



शहीद नंदकुमार पटेल विश्वविद्यालय रायगढ़ (छ.ग.)

पाठ्यक्रम एम.ए. (अंतिम) भूगोल

एम.ए. अंतिम भूगोल में चार सैद्धांतिक एवं एक प्रायोगिक प्रश्नपत्र होंगे। प्रथम प्रश्नपत्र **Climatology And Oceanography** एवं प्रायोगिक प्रश्नपत्र अनिवार्य होंगे। वैकल्पिक/ऐच्छिक समूह-अ, ब, एवं स में से एक-एक प्रश्नपत्र का चयन करना अनिवार्य होगा। प्रत्येक प्रश्नपत्र 100 अंक के होंगे एवं न्यूनतम उत्तीर्णांक 36 प्रतिशत होगा। एम.ए. पूर्व भूगोल के ऐसे छात्र/छात्रा जिनके प्राप्तांक 60 प्रतिशत है, वे ऐच्छिक समूह-ब के तृतीय प्रश्नपत्र के स्थान पर लघुशोध प्रबंध लिखने कि पात्रता रखते हैं।

समूह	प्रश्नपत्र	प्रश्नपत्र का नाम	पूर्णांक
अनिवार्य	I	Climatology & Oceanography	100
ऐच्छिक समूह-अ	II	1- Population Geography 2- Regional planning & Development 3- Biogeography	100
ऐच्छिक समूह-ब	III	1- Settlement Geography 2- Urban Geography 3- Remote sensing & GIS or Dissertation	100
ऐच्छिक समूह-स	IV	1- Agricultural Geography 2- Geography of environmental management 3- Geography of Tourism	100
अनिवार्य	V	Practical	100



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PAPER-I (Compulsory) CLIMATOLOGY AND OCEANOGRAPHY

OBJECTIVE:

The main objectives of the course is to provide

1. Understanding of weather phenomena and generation of climatic phenomena and Dynamics of global climate.
2. Understanding the main facts of ocean such as evolution of the ocean, physical and chemical properties of sea water. Oceanographic, circulation and marine life.

COURSE CONTENTS:

(A) CLIMATOLOGY

UNIT-I

1. Natural and scope of climatology and its relationship with meteorology
2. Composition and structure of atmosphere
3. Insulation and heat balance of the earth greenhouse effect
4. Vertical and horizontal distribution of thermometer.

UNIT II

5. Atmosphere motion local winds and jet stream.
6. Atmosphere moisture humidity evaporation condensation participation world pattern of participation acid rain.

UNIT III

7. Concept of a message And Atmosphere disturbance
8. Ocean atmosphere interaction El Nino Southern, oscillation (ENSO) and La Nino.
9. Monsoon winds, Norwesters and cyclones, climate of India and its controls.

(B) OCEANOGRAPHY

UNIT IV

1. Natural and scope of Oceanography, History of Oceanography.
2. Distribution of land and water major features of ocean basins, Continental margins (Continental shelf and Continental slope and deep ocean basin)
3. Physical and chemical properties of sea water.
4. Interlink between atmosphere circulation and circulation pattern in the ocean surface current wave and tides.

UNIT-V

5. Marine biological environment– bio-zone or the ocean type of organisms plankton Nekton, and Benthos, food and mineral resources of the sea
6. Best Marine deposits and formation of coral- reefs.



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PAPER- II (OPTIONAL) GROUP-A

I. POPULATION GEOGRAPHY

UNIT- I

Natural and scope of Population Geography development of population geography as field of specialization its relation with the demography source of population data their leave of reliability and problem of mapping the population data.

UNIT- II

Population distribution and density growth of population theoretical issues world pattern and determinates. India population distribution density and growth profile.

UNIT- III

Population composition gender issues age and sex literacy and education ruler and urban unbanization occupational structure population composition of India.

UNIT- IV

Population dynamic measurement of fertility and mortality migration National and international India's population dynamic world pattern of fertility mentality and internal migration population designs of the world and India.

UNIT- V

Population and resources development contempt of optimum population under population and over population theories of population Malthus Boserup, Limits to growth demographic transition population policies in developed and developing countries (Sweden from Australia China and India) population resource regions of the world



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**PAPER- II
(OPTIONAL)
GROUP-A**

II. REGIONAL PLANNING AND DEVELOPMENT

COURSE CONTENTS:

To understand and evaluate the concept of regional geography and its role in planning.

To identify the issues relating to the development of the region through the process of spatial organisation.

To identify the causes of regional disparities in development, perspectives and policy improvement.

UNIT-I

Regional Concept in Geography, conceptual and theoretical Framework, merits and Limitation for application to regional planning and development, Concept of space, area and locational attributes.

UNIT-II

Types of Region- Formal and Functional, Uniform and nodal, Single purpose and composite, Region in the context of planning Regional Hierarchy.
Regional Divisions according to variations in levels of socio-economic development and Resource Region.

UNIT-III

Regional Development Theories: Theories of Myrdal and Hirschman,, Franks theory of under development
Special purpose Region - River valley Regions Metropolitan Regions.
Problem Regions - Hill Regions, Tribal Regions of Drought and Floods.

UNIT-IV

Planning process - Sectoral, Temporal and Spatial dimension, short term and long term perspective of planning. Planning for a region's development and multi regional planning.
Indicators of development and their data sources, measuring levels or regional development and disparities. Regional Plans of India.

UNIT-V

Concepts of multi-level Planning: Decentralised planning process, Panchayati Raj system, Role and relationship of Panchayati Raj System (Village Panchayat Janpad Panchayat and Zila Panchayat) and administrative structure (Village, Block and Districts), Regional development in India - Problems and prospects.



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PAPER- II (OPTIONAL) GROUP-A III. BIO-GEOGRAPHY

OBJECTIVES: To Introduce the student the concept of bio geography and its interpretation information and their application comma interaction between living organism with climate and physical environment with special reference to India.

Course contents:

UNIT-I

- I. Scope and development of bio geography.
- II. Environment, Habitat and plants animal Association adaptation biome types.

UNIT-II

- III. Elements of plant Geography, distribution of forest and measure plants communities, plant succession in newly formed land forms. Examples for food plains and glacial for fields.

UNIT-III

- IV. Dispersal and migration of plant communities.
- V. Zoo geography and its environmental relationship.

UNIT-IV

- VI. Distribution of animals Zoogeographical Reasons.
- VII. Migration of animals.

Unit-V

- VIII. Palaeo-botanical and palaeo-climatological records of environmental changes in India.
- IX. National Forest Policy, of India, Conservation of Biotic Resources.



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**PAPER- III
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GROUP-B**

I. SETTLEMENT GEOGRAPHY

COURSE CONTENTS

Unit-I

Meaning, Objectives and Scope of Settlement Geography, Evolution, Distribution, Types and Patterns of Rural Settlements, Rural House Types, Rural Service Centres.

Unit-II

Evolution and growth of urban Settlements, the Geographical setting of Urban Centres: Site, Situation and Location, Rank - size - relationship.

Unit-III

Cities as Central Places, Central Place Theory, Growth Centre Theory and City-Country Relationship: Umland Rural-Urban Fringe, General nature of City Structure: (i, ii)

Unit-IV

The Central Business District (CBD), Centrifugal and Centripetal forces in Urban Geography, Economic Base of Towns: Basic/Non-basic concept.

Unit-V

Urban Functions, Functional Classification of Towns, Urban Planning (i) Types and Elements (ii) Urban Problems, Blight and renewal, Urban Planning in India.



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PAPER- III (OPTIONAL) GROUP-B

II. URBAN GEOGRAPHY

OBJECTIVE

- I. To understand the process of urbanisation, origin, growth and classification urban settlements with relevant theories and models.
- II. To examine changing economic base and structure of cities.
- III. To understand urbanisation process and the evaluation of urban system.
- IV. To examine the contemporary urban issues and to suggest new urban planning and policy.

COURSE CONTENTS:

UNIT- I

- i. Nature and scope of urban Geography. Approaches and recent trends in urban geography.
- ii. Origin and growth of urban settlements ancient medieval and modern period.

UNIT - II

- iii. Bases and process of urbanisation,
- iv. Classification of urban settlements on the basis of size and function functional classification of Towns,

UNIT -III

- v. Urban growth and theories, central place theory of Christaller and Losch. Contribution of Indian scholars to the studies of urban settlement.
- vi. Urban economic base; Basic and non basic functions, Input output model. City and changing urban functions.

UNIT -IV

- vii. Organisation of urban space; urban morphology and land use
- viii. structure city core, commercial, industrial and residential areas morphology of Indian urban settlements and its comparison with western cities.
- ix. Urban expansion, urban and periphery (Fringe).

UNIT - V

- x. Contemporary urban issues: Urban sprawl, Urban slums, environmental pollution air, water, noise solid waste, Issue of environmental health.
- xi. Urban Policy and planning. City Planning, contemporary Issues in urban planning, globalisation and urban planning in the Third world. Urban land use planning Green belts.



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PAPER- III (OPTIONAL) GROUP-B

III. REMOTE SENSING & G.I.S. '

UNIT- I

REMOTE SENSING - An overview of Remote Sensing; meaning and scope, place and relevance in geographical studies eciflc Characteristics, potentials and limitations of remote-Sensing; Development in the world and in India.

Physical basis of Remote Sensing radiation concepts and laws pragmatic division of EMR spectrum for Remote Sensing; Atmospheric intervention in EMR propagation; Interaction of earth features and materials with EMR; Resolution concept; Types of sensors and platforms; Principles of Remote Sensing.

UNIT- II

Aerial Photography- type etc features of aerial camera; marginal and ancillary information on aerial photographs, Simple geometry of vertical aerial photographs - scale and tilt effects, Map, photograph and imagery- a comparative perspective. Stereoscopy and its application to three dimensional perceptions and conceptual.

Visual image processing- basic concepts; Identificatory elements of images, Interpretation keys, Use of multispectral data as co/our composites; Ground truthing and verification. Transfer of details to base to base map.

UNIT- III

Principal satellite systems - general classification, and detailed characteristics of sensors, orbiting pattern and data products of LANDSAT and IRS satellite systems; Indexing and heads information on IRS data products, Computer processing and other transforms (only conceptual).

UNIT- IV

Geo-information System -Definition, scope, of GIS; relation with collateral disciplines like Cartography, Remote Sensing, Computer Science, and Geography, as well as with various application fields, Development of GIS in the world and in India Basic concepts and Essential elements of GIS; Data types used in GIS; Methods of inputting spatial data in GIS; Special computer H/W and S/W components of GIS;

UNIT- V

Global Positioning System (GPS)- concepts and application, fundamental operations and spatial analysis and socioeconomic, Mobile mapping systems. Special data infra structure- concepts, issues and strategy.



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**PAPER- IV
(OPTIONAL)
GROUP-C**

I. AGRICULTURAL GEOGRAPHY

OBJECTIVE:

To familiarize the student with the concept, origin and development of agriculture
To examine the role of agriculture determine towards changing cropping patterns, intensity comma productivity diversification and specialization.
To discuss environmental, technological and social issues in agriculture sector with special reference to India.

COURSE CONTENTS:

UNIT- I

Natural, scope and development of agriculture geography, Approaches to the student of agriculture Geography, commodity, Systematic business and system origin and dispersal of agriculture, Source of agriculture data.

UNIT- II

Determinates of agricultural land use, Physical economic, social and technological, land use policy and planning, land use survey and land capability

UNIT- III

Selected agriculture concepts and their measurements, Cropping pattern, crop concept ration and intensity of cropping former degree and commercialization efficiency and productivity comma crop combination regions

UNIT-IV

Theories of agriculture location Von Thuen's theory of agriculture location and its recent modification theories of diffusion an adoption of innovations, agriculture topology kostrovickie's method. Whittlesey's classification of agriculture regions

UNIT-V

Agriculture in India farmer land use and shifting cropping pattern, regional pattern of productivity in India, green revolution, White Revolution, food deficit and food surplus regions, nutrition and hunger, drought and food security, Food aid programmes, Environmental degradation, role of irrigation, fertilizer coma insecticide and pesticides technical knowledge.



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**PAPER- IV
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GROUP-C**

II. GEOGRAPHY OF ENVIRONMENTAL MANAGEMENT

UNIT- I

Environmental meaning, definition, concept and theories related of environmental. Environmental and its components: classification, characteristics and they are interdependent relationship, development of environmental studies and their approaches. Development of environmentalism in geography

UNIT- II

Environmental and development: ecological concepts: geography as human ecology, ecosystem; meaning definitions, concept and components, main terrestrial ecosystems the word forests and agriculture.

UNIT- III

Environmental hazards: natural and human made. Environmental pollution meaning, definition, natural and types area, water, noise and other ecological impact of pollution resource use and economical balance with special reference to soil, forest and water resource.

UNIT- IV

Environmental degradation Meaning, definition, natural, causes and consequences. Man induced activities: agriculture, meaning, industrialization, population growth and distribution, and Benny Jason, causing environmental change and environmental degradation emerging problems of environmental degradation in developing countries with special reference to India.

UNIT- V

Environmental management: meaning, importance and approaches, need for environmental policy and law. Preservation and conservation of environmental thoughts resource coma management (green revolution, Chipko Movement, National parks). Environmental actions: concept, need and importance Stockholm Sanfrezco earth summit EIA: definition and methods and need for EM. Environmental education and people's participation



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**PAPER- IV
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GROUP-C**

III. THE GEOGRAPHY OF TOURISM.

UNIT- I

Basic of tourism; definition of tourism comma factors affecting tourism: historical, natural, social cultural and economic, motivating comma factor for pilgrimages: Leisure, recreation elements of tourism, tourism as an industry.

UNIT- II

Geography of tourism- its spatial affinity; Ariel and locational dimension comprising physical, cultural, historical and economic: tourism type, cultural, Eco-ethno-coastal an adventure to the reason, National and international tourism, globalization and tourism.

UNIT-III

India Tourism regional dimensional and tourist attacks evolution of terrorism, promotions and tourism

UNIT-IV

Infrastructure & support system accommodation and supplementary accommodation coma other facilities and amenities tourism cultures short and longer detraction, agencies and intermediacies- India hostel industry

UNIT- V

Impact of tourism physical, economic and social and perceptual positive a negative impacts environmental law and tourism current trends, specials pattern and recent change rule of foreign capitals.



Paper-V
Practical
Quantitative Technique, Geographical information System
And Field Survey Report.

M.M.: 100

Unit - I Quantitative Technique

Marks: 15

Product Moment and Rank Colligation, coefficient, Linear Regression, Hypothesis Testing: Chi-Square and "t" tests Analysis of variance and test, normally distribution Curve, Probability.

Unit - II Elements of GIS

Marks: 15

Data capture verification and pre-processing data storage and maintenance of data based data storage and maintenance of data based database Management system : Types and database merits and demerits - data manipulation, analysis integrated analysis of spatial and attribute data, overlay analysis, neighbourhood operation and connectivity function and spatial modelling output formal and generation.

Unit- III G.I.S. Technology

Marks: 15

Co-ordinate system basic Principles of cartography and computer assisted cartography for GIS remote sensing data as a data source for GIS and integration GIS and remote sensing GPS and GIS : Technology, data Generation and limitation visualization in GIS-Digital Elevation Models (DEM and TINS).

Unit - IV GIS Applications

Marks: 15

GIS as a Decision support system expert system for GIS basic flowchart for GIS application - GIS standard, legal system and national GIS Policy application of GIS land information System Urban Management, Environment Management and emergence Response system.

Unit - V Field Survey Report

Marks: 10

Physical and Socio-economic report of micro region based field survey in about - 25, 30 pages

Practical Record -

Marks: 20

Viva on the above

Marks: 10

Suggested Reading: -

1. David Unwin, Productory Spatial Analysis Mehuen, London, 1981.
2. Gregory, S. Statistical Methods and the Goographer Longman, London 1978.
3. Hammond R. and P.S. McCullagh Quantitative Geography, ohn Wiley, London 1968.
4. John P. Cole and Cuchiaine A.M. King Quantitat. e. Geography, John Wiley. London 1968.



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5. Jonston R. J. Multivariate Statistical Analysis in Geography, Longman London 1973.
6. Koutsoyiannis, Theory of Econometrics Mcmillan London 1973.
7. Mourice yeats, An Introduction to Quantitative Analysis in Human Geography Mc graw Hill, New York 1974.
8. Peter Hggett, Andrew D. Cliff & Allan Frey, Location Method Vol. I and II Edward Arnold London 19777.

Pedagogy -

- * Student may be asked to compare the means of measurement of any one variable from a section of top sheet by varying the sampling frame and sample size.
- * Student may be asked to delineate regions quantitatively using district level or state level census or agricultural data and adopting a simple regionalization procedure.
- * Student may be asked work out a diffusion model using some hypothetical data or data gathered from the fellow students in the class or college or university.

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