



# Shri Vishwanath Post Graduate College

Kalan, Sultanpur (U.P.)

(Affiliated)

“तन्मे मनः शिव संकल्पमस्तुः”

[ DR. RAM MANOHAR LOHIA AVADH UNIVERSITY, AYODHYA ]

## Structure of Syllabus

PROGRAM: B.A.

SUBJECT: Geography

### SEMESTER-WISE TITLES OF THE PAPERS IN COURSE

YEAR	SEME-STER	COURSE CODE	PAPER TITLE	THEORY/ PRACTICAL	CREDIT
<b>CERTIFICATE COURSE</b>					
<b>FIRST YEAR</b>	<b>I</b>	A110101T	Physical Geography	Theory	4
		A110102P	Elements of Map and Surveying	Practical	2
	<b>II</b>	A110201T	Human Geography	Theory	4
		A110202P	Thematic Mapping and Surveying	Practical	2
<b>DIPLOMA COURSE</b>					
<b>SECOND YEAR</b>	<b>III</b>	A110301T	Environment, Disaster Management and Climate Change	Theory	4
		A110302P	Statistical Techniques and Surveying	Practical	2
	<b>IV</b>	A110401T	Economic Geography	Theory	4
		A110402P	Weather Maps, Geological Maps and Surveying	Practical	2
<b>DEGREE COURSE</b>					
<b>THIRD YEAR</b>	<b>V</b>	A110501T	Regional Geography	Theory	4
		A110502T	Basics of Remote Sensing and GIS	Theory	4
		A110503R	Tour and Tour report	Practical	4
		A110504R	Project Report-1	Practical	3
	<b>VI</b>	A110601T	Geography of India	Theory	4
		A110602T	Evolution of Geographical Thoughts	Theory	4
		A110603P	Remote Sensing and GIS	Practical	4
		A110604R	Project Report-2	Practical	3

## Semester – I

### Paper-I (Theory)

#### **A110101T- Physical Geography**

Unit	Content
I	Nature and Scope of Physical Geography, Origin of Universe, solar system and Earth. Geological Time Scale (with special reference to evidences from India), Interior of the Earth.
II	Origin of Continents and Oceans, Isostasy, Earthquakes and Volcanoes, Geosynclines, Continental Drift theory, Concept of Plate Tectonics.
III	Rocks, Folding, Faulting, Weathering, Erosion, Cycle of Erosion by Davis and Penck, Drainage Pattern.
IV	Fluvial, Karst, Aeolian, Glacial, and Coastal Landforms
V	Composition and Structure of atmosphere: Insolation, Atmospheric pressure and winds.
VI	Airmasses and Fronts, cyclones and anti-cyclones, Humidity, precipitation and rainfall types.
VII	Ocean Bottoms, composition of marine water temperature and salinity. Circulation of Ocean water-Waves, Currents and Tides, Ocean deposits, Corals and atolls.
VIII	Biosphere, Biotic succession, Biome, Zoo-geographical regions of the world.

#### **Suggested Readings:**

1. Singh, Savindra (2018), Physical Geography (Eng./Hindi) Allahabad, India: Prayag Pustak Bhawan
2. Khullar, D.R. (2012). *Physical Geography*. New Delhi. India: Kalyani Publishers.
3. Bloom, A. L. (2003). *Geomorphology: A Systematic Analysis of Late Cenozoic Landforms*, New Delhi, India: Prentice-Hall of India

### Paper- II (Practical)

#### **A110102P - Elements of Map and Surveying**

Unit	Topics
I	Cartography: Nature and Scope. Scales–Concept and application; Graphical Construction of Plain, Comparative, Diagonal Scales and Vernier scale.
II	Map Projections: Classification, Properties and Uses; Graphical Construction of Polar Zenithal, Stereographic, Bonne’s and Mercator’s Projections, and reference to Universal Transverse Mercator (UTM) Projection.
III	Topographical Map: Coverage, Scale and Topo Symbol, Interpretation Survey of India Toposheets. Representation of landforms by Contours. Slope Analysis – Wentworth’s method.
IV	Basics of Surveying: Surveying: meaning, classification, merits and demerits. Plane Table Surveying.

#### **Suggested Readings:**

1. Sarkar, A. K. (1997): *Practical Geography: A Systematic Approach*. Orient Longman, Kolkata.
2. Sharma, J. P. (2001): *Prayogik Bhugol*, Rastogi Publication, Meerut 3rd. edition.
3. Singh, R.L. and Singh, Rana P.B. (1993): *Elements of Practical Geography*. (Hindi and English editions). Kalyani Publishers, New Delhi,.

## Semester – II

### Paper-I (Theory)

#### **A110201T- Human Geography**

<b>Unit</b>	<b>Content</b>
<b>I</b>	Concept and Nature, Meaning and Scope of Human Geography. Development of Geographical understanding in India with special reference to Puranas.
<b>II</b>	Man and Environment relationship - Determinism, Possibilism, and Neo-determinism
<b>III</b>	Distribution of population and world pattern, global migration - causes and consequences, concept of over population and under population.
<b>IV</b>	Human Settlements: Origin, types (Rural-Urban) characteristics, House types and their distribution with special reference to India.
<b>V</b>	Primitive Economics-Food gathering, Hunting, Pastoral herding, Fishing, Lumbering and Primitive agriculture.
<b>VI</b>	Cultural Regions, Cultural Diffusion, Race, Religion and Language.
<b>VII</b>	World Tribes: Eskimos, Kirghiz, Bushman, Masai, Semang, Pygmies.
<b>VIII</b>	Indian Tribes: Bhotias, Gaddis, Tharus, Bhil, Gond, Santhal, Nagas.

#### **Suggested Readings:**

1. B N Singh (2019) Manav Bhugol ka Swaroop, Pravalika Publication, Allahabad
2. Hussain, M. (1994): Human Geography, Rawat Publications, Jaipur.
3. B N Singh (2020) Samajik aur Sanskritik Bhugol, Pravalika Publication, Allahabad
4. Kaushik, S.D. and Sharma, A.K. (1996): Principles of Human Geography (in Hindi), Rastogi Publication, Meerut.

### Paper-II (Practical)

#### **A110202P - Thematic Mapping and Surveying**

<b>Unit</b>	<b>Topics</b>
<b>I</b>	Maps – Classification and Types, Principles of Map Design. Diagrammatic Data Presentation – Line, Bar and Circle.
<b>II</b>	Thematic Mapping Techniques – Properties, Uses and Limitations; Areal Data -- Choropleth, Dot, Proportional Circles; Point Data – Isopleths.
<b>III</b>	Cartographic Overlays – Point, Line and Areal Data. Thematic Maps – Preparation and Interpretation.
<b>IV</b>	Instrumental Survey: Prismatic Compass

#### **Suggested Readings:**

1. Sharma, JP (2001) Prayogik Bhugol, Rastogi Publication, Meerut
2. Mahmood A., 1977: Statistical Methods in Geographical Studies, Concept.
3. Pal S. K., 1998: Statistics for Geoscientists, Tata McGraw Hill, New Delhi.

## Semester – III

### Paper-I (Theory)

#### **A110301T- Environment, Disaster Management and Climate Change**

Unit	Content
I	Concepts & components of Environment, Ecology and ecosystem. Indian traditional Knowledge in Environment and disaster Management.
II	Bio-diversity and its conservation, sustainable development.
III	Deforestation, soil erosion, soil exhaustion, Desertification, Air pollution, water pollution Disposal of solid waste.
IV	Ganga Action Plan, Tiger project, Tehri dam & Narmada Valley project.
V	Science of Climate Change: Understanding Climate Change; Green House Gases and Global Warming.
VI	Global Climatic Assessment – IPCC, Impacts of Climate Change, National Action Plan on Climate Change.
VII	Disasters, Hazards, Risk, Vulnerability, Type of Disasters, Disaster Management, Disaster Management Cycle.
VIII	Flood, Drought, Cyclone, Earthquake, Tsunami, Landslide, Chemical and Nuclear Disasters. Do's and Don'ts During Disasters.

#### **Suggested Readings:**

1. Singh, R.B. (1993) *Environmental Geography*. Delhi, India: Heritage Publishers.
2. Government of India. (2011). *Disaster Management in India*. Delhi, India: Ministry of Home affairs.
3. Singh, Savendra (2019) *Apada Prabandhan*, Pravalika Publication, Allahabad.
4. Bansal SC,(2019) *Prayavarn ek adhyan*, Meenakshi Publication, Meerut.

### Paper-II (Practical)

#### **A090302P - Statistical Techniques and Surveying**

Unit	Topics
I	Use of Data in Geography: Significance of Statistical Methods in Geography; Sources of Data, Scales of Measurement (Nominal, Ordinal, Interval, Ratio)
II	Tabulation and Descriptive Statistics: Frequency Distribution Table, Cross Tabulation, Graphical Presentation of Data (Bar diagram, Histograms, Frequency Curve and Cumulative Frequency Curves), Measurement of Central Tendencies (Mean, Median and Mode), Measurement of Partitions (Deciles, Quartiles and Percentiles), Dispersion (Standard Deviation, Variance and Coefficient of Variation).
III	Sampling: Probability sampling Non-probability sampling. Correlation: Rank Correlation and Product Moment Correlation.
IV	Instrumental Survey: Sextant

## **Semester – IV**

### **Paper-I (Theory)**

#### **A110401T - Economic Geography**

<b>Unit</b>	<b>Content</b>
<b>I</b>	Meaning, concepts and approaches of Economic Geography; agricultural region of the world (Derwent Whittlesey).
<b>II</b>	Resource: meaning, concept and classification. Spatial organization of economic activities.
<b>III</b>	Economic organization of space, Forestry, fishing and mining activities.
<b>IV</b>	Agricultural typologies, agricultural land use model (J.H. Von Thunen)
<b>V</b>	Types of industries; Factors of location of industries; iron and steel industry, cotton textiles and sugar; Theory of industrial location (Alfred Weber).
<b>VI</b>	World transportation: Sea routes and major transcontinental railways.
<b>VII</b>	WTO and International trade: Patterns and trends
<b>VIII</b>	Effect of globalization on developing countries.

#### **Suggested Readings:**

1. B N Singh (2021) Manav evam Arthik Bhugol, Pravalika Publication, Allahabad
2. Gautam, A. (2006): Aarthik Bhugol Ke Mool Tattava, Sharda Pustak Bhawan, Allahabad.
3. Alexander, J. W. (1988): Economic Geography. Prentice-Hall, New Delhi,

### **Paper-II (Practical)**

#### **A110402P - Weather Maps, Geological Maps and Surveying**

<b>Unit</b>	<b>Topics</b>
<b>I</b>	Weather Maps, Study and Interpretation of Weather Map, Weather Forecasting.
<b>II</b>	Geological Maps: Types, Signs, Bed and Bedding plane, Rock Outcrop, Dip, Strike etc. Construction of Geological Sections.
<b>III</b>	Instrumental Survey: Indian Clinometer.
<b>IV</b>	Instrumental Survey: Theodolite

#### **Suggested Readings:**

1. Sharma, JP (2001) Prayogik Bhugol, Rastogi Publication, Meerut
2. Natrajan, V. (1976): Advanced Surveying, B.I. Publications., Mumbai.
3. Punmia, B.C.(1994): Surveying, Vol I, Laxmi Publications Private Ltd, New Delhi.
4. Venkatramiah, C. (1997): A Text Book of Surveying, Universities Press, Hyderabad.

## Semester –V

### Paper-I (Theory)

#### **A110501T - Regional Geography**

<b>Unit</b>	<b>Content</b>
<b>I</b>	Definition of Region, Evolution and objectives of regional planning. Planning practices in Ancient India.
<b>II</b>	Types of Regional planning, Formal, Functional, and Planning Regions.
<b>III</b>	Delimitations of Region and Regional Planning.
<b>IV</b>	Theories and Models for Regional Planning: Growth Pole Model of Perroux; Myrdal, Hirschman, Rostow and Friedmann.
<b>V</b>	Sustainable Development, Concept of Development and Underdevelopment.
<b>VI</b>	Efficiency-Equity Debate: Definition, Components and Sustainability for Development.
<b>VII</b>	Indicators (Economic, Social and Environmental).
<b>VIII</b>	Need for regional planning in India, Five Year Plans and Regional Planning, multi- level planning in India.

#### **Suggested Readings:**

1. Singh, M B, Pradeshik Vikas Niyogan, Tara Book Agency, Varanasi.
2. Bhat L.S. (1972): Regional Planning In India, Statistical Publishing Society
3. Misra , R.P, Sundaram K.V, PrakashRao , VLS( 1974): Regional Development Planning in India , Vikas Publication , New Delhi.
4. Misra, R.P (1992): Regional Planning: Concepts , techniques , Policies and Case Studies , Concept , New Delhi
5. Kulshetra ,S.K,( 2012) : Urban and Regional Planning in India : A hand book for Professional Practioners , Sage Publication , New Delhi

## Paper-II (Theory)

### **A110502T - Basics of Remote Sensing and GIS**

<b>Unit</b>	<b>Content</b>
<b>I</b>	Remote Sensing: Definition, Type, Scope and Historical Development. Types of Satellites.
<b>II</b>	Electro-magnetic radiation: Characteristics, spectral regions and bands. Stages or Process of Remote Sensing.
<b>III</b>	Remote sensing satellites: Platform and sensors. Resolution: Spatial, Spectral, Temporal, Radiometric Resolution.
<b>IV</b>	Remote Sensing data processing and applications: Visual and digital image processing techniques.
<b>V</b>	Remote Sensing applications in Urban Planning, Agriculture, Forestry, Land use/Land cover Mapping, Oceanic Studies and Disaster Management.
<b>VI</b>	Introduction to GIS: Definition, concept and history of GIS.
<b>VII</b>	Computer fundamentals for GIS, GIS Packages like ARC GIS, ERDAS, QGI etc.
<b>VIII</b>	Coordinate system, Datum, Raster and vector data.

#### **Suggested Readings:**

1. Choniya, D D, (2016) Sudur Samvaden evam Bhogolic Suchna Pranali ke sighthant, Sharda Pustak Bhavan, Allahabad.
2. Lillesand, T.M. and Kiefer, R.W. (2000): Remote Sensing and Image Interpretation. 4th edition. John Wiley and Sons, New York
3. Campbell, J.B. (2002): Introduction to Remote Sensing. 5th edition, Taylor and Francis, London
4. Bhatta, B. (2010): Remote Sensing and GIS, Oxford University Press, New Delhi.
5. Nag Prithvish and Kudrat M. (1998): Digital Remote Sensing, Concept Publishing Company, New Delhi

### **Paper-III (Practical)**

#### **A110503P - Tour and Tour report**

---

<b>Unit</b>	<b>Topics</b>
	How to prepare Field Book, steps and methods for preparing Tour report, Methodology for Research in Field Trip, Various aspects of study in Field Trip, Preparation of Surveying in Field Trip. (30 lectures shall be taken before and during field trip)

### **Paper-IV (Project)**

#### **A110504R - Project Report-I**

---

<b>Unit</b>	<b>Topics</b>
	Meaning, types and significance of Research, Literature review and formulation of research design, research problem, objectives, hypothesis, Research materials and methods, Sampling etc. Techniques of writing scientific reports: Preparing notes, references, bibliography, abstract and keywords etc. Note: 1. Each faculty member shall teach these topics of research to his/her Group of students independently. 2. Student shall choose supervisor according to his/her research interest and specialisation of Faculty member.



## Semester – VI

### Paper-I (Theory)

#### **A110601T- Geography of India**

<b>Unit</b>	<b>Content</b>
<b>I</b>	Space relationship of India with neighbouring countries; Structure and relief; Drainage system and watersheds; Physiographic regions; Ek Bharat Shrestha Bharat: A Geographical Prospective.
<b>II</b>	Mechanism of Indian monsoons and rainfall patterns, Tropical cyclones, and western disturbances; Floods and droughts; Climatic regions; Natural vegetation; Soil types and their distributions.
<b>III</b>	Resources: Land, surface and groundwater, energy, minerals, biotic and marine resources; Forest and wildlife resources and their conservation; Energy crisis.
<b>IV</b>	Industry: Evolution of industries; Locational factors of industries; Industrial houses and complexes including public sector undertakings; Industrial regionalization; New industrial policies; Special Economic Zones; Tourism including eco-tourism.
<b>V</b>	Cultural Setting: Historical Perspective of Indian Society; Racial, linguistic and ethnic diversities; religious minorities; major tribes, tribal areas, and their problems; cultural regions.
<b>VI</b>	Population: Growth, distribution, and density of population; Demographic attributes: sex-ratio, age structure, literacy rate, work-force, dependency ratio, longevity; migration (inter-regional, intraregional and international) and associated problems; Population problems and policies; Health indicators.
<b>VII</b>	Agriculture: Infrastructure: irrigation, seeds, fertilizers, power; Institutional factors: landholdings, land tenure, and land reforms; Cropping pattern, agricultural productivity, agricultural intensity, crop combination, land capability; Agro and social-forestry; Green revolution and its socio-economic and ecological implications.
<b>VIII</b>	Settlements: Types, patterns, and morphology of rural settlements; Urban developments; Morphology of Indian cities; Functional classification of Indian cities; Conurbations and metropolitan regions; urban sprawl; Slums and associated problems; town planning; Problems of urbanization and remedies.

#### **Suggested Readings:**

1. Bansal SC,(2018) Bharat Ka Bhugol, Meenakshi Publication, New Delhi, Meerut.
2. Rao, B.P. ( 2007): Bharat kee Bhaugolik Sameeksha, Vasundhara Prakashan, Gorakhpur.
3. Khullar, D.R. ( 2007): India: A Comprehensive Geography, Kalyani Publishers, New Delhi.
4. SukhwaI, B.L. (1987): India: Economic Resource Base and Contemporary Political Patterns. Sterling Publication, New Delhi
5. Singh, R.L. (ed.) (1971): India: A Regional Geography. National Geographical Society of India, Varanasi.
6. Krishnan, M.S. (1982): Geology of India and Burma, CAS Publishers and Distributors, Delhi.
7. Gautam, A. (2006): Advanced Geography of India, Sharda Pustak Bhawan, Allahabad

## Paper-II (Theory)

### **A110602T- Evolution of Geographical Thought**

<b>Unit</b>	<b>Content</b>
<b>I</b>	Contribution of Indian Geographers in Ancient India.
<b>II</b>	Early Origins of Geographical Thinking, Concepts of distributions; relationships, interactions, area differentiation and spatial organization in Geography
<b>III</b>	Dualisms in geography; systematic & Regional geography, physical & human geography, Systematic and with regional geography. The myth and reality about dualisms.
<b>IV</b>	Contribution of Greek & Roman geographers in ancient world.
<b>V</b>	Contribution of Arab geographers in Middle ages, Renaissance period in Europe. Renowned travelers and their geographical discoveries.
<b>VI</b>	German school of thought - Kant, Humboldt, Ritter, Richthofen, Ratzel, Hettner French school of thought - Contribution of Blache & Brunhes.
<b>VII</b>	Soviet geographers, American school - Contribution of Sample, Hunthington & Carl Sauer. British school - Contribution of Mackinder, Herbertson & L.D. Stamp.
<b>VIII</b>	Paradigms in Geography, Thomas Kuhn theory about the growth and development of science. Application of Kuhn Model in Geography.

#### **Suggested Readings:**

1. Ali, S.M. (1960): Arab Geography, Institute of Islamic Studies, Aligarh Muslim University, Aligarh, First Edition.
2. Dikshit, R. D. (2003): Geographical Thought. A Critical History of Ideas. Prentice-Hall of India, New Delhi. (in English and Hindi).
3. Dube, B. (1967): Geographical Concepts in Ancient India, National Geographical Society of India, Varanasi
4. Husain, Majid. (2002): Evolution of Geographical Thought, Rawat Publications, Jaipur.

## Paper-III (Practical)

### **A110603P - Remote Sensing and GIS**

<b>Unit</b>	<b>Topics</b>
<b>I</b>	Overview of image processing & GIS Packages (Including open source Software's). – ARC GIS, ERDAS, MAP INFO, ILWIS, GEOMEDIA, IDRISI, GRASS, SAGA, QGIS.
<b>II</b>	Creation of Shape File in GIS Software's. Coordinate system and projections in GIS Software's. GIS Data Structures: Types (spatial and Non-spatial), Raster and Vector Data Structure.
<b>III</b>	Geo-Referencing of Maps. Creation of Point, Line and Polygon Files and features. Preparation of Maps with Legend, Scale, North Arrow etc and Export of Map in various Formats.
<b>IV</b>	Downloading of Remote sensing Images from various online platforms (like Bhuvan, USGS, ASF, Copernicus etc). Land use Classification (Supervised and Unsupervised) using downloaded images and GIS Packages.

#### **Suggested Readings:**

1. Chaunial, D. D. (2004): Remote Sensing and Geographical Information System(in Hindi), Sharda Pustak Bhawan, Allahabad
2. Gautam, N.C. and Raghavswamy, V. (2004). Land Use/ Land Cover and Management Practices in India. B.S. Publication., Hyderabad.
3. Nag, P. (ed.) (1992): Thematic Cartography and Remote Sensing. Concept Publishing Company, New Delhi.
4. Rampal, K.K. (1999): Handbook of Aerial Photography and Interpretation. Concept Publishing. Company, New Delhi.

## Paper-IV (Project)

### **A110604R - Project Report- II**

<b>Unit</b>	<b>Topics</b>
<b>I</b>	Project report shall be on any topic of interest of students. It must include Remote sensing and GIS technology directly or indirectly. Like project can be based on investigation of any issue using above technology or these technology must be used in data analysis or representation. Note: 1. Each faculty member shall teach and guide to his/her Group of students independently. 2. Student shall choose supervisor according his/her research interest and specialisation of Faculty member.