

SYLLABUS DESIGN

Programme – M.A. (Geography)

Course Code	Paper Category	Course / Paper	Credits	T/P/	Evaluations	
					CIE	ETE
SEMESTER – VII (YEAR-1)						
RA120101T	Major-One	Advanced Geomorphology	4	T	25	75
RA120102T	Major-Two	Geographical Thought	4	T	25	75
RA120103T	Major-Three	Population Geography	4	T	25	75
RA120104T	Major-Four	Geography of Natural Resource & Management	4	T	25	75
RA120105P	Major-Five	Cartography & Thematic Map	4	P	25	75
RA120106R	Socio-Eco-Survey	Topic selection from major subject / Review of Literature / Industrial Training / Survey	4	R	-	-
RA120107R	Minor Elective	Subject Elective from other faculty (Select any one above major four)	4	T	25	75

Credit Score : 28

Course Code	Paper Category	Course / Paper	Credits	T/P/	Evaluations	
					CIE	ETE
SEMESTER – VIII (YEAR-1)						
RA120201T	Major-One	Climatology	4	T	25	75
RA120202T	Major-Two	Economic Geography : Concepts & Principles	4	T	25	75
RA120203T	Major-Three	Regional Geography of India	4	T	25	75
RA120204T	Major-Four	Optional (Select any one) : (A) Political Geography (B) Geography of Rural Settlement (C) Soil Geography	4	T	25	75
RA120205P	Major-Five	Advanced Quantitative Techniques	4	P	25	75
RA120206R	Socio-Eco Survey	Research Project Report Writing / Report Submission / Evolution	4	P	50	50

Credit Score : 24

Total Credit Score : 28+24 = 52

SYLLABUS DESIGN

Programme – M.A. (Geography)

Course Code	Paper Category	Course / Paper	Credits	T/P/	Evaluations	
					CIE	ETE
SEMESTER – IX (YEAR-2)						
RA120301T	Major-One	Oceanography	4	T	25	75
RA120302T	Major-Two	Environmental Geography	4	T	25	75
RA120303T	Major-Three	Geography of Manufacturing	4	T	25	75
RA120304T	Major-Four	Optional (Select any one group) : (A) Research Methodology (B) Geography of Tourism (C) Geography of Water Resource Management	4	T	25	75
RA120305P	Major-Five	Advanced Cartography : Projections & Remote Sensing	4	P	25	75
RA120306R	Survey Report Research Project	Topic selection from major subject / Review of Literature / Industrial Training / Surveying / Dissertation	4	P	-	-

Credit Score : 24

Course Code	Paper Category	Course / Paper	Credits	T/P/	Evaluations	
					CIE	ETE
SEMESTER – X (YEAR-2)						
RA120401T	Major-One	Regional Planning & Development	4	T	25	75
RA120402T	Major-Two (Select one)	Optional (Select any one paper) : (A) Urban Geography (B) Cultural Geography (C) Bio Geography	4	T	25	75
RA120403T	Major-Three	Optional (Select any one paper) : (A) Agriculture Geography (B) Geography of Marketing (C) Geography of Health	4	T	25	75
RA120404T	Major-Four	Optional (Select any one paper) : (A) Remote Sensing & Geographical Information System (B) Geography of any one of Meso Regions of the world : (i) Monsoon Asia (ii) North America (USA & Canada) (iii) Australia & Newzeland (iv) Europe	4	T	25	75
RA120105P	Major-Five	Advanced Surveying GIS & Aerial Photograph	4	P	25	75
RA120106R	Survey Report / Research Project	Research Project Report / Dissertation Writing / Report Submission Evolution	4	P	50	50

Credit Score : 24

Total Credit Score : 24+24 = 48

RAJA MAHENDRA PRATAP SINGH STATE UNIVERSITY, ALIGARH

SYLLABUS M.A. PREVIOUS (GEOGRAPHY)

SEMESTER-VII (Year-1)

PAPER-I

ADVANCED GEOMORPHOLOGY

- Unit-I** Geography: Nature and Scope Fundamental Concepts : Geological Structures and Landforms, Multicyclic & Polygenetic Evolution of Landscape, Concept of threshold.
- Unit-II** Evolution of Earths Crust: Isostasy :- Doctrine of Isostracy, Views of Airy & Pratt Plate Tectonic : Concept of related views, Orogenetic Structures with reference to the evolution of Himalayas
- Unit-III** Earth Movements: Epeirogenetic and Orogenetic movements, Causes types and classification of weathering, massmovements, Forces of crustal instability: Earthquake and Vulcanicity
- Unit-IV** Evolution of the following landforms : Fluvial Landforms, Arid Landforms, Glacial Landforms, Periglacial Landforms, Karst Landforms
- Unit-V** Landscape evolution models : Davis, Penck, L.C. King, Hydro Geomorphology, Urban Geomorphology, Environmental Geomorphology, Geomorphic Hazards

Suggested books:

- Thornbury, William, D. : Principles of Geomorphology
- Embleton and King : Glacial and Periglacial Geomorphology
- Singh, Savindra. : Geomorphology
- Ahmad, Enayat : Geomorphology
- Dayal, P. : Geomorphology
- Sharma, V.K. : Geomorphology – Earth`s Surfaces and Forms
- Wooldridge and Morgan : An outline of Geomorphology
- Tikka R.N. : Physical Geography
- Sen P.K. and Prasad N. : An Introduction to the Geomorphology of index
- Lal, D.S. : Physical Geography
- Dayal, P. : Bhu – Aakriti-Vigyan
- King L.C. : Morphology of the Earth
- Chorley, R.J. : Spatial Anaylysis in Geomorphology
- Sparks, B.W. : Geomorphology
- Steers, J.A. Unstable Earth
- Strahler, A.H. & Strahler, A.H. Elements of Physical Geography
- Woldridge : S.W. & Morgam, R.S. : An Outline of Geomorphology
- Dowie : Isostasy
- Singh Savindra : Bho Aakriti Bigyan

- Ghosh, S.: Settlement Geography
- Champion T. (ed) : Population Matter
- Clark I.J. : Population Geography
- Dube K.K. & Singh M.B. : Jansankhya Bhoogol
- Garnier B.J. : Population Geography
- Pathak LP. (ed) : Population Studies
- Peter, G.L. & Lakin, R.P. : Population Geography Problems, concepts and Prospects
- Ross, John, A (ed) : International Encyclopaedia of Population
- Singh, K.N. & Singh, D.N. (eds) : Population Growth Environment Development
- Trewartha G.T. : A Geography of population
- Woods, R : Population Analyses in Geography
- Zelinsky, W. Kosinski, LA & Prothoro M.R. (eds) : Geography and a Crowding world

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SYLLABUS M.A. PREVIOUS (GEOGRAPHY)
SEMESTER-VII (Year-1)

Paper-IV GEOGRAPHY OF NATURAL RESOURCES AND MANAGEMENT

- Unit-I** Natural Resources : An Introduction, Meaning of Natural Resources, Concept and Subject Area of Natural Resources, Problems of Natural Resources
- Unit-II** Classification of Natural Resources, Types of Natural Resources, General Classification and Owen`s Classification of resources, Resource Utilization, Soils, Minerals and Power Resources
- Unit-III** Resource Utilization and Regionalization, Iron and Steel industry, Textile Industry, Chemical Industry, Resource Development and its application, Resource regions of the world
- Unit-IV** Conservation of natural Resources, Meanings, Aims, Trends and problems of conservation, Soil, forest and mineral conservation
- Unit-V** Management of Natural Resources : Measures of management and their benefits, Soil Management, Water Management, Power Management, Human Resource Management

Suggested books:

- Adams, W.M. : Green Development : Environment and Sustainability in the New World, Routledge and Chapman Hall, New York, 1990.
- Burton, I. and Kates, R.W. (1978) : Readings in Resource Management and Conservation, McGraw Hill, New York
- Clark, G.L., Feldman, M.P. and Gertler, M.S. (eds.) (2000) : The Oxford Handbook of Economic Geography, Oxford University Press, New York.
- Ehrlich, P.R. , Ehrlich, R.H. and Holdren, J.P. (1998) : Ecoscience : Population, Resources and Development, 2nd Edition, Freeman and company, San Francisco
- Granfelt, T.R. (1999) : Management in the globalized environment, J & L Composition Ltd., New York.
- Holechek, R & Joshi, R. (1994) : Desert, Drought and development, Studies and Resource, Management and Sustainability; Rawat Publications, Jaipur
- Kates, R.W. & Burton, I. (eds.) (1986): Geography, Resources and Management, Volume I and Volume II, University of Chicago Press, Chicago.

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SYLLABUS M.A. PREVIOUS (GEOGRAPHY)
SEMESTER-VII (Year-1)

Paper-V Practical : CARTOGRAPHY AND THEMATIC MAPS

Unit-I History, Development & Significance of Cartography, Representation of Statistical Data – Band Graph , Ergo graph, Circle and Spherical Diagram, Dispersion and scatter Diagrams, Pyramid diagram- Simple and compound

Unit-II Definition and classification of map, Map as a data model, Tools of map-making: lettering and symbolization of maps, Climatic Maps – Hythergraph, Climograph, Windrose, Clock-graph

Unit-III Distribution Maps-Types and methods of drawing thematic maps: Chorochromatic, Chorroschematic, Dot and Diagrammatic method

Unit-IV Cartograms : Value area cartogram, Traffic Flow Cartogram, Isochronic Cartograms & Equal cost distance cartograms.

Note : **The students have to attempt four questions within a period of three hours each in four units**

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|-------------------|---|----------|
| 1. Four exercises | : | 40 marks |
| 2. Sessional work | : | 25 marks |
| 3. Viva Voice | : | 10 marks |

Suggested books :

- Cuff D.J. & Matton M.T. : Thematic maps their design and production
- Monk house F.J. : Maps and Diagrams
- Elhance, DN : Fundamentals of Statistics
- Sharma, J.P. : Proyogik Bhoogol
- Singh R.L. & Singh R.P. B. : Elements of Practical Geography
- Yadav H.L. : Prayogatmak Bhoogol
- Singh, J. : Bharmikya Manchihoki Ruprekha
- Tiwari R.C. & Tripathi S. : Abhinav Proyogatmak Bhoogol

RAJA MAHENDRA PRATAP SINGH STATE UNIVERSITY, ALIGARH
SYLLABUS M.A. PREVIOUS (GEOGRAPHY)
SEMESTER-VII (Year-1)

Paper-VII FIELD STUDY SURVEY REPORT –SOCIO ECONIMICS SURVEY

Unit-I Introduction, Selection of Study area, Construction of Hypothesis & Research / Project Design.

Unit-II Method of Field Work : Preparation of a questionnaire, Collection of Data, Primary & Secondary Sampling, Tabulation of data, Significance of field work in Geographical studies.

Suggested books :

- Purmina, B.C. : Surveying & Leveling Vol. I
- Alvi Ziaminuddin : A text book of surveying.
- Sharma, J.P. : Prayogik Bhugol
- Campbell, J. : Introduction Cartography
- Robinson A.H. & other : Elements of Cartography
- Archen J.E. & Dolton T.H. : Field work in Geography
- Glodard RH : Field techniques and Research methods in Geography
- Kanetkan, TP & Kulkarni SV : Surveying & Research
- Singh R.L. & Singh RPB : Elements of practical geography
- Davis RE & Foote FS : Surveying theory & practices
- James, P.A. : Field Work in Geography
- Elhance, DN : Fundamentals of Statistics
- Archeer, J.E. & Dalton T.H. : Fieldwork in Geography
- Berry, B.J.L. & Marble, F : Spatial Analysis : A Reader in Statistical Geography, New Jersey, 1968.

- Kandrew, WG : Climatology
- Mathur, JR : Climatology : Fundamentals and Applications
- Siddhartha, K. : Atmosphere, Weather & Climate
- Singh, Savindra : Climatology
- Las D.S. : Climatology
- Banergi, RC & Upadhyay, D.S. : Mausam Vigyan
- Upadhyay, D.P. and Singh R : Climatology & Hydrology (in Hindi)
- Negi BS : Jalvayu & Sarmdra Bigyana

RAJA MAHENDRA PRATAP SINGH STATE UNIVERSITY, ALIGARH
SYLLABUS M.A. PREVIOUS (GEOGRAPHY)
SEMESTER-VIII (Year-I)

Paper-II ECONOMIC GEOGRAPHY : CONCEPTS & PRINCIPLES

- Unit-I** Scope, Context and recent trends in Economic geography, relation of economic geography with economics and other branches of Social Sciences, Classification of Economics, Sectors of economy (Primary, Secondary & Territory)
- Unit-II** Factors of location of economic activities, Physical Social, Economic & Cultural : Classification of Agricultural System – Whittlesey's and Von Thunen Model and its modifications.
- Unit-III** Classification of industries, Resource based and footloose industries, Theories of Industrial location, Weber, Losch, Smith & Isard, Case studies of selected industries Iron and Steel, Chemical, Oil refinery and petro chemical.
- Unit-IV** Energy Resources – Conventional Energy resources – coal, petroleum, Non-conventional energy resources, Solar energy, World energy crises, Mode of transportation, transport cost, accessibility and connectivity : International Inter and intra regional.
- Unit-V** Market and Market typology, market network in rural societies, market system in urban economy, role of market in the development of trade and commerce, International trade : Problems and prospects , Economic development of India, Regional disparities, Globalization and Indian Economy.

Suggested books :

- Alexander, J. W : Culture & Retail Distribution.
- Chatterjee S.P. : Economic Geography of Asia.
- Chorley R.J. & Hagget P. (ed) : New York Analysing in Geography
- Garnier B.J. & Delobez A. : Geography of Marketing
- Hamelton, F.E. : Spatial Perspective on Industrial organization and decision making
- Hamelton I. (ed) : Resources and Industry.
- Hurst E : Transport Geography – Concepts and Readings.

- Robertson D (ed) : Globalization and Environment.
- Rostow – W.W. : Stages of Economic Growth
- Wheeler J.O. : Economic Geography
- Gautam Alka: Arthik Bhoogol ke Mool Tatva
- Harun, M. & Rao B.P. : Arthik Bhoogol ke Mool Tatva
- Singh K.N. & Singh J : Arthik Bhoogol ke Mool Tatva
- Miller E. & E. Willard : A. Geography of Marketing
- Zimmenman E.W. : World Resources and Industry.
- Hartshon TA : Economic Geography
- Hussain Majid : Economic Geography

RAJA MAHENDRA PRATAP SINGH STATE UNIVERSITY, ALIGARH
SYLLABUS M.A. PREVIOUS (GEOGRAPHY)
SEMESTER-VIII (Year-I)

Paper-III REGIONAL GEOGRAPHY OF INDIA

Unit-I **Basis of regionalization** :- Geopolitical, Climate, agro climate, Physio graphic, historical demographic, Socio-economic dimensions of regionalization case studies.

Unit-II **Macro Regions** : Genesis and changing profile. Indian federalism : a synoptic views natural and human resources & resource utilization, population development.

Unit-III **Meso Regions:-** Bases of regionalization, Physical and human resources; economic and inter linkages ; Population development environment interface policies & programmes.

Unit-IV **Micro-Regions** : Bases of regionalization; Physical, human and economic resources; formal and functional linkages; Population development, environment nexus : Policies and Programs

Unit-V Socio-Eco-Studies of the following natural regions of India:
Ganga Plain, Rajasthan Plain, Coastal Plains, J & K's Valley, Decca Plateau

Suggested books:

- Wadia, D.N. : Geology of India
- Krishnan, M.S. : Geology of India, Burma and Ceylon
- Spate, O.H.K. : India and Pakistan
- Singh, R. L. (ed.) : India-A Regional Geography.
- Singh, J. : An agricultural atlas of India.
- Ganguly, B.N. : Trends of Agriculture and Population in the Ganges valley
- Sharma, T.R. : Location of Industries in India.
- Sinha, B.N. : Industrial Geography of India.
- Brown, J.C. & A.K. Dey : India's mineral wealth
- Sovani, M.V. : The population problem in India: A Regional approach
- Agrawal, A.N. : Indian Agriculture
- Rajan and Rao : Studies and soils of India
- Lahiri, T.B. : Balanced Regional Development of India
- Govt. of India : Agricultural Commission Report
- Verma, R.V. : Geography of India (Hindi)
- Singh, Gopal : Geography of India

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SYLLABUS M.A. PREVIOUS (GEOGRAPHY)
SEMESTER-VIII (Year-I)

Paper-IV Optional (A) POLITICAL GEOGRAPHY

Unit-I Political Geography: Meaning and scope, Subject matter, Approaches to political geography, Functional & unified field approaches , Recent developments in Political geography, Indian Concepts of geopolitics towards the approach of Vasudhaiva Kutumbakam

Unit-II Geographic elements and the state: Physical Elements, Human elements & Economic elements, Political geography and environment interface.

Unit-III Themes in political geography : Nation, State, Nation State & Nation Building, Frontiers and boundaries, Maritime boundaries, Changing Patterns of World Power perspective and core periphery concept.

Unit-IV Geopolitical world order : Origin and cessation of cold war, Global strategic views: H.J. Mackinder , N.G. Spykman, De Severosky Power and politics in the World Economy

Unit-V Development of political geography in India, Changing political map of India : State Re-organization Geographical bases of Indian Federalism, River Water Disputes : International and National Geopolitics of Indian Ocean

Suggested books :

- Johnn R. Stuart (1992)- An introduction to political geography
- Richard Muir(1995) – Modern Political Geography
- Bergman K. Edward (1975) – Modern Political Geography
- Lucile Carison(1971) – Geography and World Politic
- Cohen S.B. (1968) – Geography and Politics in a Divided World
- Pounds N.J.G. (1972) – Political Geography
- Alexander I.M. (1963) – World Political Systems
- Taylor P.J. & Flint C. : (2004 India Ed.) – Political Geography
- Dikshit R.D.(1982) : Political Geography : A Contemporary Perspective
- Adhikari S. (1997) : Political Geography
- Sukhwal B.L. (1985) : Modern Political Geography of India.

- Adhikari S. (2008) : Political Geography of India : A Contemporary Perspective
- Parkar G. (1998) : Geopolitics : Past, Present and Future
- Dikshit S.K. (2006) : Political Geography and Geo – Politics
- Saxena Hari Mohan (2009) : Political Geography
- Adhikari S. and Kumar Ratan (2010) : Political Geography
- Alexander, L.M. : World Political Pattern
- Dixit RD : Political Geography
- Taylor Peter : Political Geography
- Fisher Charles A : Essays in Political Geography
- Pounds NJ.G : Political Geography
- John R. Short : An Introduction to Political Geography
- Moddie, A.E. : Geography Behind Politics

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SYLLABUS M.A. PREVIOUS (GEOGRAPHY)
SEMESTER-VIII (Year-I)

Paper-IV Optional (B) GEOGRAPHY OF RURAL SETTLEMENTS

- Unit-I** Settlement Geography : Meaning and Scope; Significance and Development of Rural Settlement Geography, approaches to rural settlement geography human settlement as a Systems, Rural Urban continuum.
- Unit-II** Origin & Evolution of Rural Settlements, Types & patterns of rural settlements, functional classification of rural settlements ; Morphology of Rural Settlements, nature & hierarchy of rural settlements.
- Unit-III** Problems of rural settlements; Socio and Economic issues in Rural Settlements: Poverty, housing and shelter, deprivation and inequality Empowerment of women; Health care, Rural Urban Interaction
- Unit-IV** Environmental issues in Rural Settlements: access to environmental infrastructure, Water supply, Health Hazards, Sanitation and Drainage
- Unit-V** Rural Development planning in India, Integrated Rural Development, House Types and field patterns of rural settlements in Ganga Plain; Rural Migration Causes and Consequences.

Suggested books:

- Alam, S.M. (1982) : Settlement System of India, Oxford and IBH Publication Co., New Delhi.
- Brock, J.O.M. and Welb, J.W. (1978) : Geography of Mankind, McGraw Hill, London
- Chisholm. M. (1967) : Rural settlements and Land Use, John Willy New York
- Clout, H.D. (1977) : Rural Geography, Permajon, Oxford.
- Daniel, P. and Hopkinson, M. (1986) : The Geography of Settlement, Olive & Boyd, Edinburg
- Grover, N (1985) : Rural settlement a cultural Geography Analysis, Inter-India Publication-Delhi
- Hudson F.S (1976): A Geography of Settlement, McDownald and Evans, New York. Course XVIII (A)

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SYLLABUS M.A. PREVIOUS (GEOGRAPHY)
SEMESTER-VIII (Year-I)

Paper-IV Optional (C) SOIL GEOGRAPHY

- Unit-I** Introduction – Nature Development, Scope and Significance of soil geography, Relation with Pedology.
- Unit-II** Importance of the study of Soil Geography, Factors affecting soil formation: Material, Organic, Climatic, Topographic and Spatio-Temporal; Processes of Soil formation and soil development: Physical Biotic and Chemical
- Unit-III** Development of Soil Science, Soil Organism; Macro-animals (earthworms, mites, centipedes, rodents and insects); Micro-animals and plants; Fungi, Bacteria and Algae
- Unit-IV** Physical and Chemical Properties of soil ; Genetic Classification of soil; Taxonomic classification of soil : Zonal, Azonal & Intra-zonal soils; Their characteristics and world patterns.
- Unit-V** Soil Pollution; Soil erosion and degradation; Soil Conservation and Management.

Suggested books:

- Backman, H.O. and Brady, N.C. (1960) : The nature and properties of soil, McMillan, New York.
- Bennett, Hugh H. : Soil Conservation, McGraw Hill, New York
- Bunting, B.T. (1973) : The Geography of Soil, Hutchinson, London
- Clarke, G.R. (1957) : Study of the soil in the field, Oxford University Press, Oxford
- Foth, H.D. & Turk, L.M. (1972) : Fundamentals of soil science, John Wiley, New York.
- Govinda Rajan, S.V. and Gopala Rao, H.G. (1978): Studies on Soils of India, Vikas Publications, New Delhi.

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SYLLABUS M.A. PREVIOUS (GEOGRAPHY)
SEMESTER-VIII (Year-I)

Paper-V (Practical) ADVANCED QUANTITATIVE TECHNIQUES

- Unit-I** Statistics and Statistical data, Theory of Probability : laws of addition and multiplication , Probability of distribution, Standard Error, Sampling Size, Binomial Test and T-Test.
- Unit-II** Z Score, Lorenz - Curve, Skewness, Measures of Skewness, Calculation of coefficient of skewness, Location Quotient, Coefficient of Localization & Localization Curve, Nearest Neighbour Analysis.
- Unit-III** Moments : Calculation of moments; Direct method, Step deviation method, Determination of variance and standard deviation , Determination of skewness, Network Analysis, Graph Techniques and Degree of Connectivity.
- Unit-IV** Bivariate analysis, forms of relation and measuring the strength of association and relation construction, meaning of the scatter diagram, simple linear and regression analysis, spearman's rank difference rule, Karl Pearson co-relation coefficients, Regression analysis, Ratio of regression and ratio of variance.

The distribution of marks shall be as follows :

(i)	Four classroom exercises	-	40 marks
(ii)	Sessional Work	-	25 marks
(iii)	Viva Voice	-	10 marks

Suggested books :

- David Unwin, Introduction to Spatial analysis.
- Gregory S. Statistical Methods & the geographer.
- Hammond Rand P.S. Mecullagah : Quantitative Techniques in Geography
- John P. Cole & Cuichlaine A.M. King : Quantitative Geography
- Singh L.R. : Practical Geography
- Chauhan P. R. : Prayogatmak Bhoogol
- Sharma JP : Prayogik Bhoogol
- Singh R.L. (ed) 1991 : Elements of Practical Geography, Kalayanji Publishers, New Delhi.
- Yadav H.L. : Prayogatmak Bhoogol, Radha Publications, New Delhi.
- Tiwari, R.C. & Tripathi, S (2001) : Abhibnav Prayogatmak Bhoogol Prayag Pustak Bhawan, Allahabad.

RAJA MAHENDRA PRATAP SINGH STATE UNIVERSITY, ALIGARH
SYLLABUS M.A. PREVIOUS (GEOGRAPHY)
SEMESTER-VIII (Year-1)

- Paper-I** **FIELD STUDY SURVEY REPORT –SOCIO ECONIMICS SURVEY**
- Unit-I** Introduction, Selection of Study area, Construction of Hypothesis & Research / Project Design.
- Unit-II** Method of Field Work : Preparation of a questionnaire, Collection of Data, Primary & Secondary Sampling, Tabulation of data, Significance of field work in Geographical studies.
- Unit-III** Socio Economic Survey of the study area with a structured questionnaire and collection of data by personal observations and perceptions.
- Unit-IV** Based on results of the Socio-economic enquiry of the study area prepare field study report. Photographs and sketches in addition to maps an addition to maps and diagrams may supplement the study report.
- Pedagogy** The exercise should familiarize the students with the basic Socio-economic characteristics of the chosen area, settlements through lab experiment, followed by field visit and conducting enquiry at the village / town / household level.
- Note:** A socio-economic field survey camp will be arranged for the duration of 10 days at any selected Station (Rural / Urban settlement) away from the institution the camp will be compulsory for all the students. The students will have to submit a detailed project report of the selected areas. The TA/DA & other expenses on teachers and attendant will be met out by the college as per govt. rule.

Suggested books :

- Purmina, B.C. : Surveying & Leveling Vol. I
- Alvi Ziaminuddin : A text book of surveying.
- Sharma, J.P. : Prayogik Bhugol
- Campbell, J. : Introduction Cartography
- Robinson A.H. & other : Elements of Cartography
- Archen J.E. & Dolton T.H. : Field work in Geography
- Glodard RH : Field techniques and Research methods in Geography
- Kanetkan, TP & Kulkarni SV : Surveying & Research
- Singh R.L. & Singh RPB : Elements of practical geography
- Davis RE & Foote FS : Surveying theory & practices
- James, P.A. : Field Work in Geography
- Elhance, DN : Fundamentals of Statistics
- Archeer, J.E. & Dalton T.H. : Fieldwork in Geography

- King, Cuchlaine A.M. (1962): Oceanography for Geographers, Edward Arnold Ltd, London
- Neuman, Gerhard, and Piersons Jr., William J (1966): Principles of Physical Oceanography. Prentice-Hall Inc. Eglewood Cliffs, N.J.
- Lal, D.S. (2009): Climate and Oceanography, Sharda Pushtak Bhawan, Allahabad.
- Singh, S. (2008) : Oceanography, Prayag Pushtak Bhawan, Allahabad.
- Thurman, G.T. (1994): Introduction to Oceanography, 7th Edition, Macmillan, New York.
- Trujillo, A.P. and Thruman, H.V. (2012): Essentials of Oceanography. PHI Learning Pvt. Ltd., New Delhi.

RAJA MAHENDRA PRATAP SINGH STATE UNIVERSITY, ALIGARH

SYLLABUS M.A. FINAL (GEOGRAPHY)

SEMESTER-IX (Year-II)

Paper-II ENVIRONMENTAL GEOGRAPHY

- Unit-I** Environment & its components, concept of ecology & ecosystem; Ecological Principles, Human Ecology & its application in geographical studies.
- Unit-II** Ecological Systems & Man, Structure of the Ecosystem, Abiotic & biotic elements, Tropic level & food chain, Energy Flow, Functioning of Ecosystem, Bio-Geo-Chemical Cycle, Major types of Ecosystems.
- Unit-III** Nature & Concepts of Ecological crises, Environmental degradation & pollution, Global perspectives on causes and consequences of deforestation, Energy Crises, Global Warming & Climate Change.
- Unit-IV** Impact of Eco-development on environment, Poverty as causes & consequences of environmental crises, Impact of population growth, Urbanization, industrialization and technological revolution on environment.
- Unit-V** Concept of environmental management and development principles and strategy of Eco-development : man as a factor of environment change, Need and planning for sustainable development Environmental legislation : The stockholm conference, The Kyoto Conference, Environmental laws in India.

Selected books :

- Saxena, H.M. : Environmental Geography
- Singh, Savindra : Paryavaran Bhugol
- Odum P. : Fundamentals of Ecology
- Chandan, R.C. : Environmental Awareness
- Detwyler, T.R. : Man's Impact on environment
- Embelon, C. : Natural Hazards and global change
- Morgan, A.E. : Dams and other disasters.
- Bara, M.C. (ed.) : Proceedings of International Conference on Disaster Management, Guwana 23-26, April 1998
- Strahler, A.N. & Strahler, A.H. : Environmental Geo Science interaction between natural system & man
- Thomas, W.L.(ed), Man's Role in Changed the face of the earth.
- Smith, R.L. : Man and his Environment : An Ecosystem Approach.
- Qelum, E.P. : Fundamental of Ecology
- Park, C.C. : Ecology & Environmental Management.

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SYLLABUS M.A. FINAL (GEOGRAPHY)
SEMESTER-IX (Year-II)

Paper-III GEOGRAPHY OF MANUFACTURING

- Unit-I** Nature, Scope and recent developments; Elements and factors of localization of manufacturing industries
- Unit-II** Theories and models of industrial location: Weber, Losch, Hoover, Modern Refinements to least cost theory; Critical review and application of industrial location theories.
- Unit-III** Distributional pattern of manufacturing industries: Iron and steel; Energy goods and automobiles, Textile, Chemicals, Petrochemical, Hardware & Software industries
- Unit-IV** Environmental degradation caused by manufacturing industries; Industrial hazards and occupational health, Role of Globalization on manufacturing sector; Shifting of industries and its impact on the urban fringe
- Unit-V** Major manufacturing regions of the world, Major manufacturing regions of India; Agro based industries of U.P.

Suggested books:

- Alexander, J.W. (1998) : Economic Geography, Prentice Hall, Englewood Cliffs
- Alexanderson, D. (1967) : Geography of Manufacturing, Prentice Hall, Bombay
- Hoover, E.M. (1948) : The location and Space of Economy, McGraw Hill, NY
- Isard, W. (1956) : Methods of regional Analysis, The technology press of M.I.T. and John Prentice Hall, Englewood Cliffs
- Weber, Alfred (1957) : Theory of location Industries, Chicago University Press

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SEMESTER-IX (Year-II)

Paper-IV Optional (A) RESEARCH METHODOLOGY

- Unit-I** Meaning Conceptual Foundation of Research; Types of research, objectives and motivation of research, Concepts of Pure and applied research, Research problems and research design
- Unit-II** Selection of Sample, sampling techniques and Aims of Sampling , Sampling and Sample Design; Sampling types –Random, Stratified and purposive
- Unit-III** Data Collection: Methods of field observation, techniques of primary data collection, preparation of questionnaire, Data collection from secondary sources, Tabulation data analysis and representing of data.
- Unit-IV** Cartographical Analysis of Data; Techniques of Data representation by quantitative maps; Development of Hypothesis and procedure for hypothesis testing.
- Unit-V** Drafting of research report, quantitative and qualitative interpretations; Organization and designing of report, Writing Thesis, Project Report, Research paper, Citation & referencing & evaluating report

Suggested books:

- Mahmood, Aslam : Statistical Methods for geographical Studies
- Suleman, M. : Research Techniques and Methods in Social sciences
- Chorley, R.J. & Haggett, P. (ed.) (1967) : Models in Geography, London
- Kaushik, S.D. (2001): Bhaugaulik Chintan avam Vichardhara (Hindi)
- Cresswell, J.W. : Research Design: Qualitative, Quantitative and mixed methods approaches.
- Ahuja R (2001) : Research Methods, Rawat Publications, Jaipur and New Delhi
- Bhattacharya D.K. (2005) : Research Methodology Excel Books, New Delhi
- Blaxter D. Hughes C and Tight M. (1996) : How to research Open University Press, Buckingham

- Denzin N.K. and Lincoln Y.S. (eds) (2000) Handbook of Qualitative Research Thousand Oaks C.A. Sage Publications
- Henn M Mark W and Nick F. (2006) : A short introduction to Social research, Vistar Publications, New Delhi
- Kitchin R and Tute N. (2001) Conducting research and Human Geography Theory Methodology and Practice Prentice Hall, London
- Lamb M. (2001) : Qualitative Methodology for Geographers Issue and Debates, Edward Arnold, London
- O`Leary Z. (2005) : The Essential Guide in Doing Research : Vistar Publications, New Delhi
- Patrick M. and Chapman S. (1990) : Research Methods (Third Edition) Routledge, London
- Peet R. and Thrift N. (ed) (1989/2002) New Models in Geography (2 vols) Rawat Publishers, Jaipur and New Delhi.

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SEMESTER-IX (Year-II)

Paper-IV Optional (B) GEOGRAPHY OF TOURISM

- Unit-I** Tourism : Definition and meaning; Factors Influencing Tourism : Historical, Natural; Socio-Cultural and Economic factors; Elements of Tourism
- Unit-II** Types of Tourism : Cultural, Historical and Adventure Tourism; Tourism as an industry; International Tourism, Ecotourism
- Unit-III** Evolution of Tourism in India; Problems of Tourism in India; Regional Dimensions of Tourist Attractions in India
- Unit-IV** Infrastructural Approach for the development of Tourism; Motivating factors for National and International Tourists; Development of Indian Hotel Industry
- Unit-V** Role of Foreign Capital and Impact of Globalization on Tourism; Environmental Law and Tourism; Government Policies for Planning and Promotion of Tourism in India.

Suggested books:

- Bhatia A.K. (1996): Tourism Development: Principles and Practices. Sterling Publishers, New Delhi.
- Inskeep. E (1991): Tourism Planning : An Integrated and Sustainable Development Approach Van Nostand and Reinhold, New York.
- Kaul R.K. (1985): Dynamics of Tourism and Recreation, Inter-India, New Delhi.
- Lea, J. (1988) : Tourism and development in the third world.
- Milton, D. (1993) : Geography of World Tourism, prentice Hall, New York.
- Peace, D.G. (1987) : Tourism To-Day: A geographical Analysis, Harlwo, Longman
- Robinson, H.A. (1996) : A geography of tourism, McDonald and Evans, London
- Sharma, J.K. (ed.)(2000) : Tourism, Planning and Development – A new perspective, Kanishka Publishers, New Delhi.
- Kaur J. (1985) : Himalayan Pilgrimies and New Tourism, Himalaya Book, New Delhi.

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SEMESTER-IX (Year-II)

Paper-IV Optional (C) GEOGRAPHY OF WATER RESOURCE MANAGEMENT

- Unit-I** Water resource management: Meaning and scope; Aims and objectives of Water Resource Management; The basic hydrological cycle: precipitation, evaporation and Evapo-transpiration.
- Unit-II** Water Resource-Inventory and distribution (surface and sub-surface)
Water Storages-Glaciers, river channels, lakes and reservoirs
- Unit-III** Water Demand and Use: Methods of estimation-agricultural, industrial and municipal use of water
- Unit-IV** Water balance pattern: Measurement of water balance; Assessment of water requirement; Depletion and water quality management
- Unit-V** Problems of Water Resources; Water Resource Management in Disaster Area; Water quality; Management and Pollution control; Water Management in Urban Area; Watershed Management, National Water Policy.

Suggested books:

- Agarwal, Anil and Sunita Narain (1997): Dying Wisdom: Rise, Fall and Potential of India.
- Traditional Water Harvesting System. Centre for Science and Environment System, New Delhi.
- Economic and Social Commission for Asia and the Pacific, United Nations (1989).
- Guidelines for the preparation of National Master Plans.

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SEMESTER-IX (Year-II)

Paper-V : (Practical) : ADVANCED CARTOGRAPHY : PROJECTIONS AND REMOTE SENSING

- Unit-I** Map Projection : Classification, Properties and choice of Map Projection, Construction of Map projections, Equatorial Zenithal-Equal area Projection, Gnomonic Equatorial Zenithal projection, Gnomonic Oblique Zenithal Projection, Construction of Stereographic Equatorial zenithal projection, Galls Setereographic Projection.
- Unit-II** Orthographic equatorial zenithal projection, Orthographic Polar Zenithal Projection, Convventional Projections : Globular Projection, Mollweide Projection, Inruptted Mollweide Projection, Sanson Flamsteed's Sinusoidal Projection.
- Unit-III** Interpretation of Satellite images; Preparation of land use / land cover maps; Geomorphic and drainage maps, Scanning of map, Geo referencing, Creation of shape files on screen digitization of polygons, point and lenses, adding attributes, map creation and export.
- Unit-IV** Interpretation and Application : Image processing techniques : Visual (VIP) and digital (DIP), Elements of image interpretation : Image rectification / pre-processing operations, Image enhancements and classifications , supervised and unsupervised, remote and environmental monitoring.

Suggested books:

- Streers J.A : An introduction to Study of map projections.
- Raisz Erwin : General Cartography
- Monkhouse FJ : A Dictionary of Geography
- Bygott, John : An introduction to map work & practical geography
- Chauhan, P.R. : Prayogatmak Bhugol
- Singh R.L. : Practical Geography
- Jameson, A.H. & Ormsby, M.T.M.: Elementary Surveying & Map Projection
- Cunan, RJ (1985) : Principles of Remote Sensing
- Lifestand, T.M & Kiefer, RW (1979) : Remote Sensing & Image Interpretation.

Note:- The student within the duration of 3 hrs have to attempt 4 questions each:

The distribution of marks shall be as follows:

Four classroom exercise	- 40 marks
Sessional Report	- 25 marks
Viva voice	- 10 marks

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SEMESTER-IX (Year-II)

Paper-VI FIELD STUDYING SURVEY REPORT / DISSERTATION

Unit-I : Introduction object of selection of study area, Hypothesis , Research / Project design & preparation of Bibliography, Collection & preparation of map

Unit-II Method of field work : Primary and secondary data, Tabulation of data, sampling techniques choice of map, diagrams, methodology, questionnaire, significance of field work in Geographical studies.

Suggested books:

- Purmina, B.C. : Surveying & Leveling Vol. I
- Alvi Ziaminuddin : A text book of surveying.
- Sharma, J.P. : Prayogik Bhugol
- Campbell, J. : Introduction Cartography
- Robinson A.H. & other : Elements of Cartography
- Archen J.E. & Dolton T.H. : Field work in Geography
- Glodard R.H. : Field techniques and Research methods in Geography
- Kanetkan, T.P. & Kulkarni S.V. : Surveying & Research
- Singh R.L. & Singh R.P.B. : Elements of practical geography
- Davis RE & Foote F.S. : Surveying theory & practices

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SEMESTER-X (Year-II)

Paper-I REGIONAL PLANNING AND DEVELOPMENT

- Unit-I** Nature scope regional planning concept in Regional Planning, Approaches of Regional Planning, Types of region : Formal and Functional, Uniform and Nodal, Single Feature region and Multi feature region
- Unit-II** Methods for delineation of region, Theories of Regional Development (Perroux Growth Pole Theory, R.P. Mishra Albort O. Herschman, Gunnar Myrdal, W.W. Reston), Regional Planning – Merits and Limitations, Planning Process – sectorial temporal and spatial dimensions, short term & long term planning.
- Unit-III** Evolution of Regional Planning in India, River valley regions & Metropolitan Regions, Planning in Regions-Hilly Regions, Tribal Regions, Regions of drought and flood.
- Unit-IV** Development: Concept and Indicators, Regional disparities in development of India, Need for Regional Planning in India, Regional Development in India-Problems and Prospect
- Unit-V** Concept of multilevel planning, decentralized planning, Planning for sustainable development, People’s participations in planning process, Role of Panchayati Raj institutions in Regional development, Regional development in India, problems and prospects

Suggested books:

- Chand M and Puri V.K.-Regional Planning in India
- Misra R.P. – Regional Planning
- Misra R.P. – Regional Planning Concepts, Techniques, Policies & Case Studies
- Shrivastava and Chauhan – Pradeshik Niyojan avam Santulit Vikas
- Bhatt, L.S. : Regional Planning in India
- Chorley R.J. & Hagget P. : Models in Geography
- Fridmann J and Alonso W : Regional Development Policy
- Glikson Arthur : Regional Planning & Development
- Gosal G.S. & Krishnan G : Regional Disparities in levels of Economic Development in Punjab.
- Chandna R.C. : Regional Development & Planning

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SEMESTER-X (Year-II)

Paper-II Optional (A) URBAN GEOGRAPHY

- Unit-I** Urban Geography: Nature and Scope, different approaches & recent trends in Urban Geography, Attributes of urban places during ancient, medieval and modern periods, Locational and Functional classification of towns
- Unit-II** Bases and process of Urbanization and development; Origin and growth & morphology of urban settlements; Urban growth and theories; Central place theory of Christaller and Losch; Contribution of Indian Scholars to the study of urban settlements; Urban Hierarchy-Rank size rule and primate city.
- Unit-III** Urban morphology and land use – Burgess, Hyot, Harris and Ulman, Concept and characteristics of CBD, Urban expansion, conurbation, Urban Agglomeration
- Unit-IV** Concept of city, Umland and sphere of Influence Area, Rural Urban Fringe, Concept of Megalopolis and Metropolitan region, Planned and unplanned cities of India.
- Unit-V** Trends of Urbanization in India, Urban problems with special reference to slums and urban poverty, Urban Sprawl, Urban Planning and Policies in India, Green cities, Contemporary issues in urban planning, Smart City Mission in India.

Suggested books:

- Carter, H. (1972) : The study of urban Geography, Arnold Hienemann
- Geddes, P. (1968) : Cities in Evolution, Benn Publishers
- Hall, P. (1992) : Urban Geography: An introductory Analysis, Germ Area
- Scett, A. (2001) : Global City Region, Oxford University Area, U.K.
- Sinha, M.M.P. & Bala Seema : Nagariya Bhugo (Hindi)
- Bansal : Nagariya Bhugol (Hindi)
- Alam, S.M. : Hydraabad – Secundrabad Twin city
- Berry, BJL and Horton, F.F : Geographic Prespectives on urban systems
- Chorley R.J.O. & Haggett P. (ed.) : Models in Geography

- Dickinson, R.E. : City & region
- Gibbs JP : Urban ResearchMethods
- Hall, P. : Urban Regional Planning
- James PE and Jones CF (eds) : American Geography, Inventory & Prospect
- Mayor,H.M. & Kohn CF(eds) : Reading in Urban Geography
- Mumford L : Culture of cities
- Smailes AE : The Geography of Towns

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SEMESTER-X (Year-II)

Paper-II Optional (B) : CULTURAL GEOGRAPHY

Unit-I : Nature and Scope of Cultural Geography; Approaches and Development; Relationship of Culture with Environment: Resources and Technology.

Unit-II:- Major Concepts: Cultural Diffusion, Material Culture, Cultural Landscape and Cultural Ecology; Origin & Dispersal of Man.

Unit-III Origin, Types & Dispersal of Human Races; Racial Composition of India; Linguistic and Religious Structure of the World.

Unit-IV Domestication of Plants and Animals; Renewal and Dispersal Activities of Crops – Paddy, Maize, Sugarcane and Rubber; Agricultural Practices and Innovations; Industrial and Technological Revolution.

Unit-V Globalization and Cultural Development; Ecological Impact of Population Explosion, Cultural Hearths; Major Cultural Realms and Regions of the World.

Suggested books:

- Spencer, J.E. and Thomas, W.L. (1978) : Introducing Cultural Geography, John Willey and Sons, New York.
- Wagner, P.J. and Mikesell, M.W. (1962) : Readings in Cultural Geography, University of Chicago Press.
- Rostlund, F. (1988) : Outline of Cultural Geography, California Book Co. Berkley.
- Dicken, S.N. & Pits., F.R. (1970) : Introduction of Cultural Geography : A study of Man and his Environment, Edwin & Co. Waltham, Massachusetts.
- Salter, C.L. (1971) : The Cultural Landscape, Durbury Press, California.
- Carter, G.F. (1998) : Man and the Land : A cultural Geography, Rienhart, New York.
- Dohus, F.E. & Sommers, L.M. (ed) (1967) : Cultural Geography – Selected Readings, Dunn – Donally Publishing Corporation, New York.
- Sopher, F.E. (1978) : Geography of Religions, Prentice Hall, New Jersey.
- Fraizer, E.F. (1957) : Race and Cultural Contacts in the Modern World : AA. Knopf, New York.
- Waqner, P.L. (1972) : Environment of People, Prentice Hall, Eaglewood Cliffs.
- Dikshit, S.K. & Tripathi, R.D. (2001) : Sanskritic Bhoogol, Vasundhara Prakashan, Gorakhpur.

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SEMESTER-X (Year-II)

Paper-II Optional (C) : BIO-GEOGRAPHY

Unit-I : Biogeography : Meaning, scope and development, Relation of Biogeography with other sciences, Significance of Bio-geography, Biome and its type and plant animal interaction with different Biomes.

Unit-II:- Role of Soil in biogeography, Soil forming process and affecting factors, Components and properties of soil. Soil Erosion and Conservation.

Unit-III Animal and Plant Kingdom – Evolution and dispersal, distribution, plant succession in newly formed areas.

Unit-IV Biodiversity : Concept and types, Significance of biodiversity, Ecosystem – Concept, types and significance.

Unit-V Conservation and management of biodiversity, Sustainable development, Programs and policies in India for conservation of biodiversity.

Suggested books:

- Agarwal, D.P. (1992) : Environment and ecology of early man in Northern India.
- Hoyt, J.B. (1992) : Man and the Earth, Prentice Hall of USA
- Huggett, R.J. (1998) : Fundamentals of Biogeography, Routledge, USA.
- Illies, J. (1974) : Introduction to Zoogeography, McMillan. London.
- Khoshoo, T.N. & Sharma, M. (eds.) (1991): Indian geosphere-biosphere, Har-Anand Publications, New Delhi.
- Lapedes, D.N. (ed.) (1974) : Encyclopedia of Environmental Science, McGraw.
- Mathur, H.S. (1998) : Essentials of Biogeography, Anuj Printers, Jaipur.
- Pears, N. (1985) : Basic Biogeography.
- Simmon I.G. : Biogeography : Natural and Cultural, Longman, London
- Watts, David : Principles of Biogeography, London.

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SEMESTER-X (Year-II)

Paper-III Optional (A) AGRICULTURE GEOGRAPHY

- Unit-I** Agriculture Geography : Nature, scope and significance, Basic concepts, Objectives of Agricultural Geography, Approaches to the Study of agricultural geography – Regional and systematic approaches , Sources of Agricultural Data
- Unit-II** Agriculture Land Utilization, Land reforms Land Use Policy and Planning, Agricultural Productivity and Crop Diversity, Green Revolution including & regional imbalances, Impact and Consequences of Green Revolution, Concept of second green revolution in India.
- Unit III** Von Thunen`s Theory of Agricultural Location and its Recent Modifications, Whittlesey`s Classification of Agricultural regions
- Unit IV** Regional Pattern of Productivity in India, White Revolution in India, Problems in Indian Agriculture, Food Deficit and food surplus regions, Agricultural Policy in India
- Unit V** Intensity of Cropping and Land Capability in Agriculture, Employment in Agricultural Sector : landless labourers, Women, Environment Degradation : Role of Chemical Fertilizer, insecticides and pesticides

Suggested books:

- Bayliss Smith, T.P. (1987) : The Ecology of Agricultural Systems, Cambridge University Press, London.
- Berry, B.J.L et.Al. (1976) : The Geography of Economic Systems, Prentice Hall, New York
- Brown, L.R (1990) : The Changing World Food Prospects – The Nineties and Beyond, World Watch Institute, Washington D.C
- Dyson, T. (1996) : Population and Food-Global Trends and Future Prospects. Routledge, London.
- Gregor, H.F. (1970) : Geography of Agriculture, Prentice Hall, New York.
- Hartshorn T.N. and Alexander J.W : Econome Geography
- Mannion, A.M. : Agriculture & Environment change
- Morgan, W.B and Norton, R.J.C. : Agricultural Geography
- Morgan, W.B. : Agriculture in the third world : A spatial analysis
- Singh, S.S. : Krishi Bhoogol
- Singh J & Dhillon S.S. : Agricultural Geography
- Shafi, M. Regional imbalances in Agricultural Productivity in Uttar Pradesh
- Hussain, M. : Agricultural Geography.

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SEMESTER-X (Year-II)

Paper-III Optional (B) GEOGRAPHY OF MARKETING

Unit-I : Marketing Geography : Definition, scope and significance, Growth and Development, Approaches of Study : commodity, Spatial, Social Economic, Behavioural, Application of Planning : Market, Urban, Agriculture.

Unit-II : Markets : Classification, structure and hierarchy, Markets participants, Market Channel and Trade Area, Theoretical Framework for Study of Market Centres : Christaller and Losch Model of Market Locations; B.J. Berry's Model and Reilly's Models of interaction and trade area delimitation.

Unit-III Trade: Classification and structure: Local, Regional, National and International, Historical Development of Trade, Factors of Development of Trades. International Trade, World Trade Organization, World Trading Zone: SAFTA (South Asian Free Trade Association), NAFTA (North Atlantic Free Trade Association).

Unit-IV Indian Agriculture Marketing : Definition, Types and Structure, Formal Marketing : Regulated, Government Purchase Centres, Informal Marketing.

Unit-V Local Regional, Private Traders, Processing Units, Marketing of Food grains and Vegetables, WTO and Agricultural Marketing : Its Impact on agriculture environment, Food Security and Society.

Suggested books:

- Acharya, S.S. & Agarwal, N.L. (1987) : Agricultural Marketing in India, Oxford & IHB Publishing Co. New Delhi.
- Berry, B.J.L. (1967) : Geography of market centers Retail Distribution, Prentice Hall, Englewood Cliffs, N.J.
- Davis R.L. (1976) : Marketing Geography, Methuen, London.
- Dixit R.S. (1984) : Marketing Centers and their spatial development in the Umland of Kanpur, Allahabad
- Garnier, B, J and Delobez. A. (1977) : Geography of Marketing, London.

- Khan, N (1991) Agricultural Development and Marketing, H.K. Publisher, New Delhi.
- Losch, A (1954) Economics of Location, Yale University Press, New Heaven.
- N.C.A.E.R. (1983) Market towns and Spatial Development in India, NCAER, N.D.
- Saxena, H.M. (1984) : Geography of Marketing, Concepts and Methods, New Delhi.
- Saxena, P. Marketing and Sustainable Development, Rawat Publication, New Delhi.
- Singh G.N. (1987) : Agricultural Marketing in India, Hugh Publication, Allahabad.
- Rajgopal (2001) : Rural Marketing, Rawat Publication, New Delhi.

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SEMESTER-X (Year-II)

Paper-III Optional (C) GEOGRAPHY OF HEALTH

Unit-I : Meaning, Scope, Significance, Development, Methods and Techniques of Geography of Health, Geographical factor affecting human health & diseases – Physical, Social, Economic and Environmental.

Unit-II Vital & Health Indices; Classification of Diseases – Genetic, Communicable & Non – communicable, Occupational and Deficiency Diseases; Geography of Hunger and Malnutrition.

Unit-III Pattern of Distribution of Major Diseases in the World; Ecology, Etiology and Transmission of Major Diseases – Cholera, Malaria, Tuberculosis, Hepatitis, Cancer, AIDS and STDs and their Regional Patterns with special reference to India.

Unit-IV Disease Diffusion Models and Health Care Accessibility Models; Health Care System – International Level – WHO, UNICEF & Red Cross; National Level – Government and NGO's.

Unit-V Health planning and Policies in India; Family Welfare; Immunization, National Disease Eradication, Aayushman Bharat Yojna & Health for all.

Suggested books :

- Cliff, A. & Haggett, P. (1989) : Atlas of Disease Distribution, Basil Blackwell, Oxford.
- May, J.M. (1970) : The World Atlas of Diseases, National Book Trust, New Delhi.
- May, J.M. (1959) : Ecology of Human Diseases, M.D. Pub., New York.
- Mc Glashan, N.D. (1972) : Medical Geography, Methuen, London.
- Pyle, G. (1979) : Applied Medical Geography, Winston Halsted Press, Silver Spring, M.D. U.S.A.
- Akhtar, Rase (1971) : Environment and Health, New Delhi.
- Learmonth, A.T.A. (1978) : Pattern of Disease and Hunger : A study in Medical Geography. David & Charles, Victoria.
- Akhtar, Rase & Learmonth, A.T.A. (1979) : Geographical Aspect of Health and Disease, New Delhi.
- Shrivastava, Saroj (1993) : Medical Geography of Sarupar Plain, IRED, Gorakhpur.
- Singhi, G.C. (1999) : Medical Geography (Hindi), Vasundhra Prakshan, Gorakhpur.
- Bose, Kausik (2006) : Ecology, Culture, Nutrition, Health & Diseases, Kamla Raj Enterprises.

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SEMESTER-X (Year-II)

Paper-IV Optional (A) REMOTE SENSING & GEOGRAPHICAL INFORMATION SYSTEM

- Unit-I** Meaning of Remote Sensing ; Definition, Significance & utility of remote sensing in Geography; Historical Development of Remote Sensing, Remote sensing regions and bands, Spectral Signature.
- Unit-II** Principle of Remote Sensing; Interaction of electromagnetic energy with matter; Remote Sensing System- Radiation, Sensors, Platforms, Solar Energy; Elements of Photographic System-types, scales, ground coverage, resolution, areal cameras
- Unit-III** Satellite Imagery : General and orbital characteristics of remote sensing satellites , General Characteristics of remote sensing sensors : MSS and LISS; Types of remote sensing : Active & Passive Remote Sensing ; Major Remote Sensing Programs of the world, LAND SAT, ERS; Remote Sensing Program of India, Utility of Remote Sensing.
- Unit-IV** Geography as a Spatial Science ; Definition & Evolution of GIS, Principles and elements of GIS; Issues in GIS; User technology, data & application; recent advances in GIS, Mobile GIS, GPS.
- Unit-V** Elements of Spatial Data, Basic principles of computer cartography for GIS and GPS; Characteristics and applications of Digital Elevation Model (DEM) and Triangulated irregular Network (TIN); Applications of Remote Sensing and GIS in Urban Development and Disaster Management.

Suggested Readings :

- Avery, T.E. (1962) : Interpretation of aerial photograph, Minneapolis
- Dury, G.M. (1952) : Map Interpretation
- Cunan, R.J. (1985) : Principles of Remote Sensing
- Lifesand, T.M. & Kiefer, R.W. (1979) : Remote Sensing and Image Interpretation, New York
- Sabins, F.F. (1997) : Remote Sensing and Interpretation, New York
- Campbell, J.B. : Introduction to Remote Sensing, London
- Eraser Taylor, D.R. (1991) : Geographical Information System, London

- Siddiqui : An Introduction to GIS
- Devidatt Chaunyal : Sudoor Samvednam Bhaugolik Chinta Pranali
- Gupta, R.P. : Remote Sensing Geology
- Heywood I, Cornelius S., Carver S. : An introduction to Geographic Information System
- Aronoff S. : Geographic Information Systems : A management Perspective
- Star J & Estes J, Geographic Information Systems : An Introduction
- Barrett EC & Curlis LF : Fundamentals of Remote Sensing and Air Photo interpretation.
- Hord RM : Digital Image Processing & Remote Sensing data.

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SEMESTER-X (Year-II)

GEOGRAPHY OF ANY ONE OF THE MESO REGIONS OF THE WORLD

Paper-IV Optional B(i) MONSOON ASIA

- Unit-I** Physical Setting : Structure and relief; Physical Divisions; Climate and Climatic Regions; Natural Vegetation and Soil Regions
- Unit-II** Population : density, growth and distribution ; Population problems and their solutions
- Unit-III** Resource and their uses; Distribution and Utilization of Power Resources ; Minerals : Distribution and Production, Water Resources
- Unit-V** Regional Study of the following countries: Pakistan; Nepal; Bangladesh; Burma; Indonesia, Malaysia; Thailand

Suggested books:

- Robinson, H. : Monsoon Asia
- Ahmad, K.S. : A Geography of Pakistan
- Dobby, E. H. G. : Monsoon Asia
- Rawson, R. R : Monsoon Lands
- Little : Far East
- Spencer, J. : Asia-East by South
- Fisher, C.A. : South east Asia
- Moulton : Japan – A Geography
- Ahmad, N. : An Economic Geography of Pakistan
- Cressey, G.B. : China`s Geographic Foundation
- Singh, R.L. (ed) : Rural settlements in Monsoon Asia
- Green, F. : The Far East
- Cohen, B. : Monsoon Asia : A Map Geography
- Nigam M.N. & Garg B.L. : Monsoon Asia

RAJA MAHENDRA PRATAP SINGH STATE UNIVERSITY, ALIGARH
SYLLABUS M.A. FINAL (GEOGRAPHY)
SEMESTER-X (Year-II)

GEOGRAPHY OF MESO REGIONS OF THE WORLD

Paper-IV Optional B(ii) NORTH AMERICA (USA AND CANADA)

- Unit-I** Physical Setting: Structure and Relief; Physical divisions; Climate and Climatic Regions
- Unit-II** Natural Resources and their uses: Natural Vegetation zones; Soil regions; Minerals : Distribution and production; Distribution and utilization of resources of power.
- Unit-III** Population : Density, Growth and distribution ; Population Problems and their solutions
- Unit-IV** The Economy : Agriculture and Agricultural Regions, Irrigation and River Valley projects, Industrial Regions, Transport, trade and commerce
- Unit-V** Study of the following regions :
- U.S.A.:** North-Eastern States, The Columbia-Fraser & Los Angels Basin
- Canada:** St. Lawrence Region, The Prairie Plains

Suggested books:

- Jones and Miller : North America
- A.E. Perkins : North America
- Weston, J.W. : North America
- White and Foscue : Regional Geography of Anglo-America
- Taylor, G. : Canada
- Moad, W. N. : The United States and Canada
- Shaw, B. B. : Anglo America – A regional geography
- Ashton, L. G. : North America

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SEMESTER-X (Year-II)

GEOGRAPHY OF MESO REGIONS OF THE WORLD

Paper-IV Optional B (iii) AUSTRALIA AND NEWZEALAND

- Unit-I** Physical Setting : Structure and relief; Physical Divisions; Climate and Climatic Regions
- Unit-II** Natural Resources and their uses; Natural Vegetation zones; Soil regions; Minerals : Distribution and Production ; Distribution and utilization of resources of power
- Unit-II** Natural Resources and their uses: Natural Vegetation zones; Soil regions; Minerals : Distribution and production; Distribution and utilization of resources of power.
- Unit-III** Population : Density, Growth and distribution ; Population Problems and their solutions
- Unit-IV** Economy : Agriculture; Irrigation Pastoral Economy (Dairying and Sheep Industry) and River Valley projects, Industrial Regions, Transport, trade and commerce
- Unit-V** Study of the following regions :
- Canberra
 - Victoria
 - Tasmania
 - Muray Darling Basin

Suggested books:

- Suggate, L, S. : Australia and New Zealand
- Laborde E.D. : Australia, New Zealand and Pacific island.
- Domollo, K : Australia
- Rees, H. : Australia
- C.S.I.R.O. : Atlas of Australian Resources.
- C.S.I.R.O. : The Australian Environment
- Taylor, G. : Australia
- Prescott, J.A. : The soils of Australia in relation to vegetation and climate, C.S.I.R.O. Bulletin 52 (1952)
- Government of Australia : Official year book of the common wealth of Australia

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SEMESTER-X (Year-II)

GEOGRAPHY OF MESO REGIONS OF THE WORLD

Paper-IV Optional B (iv)

EUROPE

Unit-I : Physical Setting : Structure and Relief, Physical divisions, Climate and climatic Regions.

Unit-II Natural Resources and their uses : Natural Vegetation zones, Soil Regions, Minerals Distribution and production, Distribution and Utilization of resources of Power.

Unit-III Population : Density, Growth and distribution population Problems and their Solutions.

Unit-IV The Economic Agriculture and Agricultural Regions, Irrigation and River Valley Projects, Industrial Regions, Transport, Trade and Commerce.

Unit-V Study of the following Regions :

North Western Regions

Scandinavian Region

Eastern Region

Medditerranean Regions

Suggested books :

- Ahmad K.S. (1964) : Geography of Pakistan, Oxford University, Karachi.
- Dobby E.H.G. (1960) : South East Asia, University of London Press, London.
- Fisher, W.B. (1963) : Middle East : A Physical Social and Regional Geography Dutton New York.
- Nolte, Richard H (ed) : The Moder Middle East Atherolon Press, New York 1963.
- Spate, O.H.K. and Lear month, A.J.A (1967) India and Pakistan & Ceylon, Methen & Co. London
- Preece, D.M. Wood H.R.B. (1960) : Modern Geography III – Europe, University Tutorial Press, London.
- Fleure, H.J. : The Peoples of Europe
- Freeman Edward Augustus : Historical Geography of Europe
- Rao, B.V. : Husting of Europe
- Hussain, M. : Terms & Concepts of Geography
- Hunthington, E : The Geography of Europe

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SYLLABUS M.A. FINAL (GEOGRAPHY)
SEMESTER-X (Year-II)

Paper-V Practical ADVANCED SURVEYING, GIS & AERIAL PHOTOGRAPH

Unit-I : Theodolite Surveying : Types of Theodolite, Procedure of Theodolite Survey, Measurement of Angles and Plotting, Methods of Theodolite Surveying : Triangular & Traverse.

Indian Clinometer : Measurement of height – accessible and inaccessible method, methods of colouring.

Unit-II Dumpy Level – Methods of Levelling : Simple Levelling, Differential Levelling, Profile Levelling Plotting of Longitude Profile

Sextant – Measurement of Horizontal Angle & Vertical Angle, Determination of Height : accessible and inaccessible method.

Unit-III Aerial Photograph : Meaning, Methods of Aerial Photograph, Types of Aerial Photographs, Photomosaic, Scales of aerial Photographs, Determination of direction, on air photographs, Steroscope and 3D Maps, Merit and demerit of aerial photographs.

Unit-IV Geographical Information System : Definition, Development Objective, Element of GIS Spatial analysis, use of computer in GIS, Hardware and Software, Design of GIS, Data Structure, Input of GIS data.

Note : The students have to attempt 4 questions within a period of three hours each from the four units.

The distribution of marks shall be as follows :

(i)	Four Exercise	-	40 marks
(ii)	Sessional Work	-	25 marks
(iii)	Viva Voice	-	10 marks

Suggested books:

- Purmina, B.C. : Surveying & Leveling Vol. I
- Alvi Ziaminuddin : A text book of surveying.
- Sharma, J.P. : Prayogik Bhugol
- Campbell, J. : Introduction Cartography
- Robinson A.H. & other : Elements of Cartography
- Archen J.E. & Dolton T.H. : Field work in Geography
- Glodard RH : Field techniques and Research methods in Geography
- Kanetkan, TP & Kulkarni SV : Surveying & Research
- Singh R.L. & Singh RPB : Elements of practical geography
- Davis RE & Foote FS : Surveying theory & practices

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SEMESTER-X (Year-II)

Paper-VI FIELD STUDYING SURVEY REPORT / DISSERTATION

Unit-I : Introduction, objectives of selection of study area, Hypothesis , Research / Project design & preparation of Bibliography, Collection & preparation of map

Unit-II Method of field work : Primary and secondary data, Tabulation of data, sampling techniques choice of map, diagrams, methodology, questionnaire, significance of field work in Geographical studies.

Unit-III Tracing of the prominent features of area, identify salient land forms features of selected area on a topographical sheet, identify the landforms flora and fauna land use patterns.

Unit-IV Agriculture Study, Health Study, Educational study, Settlement structure and life style of the people on the basis of field observations. The students will prepare field study survey report / Dissertation with the help of map, diagram & photographs.

Note :- The students who will opt for dissertation should follow the research guideline under supervisor in his department. The TA/DA and other expenses on teachers and attendant will be met out by the college as per govt. rule for 10 days industrial training / field study on survey report only.

Suggested books:

- Purmina, B.C. : Surveying & Leveling Vol. I
- Alvi Ziaminuddin : A text book of surveying.
- Sharma, J.P. : Prayogik Bhugol
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