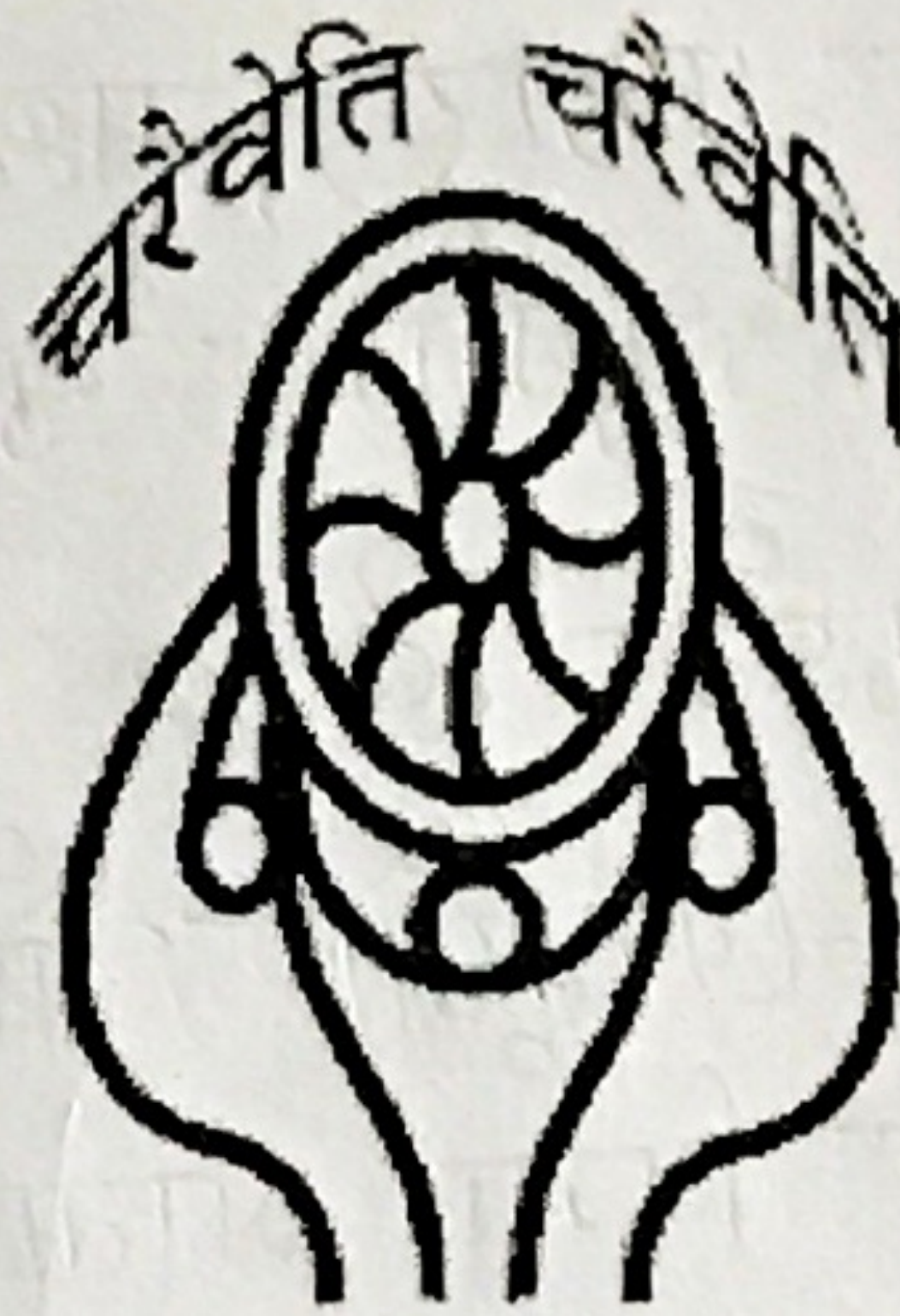


Syllabus  
for  
**M.A.**  
in  
**GEOGRAPHY**

[As per CBCS pattern recommended by UGC]

w.e.f. 2022-2023



महात्मा ज्योतिबा फुले  
रुहेलखण्ड विश्वविद्यालय, बरेली

**Mahatma Jyotiba Phule Rohilkhand University, Bareilly**

*Shah*  
(convenor, B.S. Geography.)

(Dr. Sanjay Shahi)

HEAD

Deptt. of Geography  
J.S.H. (P.G.) COLLEGE  
Amroha (U.P.)



Syllabus  
*for*  
**M.A.**  
*in*  
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**Mahatma Jyotiba Phule Rohilkhand University, Bareilly**

## **Examination and Evaluation Pattern for M.A. (Geography)**

### **To be implemented from Session 2022-23**

1. Each major subject and each minor paper shall be of 100 marks. Out of total 100 marks, sessional (internal assessment) shall be of 25 marks and end semester examination shall be of 75 marks. In the theory subject, the sessional marks shall be awarded through one mid-semester exam test (20 marks) and an assignment/ Quiz (05 marks) and there shall be one written end semester examination.
2. Practical subjects:
  - A. The sessional marks shall be awarded as per following scheme

<b>Practical subject Sessional scheme</b>	<b>Marks</b>
Lab Performance/ Demonstration	15
Lab Record	5
Viva-voce and/ or Quiz	5
<b>Total</b>	<b>25</b>

- B. The End-semester marks shall be awarded as per following scheme

<b>Practical subject End semester scheme</b>	<b>Marks</b>
Write-up/ theory work	20
Viva	25
Execution/Performance/ Demonstration	30
<b>Total</b>	<b>75</b>

### **Programme outcomes (After two years of study):**

This course intends to orient students with approaches to broader discipline of geography. It will help in exhaustive understanding of the basic concepts of geography and awareness of the emerging area of the field. This programme orient students with traditional geographical knowledge along with advance contemporary skills like remote sensing and GIS. At the end of the two-year (four-semester) course, students will have comprehensive knowledge about contemporary issues in geography, both physical and human.

# MJP ROHILKHAND UNIVERSITY BAREILLY

## SYLLABUS

### MASTER OF ARTS IN GEOGRAPHY

Sr. No.	Paper Code	Name of the Course	Marks		Credit	Duration in (hrs.)
			Internal	External		
M. A. Semester- 1						
1	GEOG-TH101	Geomorphology	25	75	4	50
2	GEOG-TH102	Geography of Resources	25	75	4	50
3	GEOG-TH103	Geography of Tourism	25	75	4	50
4	GEOG-TH104	Population Geography	25	75	4	50
5	GEOG-P101	Practical	25	75	4	50
		Semester Total	500		20	
M.A. Semeseter- 2						
6	GEOG-TH205	Oceanography	25	75	4	50
7	GEOG-TH206	Agricultural Geography	25	75	4	50
8	GEOG-TH207	Political Geography	25	75	4	50
9	Optional Paper (Any one)		25	75	4	50
	GEOG-TH208	A- Water Resource Management				
	GEOG-TH209	B- Remote Sensing & GIS				
10	GEOG-P201	Practicle	25	75	4	50
		Semester Total	500		20	
M.A. Semester- 3						
11	GEOG-TH310	Advanced Regional Geography of India	25	75	4	50
12	GEOG-TH311	Climatology	25	75	4	50
13	GEOG-TH312	Environmental Geography	25	75	4	50
14	Optional Paper (Any one)		25	75	4	50
	GEOG-TH313	A- Disaster Management				
	GEOG-TH314	B- Regional Planning & Development				
15	GEOG-P301	Practicle	25	75	4	50
		Semester Total	500		20	
M.A. Semester- 4						
16	GEOG-TH415	Thought & Research Methodology	25	75	4	50
17	GEOG-TH416	Bio- Geography	25	75	4	50
18	Optional Paper (Any one)		25	75	4	50
	GEOG-TH417	A- Urban Geography				
	GEOG-TH418	B- SW Asia				
19	Optional Paper (Any one)		25	75	4	50
	GEOG-TH419	C- Far East Asia (Special reference to China & Japan)				
	GEOG-TH420	A- Europe				
	GEOG-TH421	B- Cultural Geography				
	GEOG-TH422	C- Advanced Geography of Uttar Pradesh				
20	GEOG-P401	Practical	25	75	4	50
		Semester Total	500		20	
		Combine total (I to IV semester)	2000		80	
Semester-1	GEOG-R101	Research Project	100		4	
Semester-2	GEOG-R201	Research Project	100		4	
Semester-3	GEOG-R301	Research Project	100		4	
Semester-4	GEOG-R401	Research Project	100		4	
		GRAND TOTAL	2400		96	

# **MJP ROHILKHAND UNIVERSITY BAREILLY**

## **SYLLABUS**

### **MASTER OF ARTS IN GEOGRAPHY**

#### **MA First semester**

#### **SEMESTER- FIRST**

#### **GEOG-TH101: Theory**

#### **GEOMORPHOLOGY**

Credits: 4

Unit 1: Fundamental concepts of geomorphology and its place within the discipline of geography; Recent trends in the study of geomorphology.

Unit 2: Concept of Plate tectonics; Rigid mass and geosynclines; Recent theory of mountain building; Forces affecting the earth crust; Denudation.

Unit 3: Concept of cycle of erosion; Concept of Davis & Penck; Polycyclic landscape and Dynamic Equilibrium theory; Erosion Surface and their interpretation; Landscape development.

Unit 4: Slope Analysis; Morphometry; Climate geomorphology; Morphogenetic regions; Morphogenetic study of UP/Uttarakhand Himalayas; Applied Geomorphology.

#### ***Suggested Readings:***

1. Ahmed, E. (1985): Geomorphology. Kalyani Publishers, New Delhi.
2. Bloom, A. L. (1998/ 2001): Geomorphology. 3rd edition. Prentice Hall of India, New Delhi.
3. Chorley, R.J., Schumm S A and Sugden D E. (1984): Geomorphology. Methuen and Company Ltd., London.
4. Dayal, P. (1994): A Text Book of Geomorphology. Kalyani Publishers, New Delhi.
5. Fairbridge, R.W. (ed.) (1968): Encyclopaedia of Geomorphology. Reinhold Book Corporation., New York
6. King, C.A.M. (1966): Techniques in Geomorphology. Edward Arnold, London.
7. Sharma, P. R. and Mishra, S.P. (eds.), (1993): Applied Geomorphology in Tropics. Rishi Publications, Varanasi.
8. Singh, M. B. (2002): Physical Geography. Tara Book Agency, Varanasi. (In Hindi).
9. Singh, S. (2004): Geomorphology. Prayag Pustak Bhawan, Allahabad.
10. Thornbury, W.D. (2005): Principles of Geomorphology. John Wiley and Sons, New York

**SEMESTER- FIRST**  
**GEOG-TH102: Theory**  
**GEOGRAPHY OF RESOURCES**

Credits: 4

Unit 1- Nature, Scope & significance of the Geography of Resources, Resource Scarcity and Adequacy,

Unit 2-Characterizations& Distributional Patterns of major natural resources of the world, classifications & Distributions of soils, Water Resources, World Distribution& Productions of power resources, Minerals Resources, Possible non- conventional Energy resources of future,Human Resources; Energy Crisis,

Unit 3-Resource utilization patterns: Impact of physical, techno-economic characteristic and role of infrastructural facilities in resource utilization, Particularly in the development of agricultural and industrial patterns; Vonthunen's theory of Agricultural Location and its modification; Agricultural Regions of the world, Weber's Theory of Industrial location; Industrial Regions of the world with special reference to USA, UK, China & Japan; Resource regions of the world.

Unit 4- Conservation of Major natural resources (Soil, Water & Biotic Resources), Impact of Resource utilization on Environment, Resource Potential and future technology.

***Suggested Readings:***

1. Burton, I. and Kates, R.W. (1978): Readings in Resource Management and Conservation. McGraw Hills, New York
2. Clark, G. L., Feldman, M.P. and Gertler, M.S. (eds.) (2000): The Oxford Handbook of Economic Geography. Oxford University Press, Oxford and New York.
3. Ehrlich, P.R., Ehrlich, R.H. and Holdren, J.P. (1998): Ecoscience: Population, Resources and Development. 2nd edition. Freeman and Company, San Francisco.
4. Sheppard E. and Treror I. B. (ed.) (2003): A Companion to Economic Geography, Blackwell Publication, U.K. and USA.
5. McCarty, H.M. and James B.L. (1976): A Preface to Economic Geography. Prentice Hall, New Jersey.
6. Mitra, A. (2000): Resource Studies; Shridhar Publishers., Kolkata.
7. Ramesh, A. (ed.) (1984): Resource Geography. Heritage Publishers, New Delhi.
8. Singh, J. (2000): SansadhanBhoogol, GyanodayaPrakashan, Gorakhpur
9. Singh, K.N. and Singh, J. (2003): ArthikBhoogolKeMoolTatva, GyanodayaPrakashan, Gorakhpur.
10. Todaro M.P. and Smith S.C. (2004): Economic Development, Pearson Education, (Singapore) Private Ltd. Singapore
11. Michael T. Klare (2001) Resource Wars: The new Landscape of Global Conflict, Holt McDougal, USA.

**SEMESTER- FIRST**  
**GEOG-TH103: Theory**  
**GEOGRAPHY OF TOURISM**

Credits: 4

Unit-I : Definition of tourism, Excursion, tourist and excursionist; Geography and Tourism; Geography of tourism: Nature, Approaches, scope and its Applied aspect.

Unit-II : Growth of tourism in the following period in particular reference to India: Ancient Period; Pre & Post independence period; Recent trends of growth.

Unit-III : Geographical Components of Tourism: Space; Scenic; Climate; Animal life; Settlement feature; Cultural. Infrastructure of tourism in India: Beaches; National Parks; Birds sanctuaries; Wild life reserves; Archaeological and Historical monuments; Scenic Places.

Unit-IV : Impact of tourism with special reference of India: Social & Economic Impact; Tourism & Ecological Balance; Tourism as an industry; Planning for tourism and Role of Govt. for further Development of tourism.

***SUGGESTED READINGS***

1. Bhatia A.K. (1996) : Tourism Development: Principles and Practices. Sterling Publishers, New Delhi.
2. Kaul R.K. (1985): Dynamics of Tourism & Recreation. Inter-India, New Delhi.
3. Kaur J. (1985): Himalayan Pilgrimages & New Tourism. Himalayan Books, New Delhi.
4. Lea J. (1988): Tourism and Development in the Third World, Routledge, London.
5. Milton D. (1993): Geography of World Tourism. Prentice Hall, New York.
6. Pearce D.G. (1987): Tourism Today: A Geographical Analysis, Harlow, Longman.
7. Robinson, H.A. (1996): A Geography of Tourism. Macdonald and Evans, London.
8. Sharma J.K. (ed.) (2000): Tourism Planning and Development- A new perspective, Kanishka Publishers, New Delhi.
9. Sharma, S.K. (2017), Geography of Tourism: Basic Principles, Neha publications, Greater Green Park Bareilly.

**SEMESTER- FIRST**  
**GEOG-TH104: Theory**  
**POPULATION GEOGRAPHY**

Credits: 4

UNIT I: Nature, scope, significance of population geography; Its relation with demography and other social sciences; it's Historical development as a field of specialisation; Sources of population data; Mapping of population data and its problem.

UNIT II: Growth of population: Determinants, trends and pattern of population growth in developed and developing countries; Theory of population growth – Malthusian theory and its modification; optimum' population; Demographic transition.

UNIT III: Distribution and Density of Population: it's Factors influencing; Migration: type, Causes and Consequences; Taylor's theory & Internal migration in India. Structural Analysis of Population in India.

UNIT IV: Population and Resource relationship and its impact on economic development in developed and developing countries; Spatial analysis of the various population attributes and Policies of the following countries- USA, Japan, Australia, China, India and Brazil.

### **SUGGESTED READINGS**

1. Bhende, A. A. and Kanetkar T. (2003): Principles of Population Studies. Himalaya Publishing House, Mumbai.
2. Champion, T. (ed.) (1993): Population Matters. Paul Chapman, London.
3. Chandna, R. C. (2006): Geography of Population. Kalyani Publishers, New Delhi.
4. Clark, J. I. (1972): Population Geography. Pergamon Press, Oxford.
5. Dube, K.K. and Singh, M.B. (1994): JansankhyaBhoogol. Rawat Publications, Jaipur and New Delhi.
6. Pathak, L. P. (ed.) (1998): Population Studies. Rawat Publications, Jaipur and New Delhi.
7. Singh, K.N. and Singh, D.N. (eds.) (1992): Population Growth, Environment and Development. EDSC, Varanasi.
8. Srinivasan, K, and Vlassoff, M. (2001): Population Development Nexus in India: Challenges for the New Millennium. Tata McGraw Hill, New Delhi.
9. Trewartha, G.T. (1985): A Geography of Population: World Patterns. John Wiley and Sons, New York.
10. Zelinsky, W. (1966): A Prologue to Population Geography. Prentice Hall, Englewood Cliffs, New Jersey.

## **SEMESTER- FIRST**

### **GEOG-P101: PRACTICAL**

Credits: 4

Unit 1: Map Projection: Constructions, Properties and uses of the following Projections-

- (a) Conical – Bonne's Polyconic and International
- (b) Cylindrical- Mercator's and Gall's Projection
- (c) Zenithal – Equidistant and Equal area (Educational cases) Gnomonic and Stereographic (Polar case)
- (d) Conventional- Globular, Mollweide and Sinusoidal.

Unit 2 : Representation of statistical Data : Construction of following Graphs, Diagrams and Cartograms.



- (a) Graphs- Polygraphs, Band Graphs, Climograph, Climatograph, and Ergograph
- (b) Diagrams- Star Diagram, Multiple Bar Diagram, Pyramid Diagram, Ring Diagram, and Spherical Diagram.
- (c) Cartograms- Rectangular Cartogram and Traffic Flow Cartograms.

Unit 3 : Preparation of Thematic maps:

Representation of Population, Agricultural Industrial and Transport Data on Maps By Choropleth, Isopleth, Choroschematic, and Diagrammatic Methods.

## **SEMESTER- FIRST**

### **GEOG-R101: RESEARCH PROJECT**

Credits: 4

Research Project may be interdisciplinary or multi-disciplinary. It can be related to industrial training/Internship/ Survey work etc.

## ***MA Second semester syllabus***

### **SEMESTER- SECOND**

#### **GEOG-TH205: Theory**

### **OCEANOGRAPHY**

Credits: 4

Unit – I: Nature and Scope of Oceanography; ocean topography, Pacific, Atlantic and Indian Ocean;

Unit – II: : Ocean Currents; Tides; Coral and Coral reefs, Types of Coast and Shores;

Unit – III: Classification and characteristics of Ocean Deposit; Salinity and Density of Ocean Water.

Unit – IV: Ocean as a source of food and Minerals.

#### ***SUGGESTED READINGS***

1. Sverdrup, Keith A., Duxbury, Alison B. and Duxbury, Alyn C. (2006): Fundamentals of Oceanography, fifth edition. McGraw Hill Higher Education, New York.
3. King, Cuthlaine A.M. (1962): Oceanography for Geographers. Edward Arnold Ltd, London.
5. Lal, D. S. (2009): Climate and Oceanography. Sharda Pustak Bhavan, Allahabad.
6. Singh, S. (2008): Oceanography. PrayagPustak Bhawan, Allahabad.
7. Thurman, G.T. (1994): Introduction to Oceanography, 7th edition, Macmillan, New York.

### **SEMESTER- SECOND**

#### **GEOG-TH206: Theory**

### **AGRICULTURE GEOGRAPHY**



Credits: 4

Unit 1: Definition, Scope & Nature of Agriculture Geography, Approaches to the study of Agriculture Geography, Types of Agriculture.

Unit 2: Geographical factor of Agriculture- Climate, soil, water availability, & Slope, Economic, Social & Technological factor of Agriculture, animal husbandry, Agroforestry, Crop rotation and Crop Combination, Concept of mixed and multi cropping, Crop intensity, Agriculture land use, Crop Concentration and Diversification, irrigation.

Unit 3: Cropping Pattern, Types of crops, Agricultural Productivity, Locational Theories of agriculture, Thuenen and Weber, Agriculture regionalization of world, Agriculture regions of USA, Japan, UK, China and India.

Unit 4: Agriculture Planning, Green Revolution & Indian Agriculture, Problems of Indian Agriculture, Food Security, Food crisis, Five year plan & Agricultural Development, Co-operative Farming in Russia, Israel and Japan, Agri- Marketing and Storage.

### **SUGGESTED READINGS**

1. Ferroni, Marco, 2013. Transforming Indian agriculture- India 2040: Productivity, Markets and Institutions, Sage Publications, New Delhi.
2. Grigg, D.B. 1984. Introduction to Agricultural Geography, Hutchinson, London.
3. Mohammad, N. 1992. New Dimension in Agriculture Geography, Vol. I to VIII, Concept Publishing Company, New Delhi.
4. Roling, N.G., and Wagerutgers, M.A.E. (eds.) 1998. Facilitating Sustainable Agriculture, Cambridge University Press, Cambridge.
5. Shafi, M. 2006. Agricultural Geography. Pearson Education, Delhi.
6. Singh, J., and Dhillon, S.S. 1994. Agricultural Geography, Tata McGraw Hill, New Delhi.
7. Singh, R. B. 2000. Environmental Consequences of Agricultural Development: A Case Study from the Green Revolution state of Haryana, India, Agriculture, Ecosystems and Environment 82, 97–103.
8. Tiwari, R. and Singh, B. 1994. Krishi Bhoogol, PrayagPustakBhandar, Allahabad. (Hindi).

## **SEMESTER- SECOND**

### **GEOG-TH207: Theory**

### **POLITICAL GEOGRAPHY**

Credits: 4

UNIT I Meaning, scope, approaches of study & Development of Political Geography; Recent trends and Development in Political Geography.

UNIT II Concept of state and nation; Spatial factors of state; Buffer state, core area, ecumene, capital city, frontiers and boundaries; Geopolitical significance of the Indian Ocean;

UNIT III Concepts of geo-strategy; World geopolitics in changing perspectives- colonialism to federalism; Geostrategic ideas of Mahan, Mackinder, Spykman, and their relevance in the modern world.



UNIT IV Role of third world countries; Regional Co-operation; Geopolitical Study of South east asia, and South Asia, Politics of world Resources.

**Optional Paper (Any One)**

**SEMESTER- SECOND**

**GEOG-TH208**

**A: WATER RESOURCE MANAGEMENT**

Credits: 4

Unit-I: Introduction: The history of hydrology, System Concept in hydrology, hydrologic cycle, elements of hydrologic cycle, human impact on the hydrologic cycle.

Unit-II: Surface Water Hydrology: River basin and problems of regional hydrology, sources of streamflow, surface water resource of India, wetlands hydrology, Groundwater Hydrology.

Unit-III: Contemporary Issues and Challenges: Drought, flood, water use conflicts, water quality and major water pollutants (point and non-point source), water quality criteria for different uses.

Unit-IV: Water Resource Planning, Management and Policy: Water resources management (demand and supply side), watershed management, water harvesting, national water policy.

**GEOG-TH209**

**B: REMOTE SENSING & GIS**

Credits: 4

Unit I: Remote Sensing: Definition, historical development, satellite and sensors, concept of resolution, photography vs. image.

Unit II: Aerial photography: Type and characteristics, principles of aerial photo interpretation.

Unit III: Electro-magnetic radiation principles; interaction mechanism with atmosphere and earth surfaces; spectral responses of earth surface features, visual interpretation of satellite images.

Unit IV: Definition, Development and Applications: elements of GIS; Geographic objects: Point, Line and Area; Geographic Data, Input, Storage and Editing: spatial and attribute data, vector and raster-based models, Georeferencing: editing and output; Application of remote sensing and GIS.

**SEMESTER- SECOND**

**GEOG-P201: PRACTICAL**

Credits: 4

Unit 1 : Statistical Techniques and their use in cartographic representation: Sampling Techniques; Standard Deviation; Correlation; Measure of Dispersion and Lorenz Curve.



Unit 2: Aerial Photo interpretation and Remote sensing: Development of Air Photo-interpretation, Technique of air photography and their Application in Geography, Simple Geometry of Air Photographs. Measurement of Geometry of Scale height and Slope for Vertical air Photographs. Technique of remote sensing and their Application in Geography.

## **SEMESTER- SECOND**

### **GEOG-R201: RESEARCH PROJECT**

Credits: 4

Research Project may be interdisciplinary or multi-disciplinary. It can be related to industrial training/Internship/ Survey work etc.

\*Students would have to submit a combined project report/dissertation of both semester at the end of the year.

## ***MA Third semester syllabus***

### **SEMESTER- THIRD**

#### **GEOG-TH310: Theory**

#### **ADVANCED REGIONAL GEOGRAPHY OF INDIA**

Credits: 4

UNIT1 : Geology structure and relief feature; Physiographic division; Origin of Himalayas; Drainage Systems; Mechanism of monsoon and regional variation in rainfall, climatic regions with particular reference to the classification by Kappen, Kendrew and RL Singh.

UNIT2: Natural resources- Types, distribution and conservations of soil and forestsresources; Power resources- Their crisis and future prospects,

UNIT 3: Main characteristics and problem of Indian Agriculture, Technological Development and commercialization of agriculture in India. Industrial development and future prospect; Locational factor and special pattern of major industries in India- Iron, & Steel, Cotton textile, Sugar, fertilizer, and engineering industries.

UNIT4: Regional Study: Basis of regional divisions: Classifications of main characteristics of the following regions of India- Natural regions, Resource regions, Agriculture regions, Industrial regions, and Economic regions.

#### ***SUGGESTED READINGS***

1. Deshpande C. D., (1992): India: A Regional Interpretation, ICSSR, New Delhi.
2. Farmer, B.H. (1983): Introduction to South Asia. Methuen and Company Ltd. and Company Ltd., London.
3. Johnson, B.L.C. (1983): Development in South Asia. Penguin Books, Harmondsworth.



4. Khullar, D. R. (2006): India: A Comprehensive Geography. Kalyani Publishers., New Delhi.
5. Krishnan, M. S. (1968): Geology of India and Burma. 4th edition. Higgin Bothams Private. Ltd., Madras.
6. Schwartzberg, J. E. (1978). A Historical Atlas of South Asia, (Chicago: University of Chicago Press).
7. Singh, J. (2003): India: A Comprehensive and Systematic Geography. GyanodayaPrakashan, Gorakhpur.
8. Singh, R. L. ed. (1971): India: A Regional Geography. National Geographical Society of India, Varanasi.
9. Spate O. H. K. and Learmonth A.T.A. (1967): India and Pakistan: A General and Regional Geography, Methuen, London.
10. Tiwari, R. C. (2007): Geography of India, PrayagPustak Bhawan, Allahabad

### **SEMESTER- THIRD**

#### **GEOG-TH311: Theory**

#### **CLIMATOLOGY**

Credits: 4

UNIT I: Meaning and Scope of Climatology; Factors of Climate;

UNIT II: Composition and structure of the atmosphere; Insolation; Distributions of Horizontal and vertical temperature; Humidity; Clouds- types and factors of Precipitations.

UNIT III: Air Pressure and Wind system; Frontogenesis and Air masses; Origin and Development of temperate and tropical cyclone, Anti-cyclone; Thunderstorms;

UNIT IV: Principles criteria of Climate Classification by Kendrew, Koppen, Thornthwaite; Miller and Trewartha. Comparative study of Climates.

#### ***SUGGESTED READINGS***

1. Lal, D. S. 2003. Climatology, Allahabad: Sharda Pustak Bhawan.
2. Trewartha G. T., 1980. An Introduction to Climate, McGraw Hill Company, New York.

### **SEMESTER- THIRD**

#### **GEOG-TH312: Theory**

#### **ENVIRONMENTAL GEOGRAPHY**

Credits: 4

Unit 1: Definition of Environmental Geography; Aim and scope of environmental geography; Geography and Ecology; Environmental geography and related sciences; Fundamental concepts in environmental geography.

Unit 2: Definition of ecology; Aims and Scope of ecology; Ecological concept and principles; meaning of ecosystem; Types of ecosystems; Component of Ecosystem.

Unit 3: Source of energy; Ecological Production; Trophic levels; Food chain and food webs; Ecological pyramids; Flow of energy; Circulation of elements in ecosystem and Bio-geo-chemical cycles.

Unit 4: Man and atmospheric environment; man induced soil erosion and sedimentation; environmental degradation; extreme events; Hazards and Disaster, Environmental Pollution, Environmental Planning and Management.

### ***SUGGESTED READINGS***

1. Singh, J. (2001): Paryavaran Evam Samvikas. GyanodayaPrakashan, Gorakhpur.
2. Singh, O., Nag P., Kumra V.K. and Singh J. (eds.) (1993): Frontier in Environmental Geography. Concept Publishing Company, New Delhi.
3. Singh, O., Kumra V.K. and Singh J. (1988): India's Urban Environment: Pollution, Perception and Management. Tara Book Agency, Varanasi.
4. Singh, R. B. (ed.) (1995): Studies in Environment and Development. Rakesh Prakashan, Varanasi.
5. Singh, S. (2006): Environmental Geography. PrayagPustak Bhawan, Allahabad.
6. Sinha, B.R.K. (2009): Population, Environment and Development, New Century Publication, New Delhi.

### **Optional Paper (Any One)**

#### **SEMESTER- THIRD**

#### **GEOG-TH313: Theory**

#### **A: Disaster Management**

Credits: 4

Unit I: Disasters: Definition and Concept, Types of Environmental Hazards and Disasters.

Unit II: Man induced hazards and disaster- Earthquake, Tsunami, Landslide, Cyclones, Floods, Drought, Desertification and its distribution and Mapping.

Unit III: Regional Geography of Hazards and Disasters in India

Unit IV: Response to Disaster, Traditional and Colonial and Post-Independence (NGOs, Disaster Management Act)

#### ***Suggested Readings:***

1. Bankoff, G., G. Frerks and D. Hilhorst (eds.) 2003. Mapping Vulnerability: Disasters, Development and People, Earthscan.
3. Cutter, Susan (ed). 1993. Environmental Risks and Hazards, Pearson.
5. Government of India, 2005. Disaster Management Act, 2005, The Gazette of India, New Delhi.
6. Kapur, Anu. et al. 2005. Disasters in India: Studies of Grim Reality, Rawat Publications, Jaipur and Delhi.
8. Kapur, Anu, 2010. Vulnerable India: A Geographical Study of Disaster, Sage.
- Parasuraman, S. 2004. India Disasters Report: Towards a Policy Initiatives, Oxford University Press.



10. National Centre for Disaster Management, 2001. Report of the High Powered Committee (HPC) on Disaster management, New Delhi, [http://nidm.gov.in/PDF/pubs/HPC\\_Report.pdf](http://nidm.gov.in/PDF/pubs/HPC_Report.pdf).
11. Tripathi, Punam, 2018. Vulnerable Andaman and Nicobar Islands: A Study of Disasters and Response, Routledge.
12. United Nations, 2004. Living With Risk: A Global Review of Disaster Reduction Initiatives.
13. Wisner, B., P. Blaikie, T. Cannon and I. Davis, 2004. At Risk: Natural Hazards, Peoples' Vulnerability and Disasters, Routledge (Second Edition).
14. World Disasters Report, <http://www.ifrc.org/en/publications-and-reports/world-disastersreport/>

## **GEOG-TH314: Theory**

### **B: REGIONAL PLANNING & DEVELOPMENT**

Credits: 4

Unit – I :Regional Planning: Definition, Scope and Significance;; Conceptual and Theoretical framework;The role of Geography in regional planning; Planning in India- an overview.

Unit – II :Sectoral and Regional Planning; Hierarchical Levels of Regional Planning- Local,Regional and National; Regional Planning Strategies at Block Levels Planning and District Planning, Metropolitan Planning; Case study of two regional plans from developed and developing countries.

Unit – III :The Development Process- Indicator of development; Social and Environmental aspect of Regional Development; Levels of Regional Development and Disparities; Problem of national development; Need for spatial coordination of development programmes; role of government and voluntary agencies.

Unit – IV :Regional Planning and Development in India: Panchayati raj system, Community Development programme; Multi Level Planning; Tribal and Hill area Development Programmes;Trends in regional development; Regional Patterns and Imbalances, Integrated planning regions and future development policy.

### **Suggested Readings**

1. Bhat, L. S. (1973): Regional Planning in India, Statistical Publishing Society, Calcutta.
2. Bhat, L.S.etal. (1976): Micro-Level Planning: A Case Study of Karnal Area, Haryana, K.B. Publications, New Delhi.
- 3.Chandna, R.C. (2000): Regional Planning: A Comprehensive Text, Kalyani Publishers., New Delhi.
4. Chaudhuri, J. R. (2001): An Introduction to Development and Regional Planning with special reference to India. Orient Longman, Hyderabad.
- 5.Friedmann,J.(1992): Empowerment:The Politics of Alternative Development. Blackwell, Cambridge MA and Oxford.

**SEMESTER- THIRD**  
**GEOG-P301: PRACTICAL**

Credits: 4

**Part A: Topographical surveying and levelling of local area with the help of the following instruments.**

Unit 1: Plane table; Traversing;

Mathematical analysis- Computation of omitted Measurements in a Traverse survey.

Unit 2 : Prismatic Compass: Traversing; Adjustment of closing error by graphical Methods.

Mathematical Analysis- Correction of bearing and calculation of included angles.

**Part B: Survey camp and Field Study**

An out-station survey camp will be organized in a selected area where the student will be required to carry out the following work of the project.

1. Physical features
2. Demography
3. Socio-economic aspect

A project report of the above work will be submitted for evaluation in practical examination.

**SEMESTER- THIRD**  
**GEOG-R301: RESEARCH PROJECT**

Credits: 4

Research Project may be interdisciplinary or multi-disciplinary. It can be related to industrial training/Internship/ Survey work etc.



***MA Fourth semester syllabus***

**SEMESTER- FOURTH**

**GEOG-TH415: Theory**

**THOUGHT AND RESEARCH METHODOLOGY**

Credits: 4

UNIT- 1 The General character of geography in ancient Period; Contribution of Greek and Roman Scholar with special reference to Eratosthenes, Ptolemy, and Strabo.

UNIT - 2 Evolutions of geographic thoughts in 19<sup>th</sup>& 20<sup>th</sup> Century: Contribution of German & French school of thoughts with particular reference of Humboldt, Ritter, Ratzel, Richthofen, Hetner, Blache, and Brunhes.

UNIT - 3 Development of concept of Geography, Geography as the study of Relationship; Distributions and Aerial Differentiation, Environment Determinism, Possibilism, and Human Ecology; Concept of cultural landscape; Modern concept of geography and its place in scientific study; Contribution of British and American school of thoughts.

UNIT- 4 Research Methodology, Methods of field study in geography, Preparation of questionnaire; Sampling technique for primary data collection, their types and applications;

Concept of region, Delimitations of region; Concept of core and marginal area; Location and network analysis- Models of von thunen, Weber, and Christaller, Functional hierarchy of settlements.

**Suggested Readings**

1. Dikshit, R. D. (2004): Geographical Thought. A Critical History of Ideas. Prentice-Hall of India, New Delhi. (in English and Hindi).
2. Harvey, D. (1969): Explanation in Geography. Arnold, London.
3. Harvey, M. E. and Holly, P.B. (2002): Themes in Geographic Thought. Rawat Publications, Jaipur and New Delhi.
4. Johnston, R.J. and Sidaway, J.D. (2004): Geography and Geographers. 6th edition, Edward Arnold, London.
5. Kapur, A. (ed.) (2001): Indian Geography – Voice of Concern. Concept Publishing. Company, New Delhi.
6. Martin, G. (2005): All Possible Worlds. A History of Geographical Ideas. 4th edition, Oxford University Press, New York.
7. Peet, R. (1998): Modern Geographical Thought. Blackwell Publishers Inc., Massachusetts.
18. Sauer, C. O. (1963): Land and Life. University of California Press, Berkeley.
9. Sharma, P.R., Yadava, R.S., Sharma, V.N., (ed.) 2013: Inter Disciplinary Advances in Geography, R.K. Books, New Delhi.
10. Singh, R. L. and Singh, Rana P.B. (eds.) (1990): Literature and Humanistic Geography. National Geographical Society of India, BHU, Varanasi, Publication number 37

11. Singh, R. L. and Singh, Rana P.B. (eds.) (1992): The Roots of Indian Geography: Search and Research. National Geographical Society of India, B.H.U., Varanasi, Publication number 39.
12. Soja, E. (1989): Post-modern Geographies. Verso Press, London. Reprinted 1997: Rawat Publications, Jaipur and New Delhi.
13. Taylor, G. (ed.) (1953): Geography in the Twentieth Century. Methuen and Company Ltd. and Company, London.
14. Tuan, Yi-Fu (1977): Space and Place. The Perspective of Experience. Edward Arnold, London.
15. Singh, Ravi S (ed.) 2009. Indian Geography: Perspectives, Concerns and Issues. Jaipur: Rawat Publications

## **SEMESTER- FOURTH**

### **GEOG-TH416: Theory**

#### **BIO-GEOGRAPHY**

Credits: 4

Unit- I :Definition, scope and significance of Biogeography; Basic Ecological Principles; Bio Energy Cycle in the Terrestrial Ecosystem and Energy Budget of the Earth; Darwin's theory of evolution; Concept of Biome, Ecotone and Community.

Unit-II : Origin of Flora and Fauna; Geographical distribution, Major gene centres; Domestication of Plants and Animals and their dispersals; Distribution of Plants life on the earth and its relation to soil types, Climate and human practices.

Geographical distribution of animal life on the earth and its relation to vegetation types, Climate and human practices.

Unit-III :Problem of extinction of some major plants and animal life; Decay and their conservation; Process of desertification; its consequence and its management principles.

Industrial effluence and its effect on fresh water biology and Marine biology.

Unit-IV :Economic bearings of Biogeography; Conservation of wild life and forests; National Forests and environment policy of India; Study of the ecological regions of India in relation to their plants and animal life.

#### **Optional Paper (Any One)**

## **SEMESTER- FOURTH**

### **GEOG-TH417: Theory**

#### **A: URBAN GEOGRAPHY**

Credits: 4

UNIT I: Realm of urban geography: Meaning, Scope and Significance of Urban Geography; Different approaches to the study of urban geography; Basic concept of urban geography.



Town genesis and its stages: Location, site, and situation of towns; origin and evolution of urban centres; basis and process of urbanisation; Factors associated with the growth of city system.

UNIT II: Urban morphology: The concentric zone theory of Burges, Multiple nuclei theory of Harris-Ullman, Sector Model theory of Hoyt.

Functional Land use and Planning: Central business district and its characteristics; Urban housing- Urban housing policies, and programmes; Urban fringe, its characteristics and development.

UNIT III: Functions and functional classification of urban centres: Importance, Problem of Principle of functional classification; Methods of functional classification; Economic base of urban settlement - basic and non-basic concept, Input output models.

Town as central Place; Central Place theory of Christaller and Losch. Centrality and Central functions Hierarchy of urban centres.

UNIT IV : Spatial Distribution of Urban Centres, Size and Rank of urban centres and their relationship: Umland and its delimitation- Problem in delimitation, Method of delimitation- the law of retail gravitation and Breaking point concept. Urban trends, problem and Planning.

### **GEOG-TH418: Theory**

#### **B: GEOGRAPHY OF SOUTH-WEST ASIA**

Credits: 4

Unit 1: The South-west Asia as a regional unit and its significance to India; South-west Asia in the context of world: Locational significance; Relief; Drainage; Climate; Soils, and Vegetation.

Unit 2: Power of Mineral resources; Agriculture, Industry and Transportation; International trade.

Unit 3: Distribution and Density of Population; Growth of Urbanisation.

Unit 4: Systematic Geography of South-west Asia with special reference to the following countries. Turkey, Israel, and Saudi Arabia. Systematic and Regional Geography of Iran and Iraq.

#### **Suggested Readings**

1. W.B. Fisher: The Middle East.
2. Cressey: Cross Road.
3. East and Spate: Changing Map of Asia.
4. N.S. Ginnsburg: Pattern of Asia.
5. W. Willcocks: The Irrigation of Messopotamia.
6. J. Johnes: Turkey.
7. The Statesmans Year book: 2001-2002.
8. Vishwanath Tiwari – Asia Ka Bhugolik Swaroop.
9. Mahesh Narain Nigam and B. L. Garg- Pashchimi Asia.

### **GEOG-TH419: Theory**

#### **C: FAR EAST ASIA (Special reference to China & Japan)**

Credits: 4

Unit - I Region as a geographical entity and as a component of global system. Basis of regionalization, grouping of countries geographical, political, historical, cultural etc.

Unit - II Structure, Relief, climate and climatic regions, vegetation, Irrigation, Power and Mineral resources.

Unit - III Population – distribution, growth, distribution pattern, migration, Agriculture, Industries, Trade and Transport.

Unit - IV Strategic importance of the region, Geographical background of the modern problems. Detailed regional study of China and Japan.

### **Suggested Readings**

1. Dr. M.N. Nigam – Monsoon Ka Asia.
2. Vishwanath Tiwari: Asia Ka Bhaugolik Swaroop.
3. Trewartha; G.T. Japan.

### **Optional Paper (Any One)**

#### **SEMESTER- FOURTH**

#### **GEOG-TH420: Theory**

#### **A: GEOGRAPHY OF EUROPE**

Credits: 4

Unit 1: : Locational significance; Relief; Structure; and Drainage; Climate; Soils; Natural Vegetation; Power and Mineral resources.

Unit 2: Industries; Transportation and International trade distributions and Density of Population; Growth of Urbanisation.

Unit 3: Systematic geography of Europe with special reference to U.K., France, Germany, Switzerland, Italy, Scandinavia, Holland, Denmark, Spain.

Unit 3: Geography of France, Germany, U.K., and Italy.

#### **GEOG-TH421: Theory**

#### **B: CULTURAL GEOGRAPHY**

Credits: 4

Unit I: Nature and Scope of cultural geography: Approaches and Development, Relationship of culture with Environment, Resource and Technology.

Unit II: Concepts: cultural Diffusion, Material culture, Cultural landscape and cultural ecology, Origin and Dispersal of man.



Unit III: Origin, Types & Dispersal of human race, 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; Agriculture Practice and innovations, Industrial and Technological Revolutions.

OR

Globalization and cultural development; Ecological impact of population explosion; Cultural Hearths, Major cultural Realms, and Region of the world.

### **GEOG-TH422: Theory**

#### **C: ADVANCED GEOGRAPHY OF UTTAR PRADESH**

Credits: 4

Unit-I :Detail study of Uttar Pradesh in the following heads- Physiography :Locational Set-up of Uttar Pradesh in India and its changing map. Relief and Physical Divisions, Structure, Drainage, Ground Water Resource, Soils and their types, Climate and Climatic regions and vegetative cover.

Unit-II :Agriculture Land use and Industrial Growth centre: Spatio-temporal Trends of Agricultural production, Agricultural Productivity and Crop-Combination regions, Agro-Processing industry and their problems with special reference to Sugar and Cottage industry.

Unit-III :Settlement type and Patterns; Human Resource Development in Uttar Pradesh.

Unit-IV :Geographical regions- Classification and characteristic of macro, meso, and micro regions Uttarakhand and upper Ganga Plain.

#### **Suggested Readings**

- 1.Despande C.D. (1992): India-A Regional Interpretation ICSSR, Northern Book Centre, New Delhi.
2. Gautam, A.(2005): Geography of India,( In Hindi & English) Rastogi Publishing House, Meerut.
3. Kundu A., Raza Moonis (1982): Indian Economy: The Regional Dimension, Spectrum Publishers, New Delhi.
- 4.Mamoria, C.B.(1980) : Advanced Geography of India, Sahitya Bhawan, Agra.
5. Singh, S.,(2019): Geography of Uttar Pradesh, Sahitya Bhawan, Agra

### **SEMESTER- FOURTH**

#### **GEOG-P401: PRACTICAL**

Credits: 4

Topographical surveying and levelling of local area with the help of the following instruments.

Unit 1 : Dumpy Level : Simple levelling, Differential levelling, Profile levelling.

Mathematical Analysis- Calculation of curvature and refraction. Reciprocal levelling

Unit 2 : Traversing : Resection (Two point problem); use of telescopic Alidade in traversing.  
(Measurement of distance by telescopic Alidade).

## **SEMESTER- FOURTH**

### **GEOG-R401: RESEARCH PROJECT**

Credits: 4

Research Project may be interdisciplinary or multi-disciplinary. It can be related to industrial training/Internship/ Survey work etc.

\* Students would have to submit a combined project report/dissertation of both semesters at the end of the year.

**\*Student will opt a minor paper from another subject.**

