. Lea J. : (1988), **Tourism and Development in the Third World**, Routledge, London.
7. Milton D. : (1993) **Geography of World Tourism, Prentice Hall, New York**.
8. Pearce D.G. : (1987) **Tourism To-day : A Geographical Analysis**, Harlaw, Longman.

9. Robinson H. : (1996) **A Geography Tourism**, Macdonald and Evans, London.
10. Sharma J.K. (ed.) : (2000), **Tourism Planning and Development- A New Perspective**, Kanishka Publishers, New Delhi.
11. Sinha P.C. (ed.) : (1998), **Tourism Impact Assessment**, Anmol Publishers , New Delhi.
12. Theobald W. (ed.) : (1994), **Global Tourism : The Next Decade** : Oxford, Butterworth, Heinemann, Oxford.
13. Usha Bala : (1990), **Tourism in India**, Arushi Prakashan, New Delhi.
14. Voase R. : Tourism (1995) **The Human Perspective**, Hodder & Stoughton London.
15. Williams A.M. and G. Shaw (ed.) : **Tourism and Economic Development Western European Experience**, Belhaven, London.

Paper- X Practical : Thematic and computer Aided Cartography

Distribution of Marks	
Lab Work Test :	60
Record on Lab Work :	20
Viva-Voce :	20
Max.Total :	100
Time :	4 hrs.

UNIT - I

Components of Computer (Hardware - Hard Disk and its Specifications, RAM, Removable Drives, Printers, Scanners and Software). The process of writing of data disks (e.g. Census of Indian data disks) Use of Computers in Geography. Introduction to MS - Excel :Opening of File, data entry in the Spreadsheet, Saving and Naming, Data Sheet, Transfers of

Data (whole file or its part) to a New file.

Drawing of line graph, Bar diagram Pie diagram, Scatter diagram, (changes from colour to different shad patterns, placement of Legend, different weight to X and Y coordinates, Placement of Headings and Sub-headings, Font Size, Style, Bold and Italics)

Cartography - meaning and concepts significance of cartography in Geography Preparation of a Thematic Atlas along with interpretation of each plate (6 plate)

UNIT - II

GIS and its components, Geography and GIS, Utility of GIS in decision making, vector and Raster data in GIS (A Brief interpretation)

Introducing GIS software : Creating Choropleth maps through GIS software (At least three exercise)

Note :

The question paper shall contain six questions in all, including three questions from each unit. Candidate(s) are required to attempt three questions in all selecting at least one question from each unit. All questions carry equal marks.

Recommended Readings :

1. Burrough, P.A. and R. Mac Donell (1998) **Principles of Geographical Information System**, Oxford University Press, Oxford.
2. Kraak, Mennon-Jan and Ferjan Ormeling (2003), **Cartography** Pearson New Delhi.
3. Longley. P.M.Goodchild Maguire and D Rhind (ed.) (1999) **Geographic Information System**, John Wiley, N. York
4. Monkhouse F.J. and H.R. Wilkinson (1980) **Maps and Diagrams**, B.I. Publications, Bombay.
5. Robinson A.H. et al. (1995), **Elements of Cartography**, John Wiley, New Delhi.
6. Singh R.L. (1979) **Elements of Practical Geography**, Kalyani Publishers, New Delhi.