

Dr. Bhimrao Ambedkar Government College Sriganaganagar

FACULTY OF ARTS

M.A. PREVIOUS GEOGRAPHY 2021

Paper I	: Evolution of Geographical Thought
Paper II	: Structural & Dynamic geomorphology
Paper III	: Principles & Theory of Economic Geography
Paper IV	: Geography of Environment

Note: A weekly seminar be arranged for M.A. Previous and Final students.

1. Laboratory & map work test (4 hours duration)	40 marks
2. Record work and Viva-voce (25 +10)	35 marks
3. Project report & viva-voce (15+10)	25 marks
Total Marks	100 marks

Practical : Surveying and Laboratory Work

M.A. FINAL GEOGRAPHY 2022

Paper V : Advanced Geography of India

Paper Vi : Any one of the following:

- (a) Urban Geography
- (b) Regional Planning & Development
- (c) Cultural Geography
- (d) Geography of Tourism

Paper VII : Any one of the following:

- (a) Bio- geography
- (b) Agriculture Geography
- (c) Quantitative techniques in Geography

(d) Geography of Population & Settlement Paper VIII : Any one of the following:

(a) Political Geograpgy

(b) Industrial Geography (c) Climatology & Oceanography (d) Remote sensing & G.I.S.

Dissertation : In lieu of Vi/ Vii/ Viii paper

Practical : Surveying and Laboratory Work

The distribution of marks in the practical will be as follows:

1. Laboratory work of four hours duration	40 marks
2. Record work & viva-voce (15+5)	20 marks
3. Field surveying & viva-voce (10+5)	15 marks
4. Survey camp & viva- voce (15+10)	25 marks
Total Marks	100 marks

PAPER-I: EVOLUTION OF GEOGRAPHICAL THOUGHT

UNIT-I

Definition of geography, The nature and scope of geography (basic concepts), Post war trends, Inter-disciplinary trends, recent trends in geography.

UNIT-II

Pre-scientific geographic ideas in ancient and medieval times: Indian influences. Geography of Vedic age and geography of Puranas: sources of puranic geography, Puranic continents and oceans, the mountain system and river systems (first 4 chapters from Geography of Puranas by S.M. Ali). Development of geography in India.

UNIT-III

Contribution by Greek, Roman and Arab geographers; the emergence of scientific geography in the 18th and 19th centuries; its place among other social sciences; Foundation of modern geography; Contribution of German, French, British and American schools; Humboldt and Ritter; Leaders of the first generation- Ratzel, Richthofan, Hettener; Contribution of Vidal-de-la Blache and Jean Brunche.

UNIT-IV

Conceptual and methodological developments during the 20th century; Paradigm shifts; Man & environment; Areal differentiation and spatial organization; Dichotomies in geography- Physical & human geography, Determinism & possibilism, Neo-determinism, Regional & systematic geography, Qualitative & quantitative geography, Theoretical & applied geography, Analytical & synthetical geography, Reductionism & holism.

UNIT-V

Impact of positivism, humanism, radicalism, and behaviouralism in geography; Positivism, functionalism, idealism, realism, and post modernism in geography. Feministic perspective in geography.

Course Outcomes:

- To study the nature, scope, concept and trends of Geography
- To study the evolution and development of Geography through the times
- To study the influence of several schools of thought
- To know the concepts and philosophies and relate them with the contemporary problems of society

PAPER-II: STRUCTURAL AND DYNAMIC GEOMORPHOLOGY

UNIT-I

Nature and scope of geomorphology, Fundamental concepts, the constitution of earth's interior: the evidences of seismology, thermal state of the earth interior, the zoning of the earth's interior. The principles of isostasy: origin of the concept, level of compensation, different scientists views, gravity anomaly. Revival of continental drift theory of Alfred Wegner, Plate tectonics, Seafloor spreading hypothesis.

UNIT-II

Earth Movements and geological structure, Endogenetic forces: diastrophic and sudden forces, Tectonic regionalization of India, Geosynclines, Ancient shields, Median mass, Theories of mountain building of Jeffery, Kober, Joly, Daly, Holms, phases of mountain building with reference to evolution of the Himalayas.

UNIT-III

Exogenetic processes: Concept of gradation, agents and processes of gradation; Causes, types and classification of weathering, Mass movement, Erosional and depositional processes; Sub- areal denudation, concept of landscape evolution, factors controlling landform development, landform classification, Karst, Arid, Semi-arid, Glacial and coastal landforms.

UNIT-IV

Fluvial process, mathematical form of river curve, the fundamental principles of cycle of erosion and its presentation, drainage patterns, Indian river systems and river regimes; the study of slopes, concept of slope in geomorphology, old and new ideas on evolution of hill side slope elements (hilltop, hillside, screed slope, and pediment), Detailed study of the ideas of W.M.Davis, Walter Penck, Wood, A.Young, L.C. King, and Strahler on the development of slope.

UNIT-V

The study of erosional surfaces: concept of erosion surface, techniques of recognition and correlation of erosion surfaces with special reference to India and Rajasthan; Concept of applied geomorphology, bottom relief of the oceans, Coral reefs and islands, Sea level change and coastal erosion, formation of coasts of India.

Course Outcomes:

- To understand the concept of geomorphology with illustrations
- To study the principles and scientific theories of geology
- To study the important thinkers and scientists who have contributed through significant studies

PAPER- III: PRINCIPLES & THEORY OF ECONOMIC GEOGRAPHY

UNIT-I

Meaning, nature, scope and methods of economic geography; relation of economic geography with economics and other branches of social sciences, concept of economy; simple model of economy: environmental relations of economy, spatial structure of economy.

UNIT-II

Types of agriculture: Whittlesey's classification of agricultural regions and special study of subsistence agriculture, tropical plantation, Mediterranean agriculture, mixed farming, stock raising and its products; concept and techniques of delimitation of agriculture regions; crop combination and diversification; Von Thuenen's model of agriculture location and its modification.

UNIT-III

Spatial distribution of energy; sources of power: coal, petroleum, hydroelectricity, and atomic power; Future need of energy, Nature of world

trade and its role in economic development; Decision making processes- a behavioural approach.

UNIT-IV

Classification of industries; resource based and footloose industries; theories of industrial location- Weber, Losch and Isard; Case studies of selected industries- iron & steel, cotton textile, chemical fertilizers, paper & pulp, oil refining and petrochemical.

UNIT –V

Location and interaction in a simplified economic landscape; Spatial variation in transport cost- accessibility & connectivity. Spatial variation in production cost. Demand scale and agglomeration, Concept of economic region, techniques of delimitation of economic regions, economic regionalization of India.

Course Outcomes:

- To study the theoretical framework of economic geography
- To study the classifications of agriculture, energy and industries to correlate them with the existing geographical conditions
- To familiarize with the economic regionalization of India

PAPER -IV: GEOGRAPHY OF ENVIRONMENT

UNIT-I

Concept of environment, meaning, nature and scope of environmental geography; Concept of ecology and ecosystem: definition and elements, energy flow and productivity in ecosystem, ecocycles, types of eco-system.

UNIT-II

Man- environment relationship, perception of environment and its quality, degradation of environment, development vis-à-vis eco-crises;

Population, resources and eco-crises; environment and quality of life.

UNIT – III

Environmental hazards and pollution problem- water, air, noise, soil and radioactive: causes, impact and measures of control with Indian examples.

UNIT – IV

Environmental management- management of forest, soil, wild life, energy and mineral resources, Environmental education, monitoring and mapping, conservation of natural resources.

UNIT – V

Ecological planning for sustainable development in India, environmental policies and programmes (international and national), environmental problems and planning in India.

Course Outcomes:

- To study the elements and components of environment and ecology
- To study the threats to environment, various hazards-causes and effects
- To study the man-environment relationship
- To feel the responsibility of preserving the gifts of human life

PRACTICAL

Distribution of marks will be as follows:

- | | |
|--|----|
| 1. Laboratory & map work test (4 hours duration) | |
| 40 marks | |
| 2. Record work and Viva-voce (25 +10) | 35 |
| marks 3. Project report & viva-voce (15+10) | |
| 25 marks | |

Total Marks 100 marks

N.B. 12 hours of teaching practical be provided per batch of 15 students per week.

Note: M.A Previous students will compulsorily undertake 1 week field survey at any location of geographical interest.

Laboratory and map work:

- (i) The art and science of cartography, history of maps, materials, techniques and preparation of maps; Map as a tool in geographical studies; types of maps, techniques for the study of spatial pattern of distribution, single purpose and composite maps.
- (ii) Enlargement, reduction and combination of maps, finding area of maps, use of planimeter.
- (iii) Interpretation of weather maps and weather forecast.
- (iv) Elementary trigonometry.
- (v) Map projections- definition, choice & use, limitations and classification.

Construction (mathematical) and characteristics (properties) of following projections: I. Conical projection:

1. Equal area with one standard parallel
2. Equal area with two standard parallels
3. Bonne's Conical Projection
4. Poly-conic projection
5. International

II. Cylindrical Projection:

1. Cylindrical Equal Area Projection
2. Natural Cylindrical Projection
3. Simple Cylindrical Projection
4. Mercator's Projection
5. Gall's stereographic

Projection III. Zenithal

Projections:

1. Gnomonic (a) Polar case (b) Equatorial case.
2. Stereographic (a) Polar case (b) Equatorial
3. Orthographic (a) Polar case (b) equatorial case
4. Equal Area (a) Polar case (b) equatorial case
5. Equidistant (a) Polar case (b) equatorial case IV.

Conventional Projections:

1. Sinusoidal Projection
2. Mollweide Projection
3. Interrupted Mollweide Projection
4. Interrupted Sanson Flamsteed (Homolosine)

Geographical Maps and Diagrams:

Computation of data, preparation of frequency tables, representation of histogram and ogive; finding skewness, Computation of mean, median, mode, standard deviation and coefficient of variation and correlation; Theoretical basis of nearest neighbour analysis, Practical exercise of nearest neighbour analysis, Network analysis, Locational analysis of urban centres, All these be computed from statistical data preferably based on district or tehsil unit area and the following types of maps and diagrams be prepared:

Isopleths, Choropleth, Chorochromatic maps; Mapping of location specific data, accessibility and flow maps; Isochrones and population potential surface maps; population pyramid; Sten-deGeer's and Stilgen-baur method.

Three dimensional diagram of economic and social data, Block pile, Sphere, Pyramid; Graphs- polygraph, semi-log & log graph, Trilinear chart, Circular graph, Climatograph, Taylor's climograph, Annual water deficiency and water surplus graph.

Survey Camp: Landscape study tour of cultural and physical features be conducted organizing a field excursion for a week and a detailed report of about 25 typed pages with appropriate maps and diagrams should be submitted by each student. The students must stay in the camp .Survey report shall be prepared separately and independently.

M.A. FINAL GEOGRAPHY EXAMINATION- 2020

PAPER-V: ADVANCED GEOGRAPHY OF INDIA

UNIT-I

Physiography and drainage system; soils, vegetation; climate and its regional variations; origin and mechanism of Indian Monsoon; Schemes of natural, physiographic, and climatic classification; Identification of drought and flood prone areas.

UNIT-II

Resources: conservation and utilization of land, mineral, water, biotic and marine resources. Agriculture, agro-climatic regions, land use pattern, green revolution and its impact on Indian agriculture, Agriculture infrastructure – irrigation, fertilizers and seeds, Dry zone agriculture.

UNIT-III

Mineral and power resources; factors of industrial localization; classification of industries; Major industries: iron & steel, cotton & textile, cement, fertilizers, paper & pulp and sugar industry.

UNIT-IV

Tribal areas and their problems; population distribution, density and growth, population problems and policies; study of the network of roadways, railways, airways and waterways; Regional disparities in social and economic development in India.

UNIT-V

Geographical study of Rajasthan under the following heads: Relief, climate, vegetation, soils, agricultural development, irrigation, mineral and power resources, industrial development; Detailed study of – (i) Marusthali, (ii) Aravalli, (iii) Hadoti and (iv) Bangar region.

Course Outcomes:

- To study the physiographical features of India
- To study the major resources available in India and their characteristics
- To study the geographical features of Rajasthan

PAPER VI (b): REGIONAL PLANNING AND DEVELOPMENT

UNIT-I

Regional concept in Geography and its application to planning, Conceptual and theoretical framework, Merits and limitations for application to regional planning and concept of development, Indication of development, Regional imbalances, Changing concept of the region from an inter-disciplinary view point, Concept of planning regions, Concept of Space, Area and locational attributes.

UNIT – II

Types of regions: formal and functional; uniform & nodal; single purpose & composite region in the context of planning; Regional hierarchy; Special purpose regions and methods of regional delineation; approaches to delineation of different type of regions and their utility in planning; Planning processes- sectoral, temporal and spatial dimensions, short term and long term perspectives of planning, Planning for a region's development and multi-regional planning in a national context.

UNIT – III

Physical regions, resource regions, Regional divisions according to variations in level of socio- economic development; Special purpose regions- river valley region, metropolitan region, problem region, hilly region, tribal region, regions of drought and floods.

UNIT - IV

Indicators of development and their data sources, measuring levels of regional development and disparities – a case study of India; Regional development strategies –concentration v/s dispersion; Case studies for plans of development and developing countries, regional plans of India.

UNIT – V

Concept of multi- level planning; decentralized planning; peoples participation in planning process; Panchayati Raj System; role and relationship of panchayati raj institutions (Village, Block and District); Regional development in India- Problems and Prospects.

Course Outcomes:

- To study the regional concepts and applications in Geography
- To study the different levels of planning in regional development in India
- To study the indicators of national development through data and case studies

PAPER VII (C.): QUANTITATIVE TECHNIQUES IN GEOGRAPHY

UNIT-I

Definition of statistics, Importance and use of statistical techniques in geography, Statistical data, Various types of averages, Measures of dispersion

and their calculation, Normal frequency distribution, Curve and its uses, Binominal and Poisson's frequency distributions.

UNIT-II

Characteristics of samples, Methods of sampling, Statistical significance, Standard error of difference, Significance test in small samples, Student's 't' test, Snedecor's variance ratio test (F test).

UNIT-III

Difference between large and small samples, Significance test in large samples, Standard error of the difference of sample means, Chi Square test- definition and nature, degree of freedom, goodness of fit.

UNIT-IV

Measures of spatial distribution, Point and line distribution, Nearest neighbour index, Models, Importance of models in geography, Models as quantitative techniques, Simulation models, Gravity models, Measures of inequality, Lorenz curve, Gini's coefficient. Combinatorial analysis- Nelson's method, Weaver's method, Raiffullah's method, Ternary diagram.

UNIT- V

Product moment correlation coefficient, Spearman's correlation coefficient, Kendall's coefficient of correlation, Simple linear regression analysis, Regression line and confidence limits.

Course Outcomes:

- To study the statistical and quantitative tools in Geography
- To study the sampling tools and techniques for data assimilation
- Concepts and models of spatial distribution
- To inculcate a disciplined approach of students towards research

PAPER VII (d.): GEOGRAPHY OF POPULATION AND SETTLEMENT

UNIT-I

Definition and scope of population geography, Theories in Population Geography- Malthusian, Neo- Malthusian, and Optimum Population Theory, Demographic Transition Theory.

UNIT – II

Population Census with special reference to Indian census; Growth, density and distribution of population in the world with special reference to India; age and sex composition; Economic and religious composition of population with special reference to India; Rural and urban population.

UNIT – III

Urbanization, Internal and International migration, behavioral migration studies, The population policy of Government of India.

UNIT – IV

Definition, scope and development of settlement geography, Theories in settlement geography, Causes of origin of settlements, types, site and situation of rural and urban settlements, settlement pattern, size and spacing of rural and urban settlements.

UNIT – V

Morphological characteristics of rural and urban settlements with special reference to India, Concentric zone and multiple nuclei models of urban growth; problems of urban housing and emergence of status.

Course Outcomes:

- To study theories in population- techniques and results

- To study the technique and classifications of population census
- To familiarize with the important policies of the government for migration, urbanization, settlement etc.
- To study the recent changes in Indian population and settlement in comparison to the world

PAPER VIII (C): CLIMATOLOGY AND OCEANOGRAPHY

UNIT-I

Nature and scope of climatology and its relationship with meteorology; Composition, mass and structure of atmosphere; Insolation, heat balance of the earth, Green house effect; Vertical and horizontal distribution of temperature; Atmospheric moisture: humidity, evaporation, condensation, precipitation-formation types, acid rain, World pattern of precipitation.

UNIT - II

Atmospheric motion, forces controlling motion of air, vertical motion and velocity, local winds, jet stream, general circulation in atmosphere, Tropical, Temperate and High Latitude weather systems- concept of air masses and atmospheric disturbances. Ocean atmospheric interaction- El Nino, Southern oscillation ENSO and La Nino, Monsoon winds, norwesters and cyclones-tropical and temperate. Climate of India and its controls: western disturbances.

UNIT – III

Climate classification of Koeppen and Thornthwaite; Major climates of the world- Tropical, Temperate, Desert, and Mountain climate; Climate changes-evidences, possible causes, global warming, environmental impact and society's response.

UNIT – IV

Nature and scope of oceanography- history of oceanography, distribution of land and water, major features of ocean basins, continental margins and deep- ocean

basins, Bottom relief of Indian, Atlantic and Pacific oceans; Marine sediments, physical and chemical properties of sea water.

UNIT – V

Interlink between atmospheric circulation and circulation patterns in the oceans; Surface currents- thermohaline, waves and tides; Impact of humans on the marine environment; Law of sea, Exclusive economic zone, marine deposits and formation of coral reefs.

Course Outcomes:

- To study the concepts and theories related to climatology and oceanography
- To know in detail about the field of oceanography
- To study the diverse climates of the world in detail

Dissertation/case study on Geographic Problem (in lieu of paper VI, VII, or VIII)
N.B. The candidate offering this paper will be required to submit dissertation/case study at least three week before the commencement of the theory examination. It will be examined by a board of two examiners. Three copies of the dissertation must be submitted to the university out of which one copy will be returned to the department/ college and one to he supervisor. The dissertation should be exclusively based on field work and statistical analysis as far as possible, and be prepared under the guidance of a post graduate teacher of five years standing. The volume of dissertation should not exceed 100 pages.

PRACTICAL

Surveying and laboratory work 1 hours per batch of 15 candidates. The distribution of marks in the practical will be as follows:

- | | |
|---|----------|
| 1. Laboratory work of four hours duration | 40 marks |
| 2. Record work & viva-voce (15+5) | 20 marks |
| 3. Field surveying & viva-voce (10+5) | 15 marks |
| 4. Survey camp & viva-voce (15+10) | 25 marks |

Total Marks 100 marks

Note : 12 hours of teaching practical be provided per batch of 15 students per week.

The art of surveying, History of surveying, scope, utility and problems, classification of surveying, Methods and techniques of representation of relief :

- (a) Methods and techniques of depicting relief
- (b) Profile, gradients and calculation of slopes
- (c) Contour and inter-visibility
- (d) Block diagrams, field sketching, serial profile, hypsometric curves, altimetric frequency graphs.

Interpretation of Topographical Maps: A brief history of topographical maps of the world with special reference to India and their interpretation and Detailed study of such top sheets.

Air photo interpretation and exercise on the determination of height of plan, parallax, number of runs and number of photographs, knowledge of stereoscopic vision, mosaics, types of camera, emulsions and stereoscopes, interpretation and identification of cultural and physical features on areal photography and photo interpretation of land use and settlement in the field surveying. Remote sensing and computer application in mapping, digital mapping, Knowledge and use of Geographic Information System (GIS), and thematic maps.

Use of field survey instruments: Use and application of Plane Table Survey – radiation, intersection, re-sectioning – two and three point problems;

Practical contouring by clinometers / abney level.

Leveling : Terms, types and principles of leveling, classification of leveling,

Dumpy level: use of Dumpy Level, preparation of field book, practical contouring, profiles, cross uniting.

Theodolite: Its parts and their functions, use of theodolite- traverse computation, independent coordinates,

Survey Camp: a topographical survey of a settlement will be done by organizing a camp at least for a week duration and maps and reports of the camp will be prepared. The students are supposed to stay in the camp, and the report shall be prepared separately and independently.

Course Outcomes:

- To learn and practice the survey methods, techniques and tools
- To learn to use the various equipment associated with the surveys and experiments
- To experience camping and report preparation