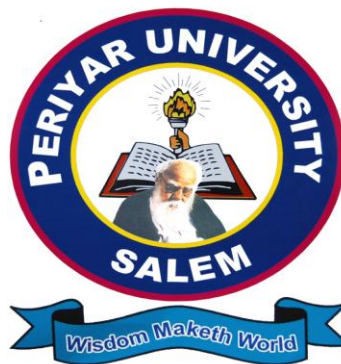


**PERIYAR UNIVERSITY
PERIYAR PALKALAI NAGAR
SALEM – 636 011**



**DEGREE OF BACHELOR OF
SCIENCE**

CHOICE BASED CREDIT SYSTEM

SYLLABUS FOR - B.Sc. GEOGRAPHY

**FOR THE STUDENTS ADMITTED FROM THE
ACADEMIC YEAR 2012 – 2013 ONWARDS**

LIST OF CORE COURSES-THEORY AND PRACTICALS

S.NO	NAME OF THE COURSE	COURSE CODE	SEMESTER
1	CLIMATOLOGY	12UGG01	I
2.	OCENOGRAPHY	12UGG02	II
3.	GEOMORPHOLOGY	12UGG03	III
4.	REGIONAL GEOGRAPHY OF TAMILNADU	12UGG04	IV
5.	HUMAN GEOGRAPHY	12UGG05	V
6.	NATURAL REGIONS OF THE WORLD	12UGG06	V
7.	GEOGRAPHY OF POPULATION AND SETTLEMENT	12UGG07	VI
8.	GEOGRAPHY OF RESOURCES	12UGG08	VI
9.	REGIONAL GEOGRAPHY OF ASIA	12UGG09	VI
10.	PRACTICAL-I (MAPS AND SCALES)	12UGGP01	II
11.	PRACTICAL-II (MAP INTERPRETATION AND DATA REPRESENTATION)	12UGGP02	IV
12.	PRACTICAL III (PROJECTIONS AND SURVEYING)	12UGGP03	VI
13.	PRACTICAL IV (REMOTE SENSING TECHNIQUES IN GEOGRAPHY)	12UGGP04	VI

LIST OF SKILL BASED ELECTIVE COURSES (SBEC)

S.NO	NAME OF THE COURSE	COURSE CODE	SEMESTER
1	FUNDAMENTALS OF PHYSICAL GEOGRAPHY	12UGGS01	II
2.	GEOGRAPHY OF TRAVEL AND TOURISM	12UGGS02	III
3.	PHYSICAL GEOGRAPHY OF INDIA	12UGGS03	V
4.	CARTOGRAPHY	12UGGS04	V
5.	PRINCIPLES OF SURVEYING	12UGGS05	VI
6.	AN INTRODUCTION TO SOCIAL GEOGRAPHY	12UGGS06	VI

LIST OF ELECTIVE COURSE (EC)

S.NO	NAME OF THE COURSE	COURSE CODE	SEMESTER
1.	BIO-GEOGRAPHY	12UGGE01	V
2.	REMOTE SENSING AND GIS	12UGGE02	V
3.	ECONOMIC GEOGRAPHY OF INDIA	12UGGE03	VI

LIST OF NON-MAJOR ELECTIVE COURSES (NMEC)

S.NO	NAME OF THE COURSE	COURSE CODE	SEMESTER
1.	GEOGRAPHY OF INDIA	12UGGN01	III
2.	GEOGRAPHY OF TAMIL NADU	12UGGN02	IV

COMMON COURSES

S.NO	NAME OF THE COURSE	COURSE CODE	SEMESTER
1.	VALUE BASED EDUCATION		I
2.	EXTENSION ACTIVITIES	12UEX01	VI

COMPULSARY COURSE

S.NO	NAME OF THE COURSE	COURSE CODE	SEMESTER
1.	ENVIRONMENTAL STUDIES		IV

QUESTION PATTERN

**CORE,SKILL, BASED,ELECTIVE AND NON-MAJOR ELECTIVE
AND ALLIED COURSES**

**Max Marks= 75
Internal Marks=25**

Total =100

PART-A (10X2=20 Marks)

Two questions from each section.

ANSWER ALL THE QUESTIONS

Answer should not exceed 50 words

Part-B= (5X5=25 Marks)

Two questions from each section with **internal** (a) or (b) choice

Answer **ALL** the questions

Answer should not exceed 300 words

Part-C (3X10=30 Marks)

One question form each section.

Answer **ANY THREE** questions out of **FIVE** questions

Answer should not exceed 1200 words.

**QUESTION PATTERN
MAJOR COURSE PRACTICALS**

For Internal

40

40 Marks

For University Eamination-60 Marks

One Question from each section

For Record Submission = 10

Each question carries 10 Marks (5X10=50 Marks)

Total Marks 50 + 10 = 60

**SEMESTER-I
CLIMATOLOGY**

Paper code:12UGG01

Unit I: Definition and Significances of Climatology - Rotation and Revolution of the Earth, Solstice, Equinox and Seasons, Elements of Weather and Climate, Composition and Structure of the Atmosphere, Isolation: factors affecting Isolation, Global energy budget, Horizontal and Vertical Distribution Inversion of Temperature and factors affecting them.

Unit II: Atmospheric Pressure: Diurnal and Seasonal Variations – Vertical and Horizontal distribution and factors affecting – Pressure Gradient – Coriolis force and Deflection. Winds: Causes and Types - Jet stream, planetary winds, Monsoon and Local winds.

Unit III: Atmospheric moisture and Precipitation: Humidity types - Condensation – Cloud types – Precipitation and Rainfall: Types and measurements.

Unit IV: Air Masses and Fronts: types, classification and properties – Atmospheric Disturbances: Tropical, Temperate Cyclones, thunderstorms and tornadoes – Origin, Development and associated weather conditions.

Unit V: Climatic Classification: Need and Basis of Climatic Classification – Koppen's Climatic Classification – Weather forecasting: Observation, Types and Uses.

REFERENCE BOOKS:

1. Critchfield, H., (1975): General Climatology, Prentice-Hall, New York.
2. Das, R. K., (1968): The Monsoons, National Book Trust, New Delhi.
3. Mather, J. R., (1974): Climatology, McGraw Hill, New York.
4. Patterson, S., (1969): Introduction of Meteorology, McGraw Hill Book Co., London.
5. Stringer, E. T., (1982): Foundation of Climatology, Surjeet Publications, New Delhi.
6. Trewartha, G. T., (198): An Introduction to Climate, International Students Edition, McGraw Hill, New York.
7. Kumaraswamy. K., et al., (2003): Climatology (Tamil Edition), Grace Publishers, Kumbakonam.

Semester-II
OCEANOGRAPHY

Paper code:12UGG02

Unit I: Oceanography: Scope, Content, Significance, Distribution of Land and Sea – Hypsometric Curve, Surface Configuration of the Ocean Floor: Continental Shelf, Continental Slope, Deep Sea Plain, Oceanic Deeps and Submarine Canyons.

Unit II: Relief Features of the Major Oceans: Atlantic, Pacific and Indian Ocean – Horizontal and Vertical Distribution of Seawater Temperature, Salinity: Factors Affecting Salinity and Distribution.

Unit III: Ocean Water Circulation: Factors Influencing Ocean Circulation – General Circulation of Ocean Currents, Currents of the Atlantic, Pacific and Indian Ocean, Waves and Tides: Definition and Types, Tsunamis: Origin and Effects.

Unit IV: Marine Deposits: Classification and Distribution – Coral Reefs types - Conditions for the Growth.

Unit V: Marine Resources: Types – Distribution and Uses – Tidal Energy – Role of National Institute of Oceanography in India.

Reference books:

1. Anikouchine, W. A. and Sternberg, R. W., (1973): The World Oceans - An Introduction to Oceanography, Englewood Cliffs.
2. Garrison, T., (1998): Oceanography, Wadsworth Co. USA.
3. Gerald, S. (1980): General Oceanography: An Introduction, John Wiley & Sons, New York.
4. King, C. A. M., (1972): Beaches and Coasts, E. Arnold, London.
5. King, C. A. M., (1975): Oceanography for Geographers, E. Arnold, London.
6. Ramasamy, G., (1970): Oceanography (Tamil Edition), Tamil Nadu Text Book Society, Chennai.
7. Sharma, R. C. and Vatel, M., (1970): Oceanography for Geographers, Cheytanya Publishing House, Allahabad.

SEMESTER-III
GEOMORPHOLOGY

Paper code:12UGG03

UNIT I: Meaning – scope - content and significance of Geomorphology – Internal structure of the earth – Rock Types: Igneous, sedimentary and metamorphic.

UNIT II: Geomorphic Processes: Internal and external processes – Diastrophism and Denudation, Internal Process - Faults, Folds and Cracks, Volcanism and Earthquakes: types and distribution.

UNIT III: External processes: Weathering: Physical, Chemical and Biological. Mass wasting: Soil creep, landslide, rock fall, rock slip and mud flow.

UNIT IV: landforms produced due to erosion and deposition with reference to: a. Running water, and b. Underground water.

UNIT V: Landforms produced due to erosion and deposition with reference to: a) Glaciers, b) Winds, and c) Waves.

REFERENCE BOOKS:

1. Dayal, P. A., (1996): Text book of Geomorphology, Shukla Book Depot, Patna.
2. Kale, V. and Gupta, A., (2001): Elements of Geomorphology, Oxford University Press, Calcutta.
3. Monkhouse, F. J., (1960): Principles of Physical Geography, Hodder and Stoughton, London.
4. Pitty, A., (1974): Introduction to Geomorphology, Methuen, London.
5. Singh, S., (1998): Geomorphology, Prayag Pustakalaya, Allahabad.
6. Sparks, B. W., (1960): Geomorphology, Longmans, London.
7. Strahler, A. N. and Strahler, A. H., (1992): Modern Physical Geography, John Wiley and Sons, New York.
8. Sivamoorthy, A., (1964): Geomorphology (Tamil Edition), Tamil Nadu Text Book Society, Chennai

SEMESTER- IV

REGIONAL GEOGRAPHY OF TAMIL NADU

Paper code:12UGG04

Unit I: Location and Extent – Administrative units – Major relief features
– Major rivers – Climate: temperature, Seasonal and Annual rainfall
– distribution, Soil: types and their distribution.

Unit II: Forest, livestock and fisheries - types and distribution, forest products, Livestock: cattle, sheep, dairying and fisheries-inland and deep-sea fishing.

Unit III: Irrigation and Agriculture Resources: types and distribution – canal, tank and well irrigation, Agriculture: distribution and production of rice, cotton, sugarcane, and rain fed crops, oil seeds, tea and coffee.

Unit IV: Mineral and Industrial Resources: General distribution and production. Power resources: Hydel, thermal, atomic and wind power, Industries: distribution and production of – cement, sugar, cotton, automobile and paper.

Unit V: Transport: Development and distribution of roads, railways, air and sea transportation - Important ports, Population – growth and distribution of rural and urban population.

REFERENCE BOOKS:

1. Sakthi Venkata Kumaraswamy, (2002): Geography of Tamil Nadu (Tamil edition), Sakthi Abirami Pathipagam, Kumbakonam.
2. Statistical Hand Book of Tamil Nadu, (2004): Special Commissioner and Director Department of Economics and Statistics Government of Tamil Nadu, Chennai.
3. Tamil Nadu – An Economic Appraisal 1999-2000, Director, Department of Evaluation and Applied Research, Chennai.
4. Season and Crop Report of Tamil Nadu for the Agricultural year 2003-2004, Commissioner, Department of Economics and Statistics, Chennai.

Semester-V
Human Geography

Paper code:12UGG05

Unit-I Basics: Scope and Content of Human Geography-
Interrelationship between Man and Environment-
Concepts-Determinism, Possibilism, Neo-Determinism
and Probablism.

Unit-II Human Habitats-Meaning and types-Mode of life in
Equatorial regions, Tropical Deserts, Temperate Grass
lands and Tundra region.

Unit-III Race-Major Races:-Caucasoid, Mongoloid and Negroid-
Distribution-Racial Conflicts and Racial Prejudice.

Unit-IV Religion: Distribution of world religion: Hinduism,
Christianity, Islam, Buddhism and Judaism.

Unit-V Languages: Major world Languages and their
distribution-Geographical factors-Significances.

REFERNCE BOOKS:

1. Majid Husian-Human Geography.
2. G.T. Trewarta-Geography of Population.
3. Goh Chenleong and Gilan C.Morgan-Economic and Human Geography.

SEMESTER-V

NATURAL REGIONS OF THE WORLD

PAPER CODE:-12UGG06

UNIT:- I – Definition – Natural Regions of the World – Equatorial Region : Situation and extent, Climate, Natural Vegetation , Animal life, Human life and Economic Development

UNIT:-II- Tropical Region – Tropical Monsoon Region – Tropical Savanna – Climate – Soil – Vegetation – Life in tropics – Economic Activity

UNIT:- III – Arid Region – World Deserts – Hot Deserts – Cold Deserts – Climate – Soil – Vegetation – Life in Deserts – Economic Activity

UNIT:- IV – Temperate Region – World Grasslands – (Prairies – Pampas – Downs – Valdes – Canterbury) Climate – Soils – Life in Temperate Regions – Economic activity

UNIT:- V Tundra region – Arctic region – Climate – Vegetation – Life in Tundra Region – Economic Activity

REFERENCE BOOKS:

1. Heintzelman H. et. Al., (1985) World Regional Geography, Prentice Hall Ltd., New Delhi.
2. Hussain Majid (2004) World Geography, Rawat Publication, New Delhi.
3. Robinson H. (1977) Monsoon Asia Mac Donald and Evans Ltd., Plymouth
4. Stamp L.D. (1967) Asia: A Regional and Economic Geography, B.I. Publication Ltd., New Delhi.
5. Tirth Ranjit (2005) Geography of Asia, Rawat Publication, New Delhi.
6. Wheeler J. et, al., (1975) Regional geography of the world, Holt Rionchart and Winston, New Delhi.

Semester – VI

GEOGRAPHY OF POPULATION AND SETTLEMENTS

Paper code:12UGG07

Units- I Population : As a Resource and Constraints to Development – Factors influencing the Distribution and Density, Factors affecting growth of population of the world- Problems of over population and under population.

Units- II Migration- Historic and Contemporary Migrations- Types – National, International, voluntary and forced migrations- causes and consequences of migrations.

Unit- III Settlements: Definition, site and situations of rural settlements, Factors influencing settlements patterns, Classification of settlements: Rural and Urban

Unit – IV Structure of Towns: Theories relating to the morphology of town.

- a) Concentric zone theory
- b) Circle and Sector theory
- c) Multiple Nuclei theory

Unit – V Urban and Urbanization: meaning – classification of towns and cities, site and situations and functions – urban hierarchy and hinterland – pattern of urbanizations in India

Reference Books:

1. G.T Trewartha-Geography of population
2. Clerk – Geography and Population
3. J.H. Johnson – Principle of Demography
4. Cole and King – Urban Geography
5. Mayor and Kohn – Urban Geography
6. R.L. Singh – Geography of settlements

SEMESTER –VI
GEOGRAPHY OF RESOURCES

PAPER CODE: 12UGG08

UNIT:- I- Resources: Meaning – Nature and significance in Resources – Classification and Types – Need for Conservation and Sustainable Development,

UNIT:- II – Water Resources – Importance – Classification – Continent wise Distribution and Utilization of Water Resources – Problems and Issues.

UNIT:- III – Biotic Resources – Major Forest types and Distribution – Live stock- Fisheries – Major fishing grounds of the world.

UNIT:- IV – Minerals Resources – Classification and Distribution of major Minerals : Iron and Copper – Energy Resources – Coal, Petroleum, Hydro Electric and Atomic power – Major industrial zones of the world.

UNIT:- V – Transportation and Trade – Different Modes of Transport – Trade – Types, Factors affecting Trade – Multi lateral and Bilateral – Agreements of trade – WTO – GATT

REFERENCE BOOKS:

1. John. W. Alexander- Economic Geogfraphy.
2. Gohcheng Leong and Morgan- Economic and Human Geography.
3. Von Royan and Bergsten- Fundamentals of Economic Geography
4. R.S. Thoman- Geography of Economic Activities.

SEMESTER – VI

REGIONAL GEOGRAPHY OF ASIA

Paper code:12UGG09

UNIT: - I – Significance of Geographical Location – Physiographic – Climate – Drainage systems

UNIT: - II – Soil types and Classification – Agricultural Production – Rice and Wheat – Rubber, Tea and coffee, Sugar cane and Jute

UNIT:- III – Mineral and Energy Resources – Iron ore , Manganese, Tin, Bauxite, Coal, Petroleum and Natural Gas

UNIT:- IV – Industrial Production and Distribution – Iron and Steel, Cotton and textile , Sugar cane and Automobile

UNIT:- V – Population- Transport and Trade and Commerce

REFERENCE BOOKS:

1. Human and Economic Geography by co-chang leoang, Oxford press
2. World Geography – Hembridge
3. Geography of Asia- Dobby
4. A Regional Geography of the world – D. S. Manku

Semester-II

Practical-Core Course-I-MAPS AND SCALES

Paper code:12UGGP01

Unit-I Map: Definition and types-Geo co-ordinate system: Latitude and Longitude. Time Zone and International date line.

Unit-II

Scales: Meaning and types – Construction of linear, Comparative and Diagonal scale – Conversion of scales.

Unit-III

Measurement of distance: Thread, divider and Rotometer method. Measurement of Area: Square and Strip methods. Enlargement and reduction of Map: Square and Similar Triangle method.

Unit-IV

Representation of climatic data: climatic graphs, Climograph, Hythergraph and Ergo graph-Wind rose diagram.

Unit-V

Representation of Relief features-Interpolation of Contours-Contour diagrams with Cross-section.

REFERENCE BOOKS:

1. Gopal Singh (1996), Map Work and Practical Geography, Vikas Publishing House Pvt. Ltd., New Delhi.
2. Khan Z.A. (1998), Text Book of Practical Geography, Concept Publishing Co., New Delhi.
3. Khullar D.R. (2004), Essentials of Practical Geography, New Academic Publishing Co., Jalandhar.
4. Monkhouse F.J., and Wilkinson H.R., (1961), Maps and Diagrams, Methuen & Co., New York.
5. Negi B.S. (1995), Practical Geography, Kedar Nath, Meerut.

Semester IV
PRACTICAL CORE COURSE- II – MAP INTERPRETATION
AND DATA REPRESENTATION

Paper Code:12UGGP02

Unit – I Meteorological Signs and Symbols – Station models – Study and interpretation of Weather reports of India (January, July, May and November only)

Unit – II Conventional signs and Symbols in Indian topographical maps – Interpretation of Indian topographical maps – Plain, Plateaus, Hills and Mountains only

Unit- III Representation of economic data: One dimensional diagrams – Bars: Two dimensional diagram: Rectangular, Squares and Circles – Three Dimensional diagrams: Curbs and spheres.

Unit IV- Pyramidal Diagrams – Pictorial – Flow. Line and Pie diagrams

Unit – V – Methods of Representing distribution of Data – Drawing of Isopleths, Choropleths, Chorochromatic and Choroschematic Maps.

Reference Books:

1. F.J. Monkose and H.R. Wilkinson – Maps and Diagrams.
2. Gopal Singh – Map work and Practical Geography
3. Zamir Ali – Text book of Practical Geography
4. Misra. R.P and Ramesh.A – Fundamentals of Cartography.
5. B.S Nagi – Practical Geography.
6. Pijushkanti saha and Partha Basu – Advanced Practical Geography.

SEMESTER - VI
Practical-III Core Course-I-
PROJECTIONS AND SURVEYING

Paper code:12UGGP03

Unit-I Map projections: Definition, significance and classification- construction and classification- construction of Zenithal projections: Equidistant, Equal area, Gnomonic and orthographic (or) Stereographic projection.

Unit-II

Construction of Cylindrical projection: Equidistant, Equal area and Mercator Projection-Simple Conical Projections with one and two standard parallels-Bone's and Polyconic projections.

Unit-III

Surveying: Chain Survey: Triangulation, Open and closed traverse-prismatic Campus: open and closed traverse.

Unit-IV

Plane table Survey: Open and closed Traverse-Correction of closing errors-Bowditch method-Finding of Resection points: trial and Error method and tracing paper method (three points only)

Unit-V

Survey with Indian clinometers and Abney level: Accessible and inaccessible methods-Dumpy level-Collimation method, Calculation of heights.

REFERENCE BOOKS:

1. Jayachandaran, S., (1964): Practical Geography (Tamil Edition), Tamil Nadu Text Book Society Chennai.
2. Khan.Z.A., (1998): Text Book of Practical Geography, Concept Publishing Company, New Delhi.
3. Negi, B.S., (1995): Text Book of Practical Geography. Kedar Nath, Meerut.
4. Gopal Singh (1996): Map works Practical Geography, Vikas Publishing House, Pvt. Ltd., New Delhi.
5. Mankhouse, F.J., and Wilkinson, H.R., (1980): Maps and Diagrams, B.I. Publication, New Delhi.

SEMESTER – VI

PRACTICAL CORE COURSE – IV - REMOTE SENSING TECHNIQUES IN GEOGRAPHY

Paper code:12UGGP04

UNIT:- Remotely Sensed Data Product – Aerial Photos: Types, Scale of Photos – Marginal information of Aerial Photos – Stereo Vision Tests

UNIT:- II – Satellite Imagery: Data Acquiring Techniques – Marginal Information – Basic Elements of Image interpretation- Interpreting Equipments : Viewing and Measuring Instruments

UNIT:- III – Aerial Photo Interpretation: Tracing and Interpreting the Aerial Photographs

UNIT:- IV – Satellite Image Interpretation: Tracing and Interpreting the given data product

UNIT-V- Comparative study of Map Information :

- 1) Air Photo and Topographic Map
- 2) Air Photo and Satellite images.
- 2) Air Photo Satellite and Topographic maps.

REFERENCE BOOKS:

1. Barret, E.C. and Curtie L.F. (1990): Introduction to Environmental Remote Sensing, Chapman and Hall, London.
2. Cambell, James B. (1987): Introduction to Remote Sensing, The Guilford Press, New York.
3. Lillesand, T. M. and Kieper (1987): Remote Sensing and Image Interpretation, John Willy and Sons, New York.
4. Lueder, D.R. (1959): Aerial Photographic Interpretation, McGraw Hill Book, Co., New York.
5. Wolf, P.R. (1974): Elements of Photogrammetry, McGraw Hill, New York.

Semester-II

FUNDAMENTALS OF PHYSICAL GEOGRAPHY

Paper code:12UGGS01

Unit-I General Geography: Nations and Capitals, Geographical locations- Latitude, Longitude and Time Zone, Solar system and Planets.

Unit-II Landforms: Major Relief features, Earth's External and Internal forces and agents of Denudation-Features formed by them, Normal Cycle of Erosion.

Unit-III

Climatology: Atmosphere, insolation-Temperature, Pressure-Wind-Humidity-Forms of condensation and Precipitation-Types and distribution of rainfall-Air mass-Front, Cyclones-Classification of Climate: Koppen's classifications.

Unit-IV

Oceanography: Land and Sea distribution-Bottom Topography of Oceans-Temperature, Salinity, Current, Tide, Coral reefs, Ocean deposits and Resources.

Unit-V

Biogeography: elements of biogeography-Environment, Habitat, Plant and animals-Distribution Groupings-Distribution of forests and major communities.

REFERNCE BOOKS:

- 1.Dayal, P. A., (1996): Text book of Geomorphology, Shukla Book Depot, Patna.
- 2.Sivamoorthy, A., (1964): Geomorphology (Tamil Edition), Tamil Nadu Text Book Society, Chennai
3. Lal, D.S., (1989): Climatology, Chaitanya Publisher's House,
4. Critchfield, H., (1975): General Climatology, Prentice-Hall, New York.

SEMESTER-III
GEOGRAPHY OF TRAVEL AND TOURISM

Paper code:12UGGS02

Unit I Tourism: Scope and Content-Basic components of tourism:
Attraction, Accessibility and Accommodation -Factors affecting
tourism activities-Types of tourism.

Unit II Travel documents. Passport and Visa –types-Tourist facilities and
services: Transport facilities – Accommodation, catering and
Hospitality- Entertainment, Trade, fairs, festival, sports and games.

Unit III
Accommodation: Significance and role in tourism industry - Hotel
types, Motels, Chou tries, Guest Houses, Youth Hostels, tour
operators.

Unit IV tourism and Travel agencies-functions- role of trade fairs and
festivals- National and International Sports and Games as Promoters-
Tourism in tamil Nadu-Impact on Economy.

Unit V Major Tourist Centers of India- Selected centers only (Jaipur, Agra,
Shimla, Ajanta and Ellora) – A Geographical study of tourist centers:
- Udgamandalam, Kodaikanal, Yercaud, Bangalore and Mysore.

REFERENCE BOOKS:

1. Pran Nath seth and Sushama seth bhat-an introduction to Travel and
Tourism
2. Biswanth Ghosh-Tourism and Travel Management.
3. A.P Singh-Himalayan Environment and tourism.
4. R.W. Kanl-dynamics if Tourism a Triology-Vol-I
5. Bhatia-Tourism Development.
6. S.N Singh-Geography of Tourism.
7. Manoj Doa-India: A Tourist Paradise

SEMESTER -V

PHISICAL GEOGRAPPHY OF INDIA

Paper code:12UGGS03

UNIT:- I- Introduction – Location – Structure and Relief – Physiographic Divisions

UNIT:- II – Climate of India- Factors Determining – Mechanism of Indian Monsoon – The Rhythm of Seasons – Distribution of Rainfall – Climatic Region of India

UNIT:- III – Drainage Systems of India – Himalayan System – Peninsular System

UNIT:- IV- Natural Vegetation – Forest types and Distribution – Forest covers in India – Wild life and Biosphere reserves of India – Conservation of Wild life

UNIT:- V- Soils of India – Major types and distribution – Soil degradation – Soil Conservation – Natural calamities

REFERENCE BOOKS:

1. Radhakrishnan K. Indian Geography (Tamil)
2. Gopal singh. Geography of India
3. India Physical Envinonment, NCERT Publication
4. Civil Services Chronicle February 2001, January 2011.
5. K. Siddartha K. & Mukharjee S. Geography through Maps.

Semester –V
CARTOGRAPHY

Paper code:12UGGS04

Unit –I Cartography – Nature, Scope and Content of Cartography – Arts and Science of Cartography – Cartography as a system of communication – Maps – Classification and their uses – Growth, development and modern trends in cartography.

Unit – II Map drawing and Measuring Techniques – Map Setting – The Earth and System of Co-ordinates – Base Map – Compilation and Generalization of Maps.

Unit – III Symbolization: Types of Cartographic symbols – Point, line, and Area symbols – Qualitative and Quantitative data generalization.

Unit – IV Map Design and Layout: General design problems – Principles of Cartographic design and design of map symbols – Lettering – Lettering methods, Positioning of letters – Geographical names.

Unit – V Map Reproduction – Process of Map production –Photographic systems – Multiple Reproduction Processes – Computer application in Cartography – Computer mapping – Remote Sensing and Cartography – Uses of Air photographs and Satellite images in Cartography.

Reference Books –

1. Misra R.P. and A.P. Ramesh – Fundamentals of Cartography
2. Robinson – Elements of Cartography
3. Keats J.S – Cartographic Design and Production.
4. Raiz – Principles of Cartography.

Semester – VI
PRICIPLES OF SURVEYING

Paper code:12UGGS05

Unit – I Surveying – Definition – Scope and content – types of surveying – Area measurement – Height determination – Advantages of survey.

Unit – II Chain survey – Accessibility –FMB – Methods of chain survey – Triangulation – Open and Closed traverse – Plotting of chain survey and results.

Unit – III Prismatic compass – Parts of prismatic compass – Accessories – Traverse – Plotting of prismatic compass – Errors and its corrections –= Bowditch's method of correction – calculation of bearings from included angles.

Unit-IV Plane Table – Equipments – Methods of plane table survey – preparation work for the plane table survey – Leveling and Orientating the table - Resection points – Trial and Error Method – Tracing Paper Method – Advantages and Disadvantages of plane table survey.

Unit-V Height measurement – Determination of height – by Dumpy level – Parts of Dumpy level – Methods of dumpy level survey – Height measurement by Indian Clinometer and Abney level.

Reference books:

1. Lekh Raj & Raghunandan Singh - Map work and practical geography.
2. Jayachandran – Practical geography.
3. Zamir Alvi – A Text book of Practical geography.
4. Pijushkanti Saha and Partha Basu – Advanced Practical geography.

Semester-VI

AN INTRODUCTION TO SOCIAL GEOGRAPHY

Paper code:12UGGS06

Unit-I Population-World Population distribution-factors affecting population-growth of population-theories: Malthus, Optimum and Demographic Transition.

Unit-II Migration–Settlement: Rural and Urban–Site and Situation–classification–Urbanization–Regional Studies-Concept-Types: Formal, Functional, Natural, Agricultural, Industrial and Cultural Regional of the World.

Unit-III Resources of the World: Resource types-Agriculture: Distribution and Production of Paddy, wheat, Tea and Coffee-Forest types-Distribution-Fisheries.

Unit-IV Minerals: Iron ore-Power Resources: Coal-Petroleum, thermal, Hydro, Nuclear-Industries: Cotton Textiles, Iron and Steel, Ship Building, - Transport and Trade.

Unit-V Geography of India: Location, Relief, Climate, Soil, Population, Urbanization.

REFERENCE BOOKS:

1. Dayal, P., (1990) A Text book of Geomorphology.
2. Lal, D.S., (1996) Climatology.
3. Robinson, H. (1978) Biogeography.
4. Strahler. A.H. and Strahler.A.N. (2001) Modern Physical Geography.
5. Thornbury. W.D., (1954) Principles of Geomorphology.
6. Worcester, P.G., (1948) A Textbook of Geomorphology.

SEMESTER –V

BIO GEOGRAPHY

Paper code:12UGGE01

UNIT-I Bio – Geography : Definition , Scope and significance – Basic Ecological Principles - Bio- Energy cycle in the Terrestrials Eco-system- Tropical level and food chain.

UNIT_II Evolution of life on Earth : Origin of Fauna and Flora- plants and Animal evolution throughout the geological times- distribution of plant life on the earth- concepts of Biome, Eco-tone and community.

UNIT-III Bio- Diversity: Problems of Extinction of plant and animal life- Habitat decay and need for conservation- Process of Desertification and its Consequences- Industrial Effluents and their affects on fresh water Biology.

UNIT-IV World Biomes: Major Biomes- Tropical forest- Tropical Grasslands- Temperate Grassland and Tropical Deserts.

UNIT-V Ecological and Environmental Managements: Study of Ecological regions of Himalayas and the Western –Ghats- Conservation and Management- Major Global Environmental Problems- International Co- Operation.

REFERENCE BOOKS:-

1. Ssvindra singh- Environmental Geography,
2. Robinson- H. Biogeography.
3. Nigel Pears- Basin Biogeography,
4. Newbegin.I.- Plant and anima, Geography

Semester-V
REMOTE SENSING AND GIS

PAPER CODE: 12UGGE02

Unit I: Remote Sensing: Definition and Types: Aerial, Satellite and Radar, Development of Space Programmes - History and Organization Associated with Remote Sensing in India and in other Countries.

Unit II: Remote Sensing: Sources of Energy, Electromagnetic Radiations (EMR) Atmospheric Windows, Energy Interaction with Atmosphere and Earth, Types of Platforms, Active and Passive Remote Sensing Methods, Ideal Remote Sensing Systems.

Unit III: Fundamentals of Aerial Remote Sensing: Components of Aerial Camera, Types of Aerial Photographs, Marginal Information of Aerial Photographs, elements of Photo Interpretation.

Unit IV: Fundamentals of Satellite Remote Sensing: Types of Satellites: Geo-stationary and Sun-synchronous Satellites, Resolution: Spatial, Spectral, Radiometric and Temporal, Types of Data Products, Marginal Information of Satellite Images.

Unit V: Geographical Information Systems (GIS) Meaning-Developments-Raster and Vector data-Data integration-Global positioning system (GPS) Advantages and Limitations of GIS and GPS.

REFERENCE BOOKS:

1. Barret, E.C. and Curtie L.F. (1990): Introduction to Environmental Remote Sensing, Chapman and Hall, London.
2. Cambell, James B. (1987): Introduction to Remote Sensing, The Guilford Press, New York.
3. Lillesand, T. M. and Kieper (1987): Remote Sensing and Image Interpretation, John Willy and Sons, New York.
4. Lueder, D.R. (1959): Aerial Photographic Interpretation, McGraw Hill Book, Co., New York.
5. Wolf, P.R. (1974): Elements of Photogrammetry, McGraw Hill, New York.

SEMESTER VI

ECONOMIC GEOGRAPHY OF INDIA

Paper code:12UGG03

UNIT:- I - India and its Neighbouring Countries – Political Division – Political Boundaries with Neighbouring Countries- Indian Agriculture : Importance – Suitable conditions for cultivation of major food crops.

UNIT:- II - Production and Distribution of major Commercial crops- Sugar cane-Tea-Coffee – Cotton – Tobacco- Problems of Indian Agriculture – Green revolution.

UNIT:- III - Mineral and Power Resources – Iron ore, Bauxite, Manganese and their distribution – Power Resources: Hydel Power, Thermal Power, Atomic and wind power

UNIT:- IV- Industries: Iron and Steel, Cotton textile- Petro-chemical, Automobile Production and their distribution – Major Industrial Region of India- Transport- Road, Railway , Water way and Air ways.- Major Trade in India.

UNIT:- V- Population : Spatial Distribution and Density- Population Growth, Urban and Rural – Age and Sex Ratio –Scheduled caste and Tribal Population – Major Tribal groups of India.

REFERENCE BOOKS:

1. T.C. Sharma and O. Coutinho- Economic and Commercial Geography India.
2. Mamoria- Economic and Commercial Geography of India.
3. Gopal Singh – Geography of India
4. R.N. Dubey and B.S Negi- Economic and Commercial Geography of India.
5. R.C. Tiwari- Geography of India.
6. Govt. of India Publications- Year Book.

SEMESTER III

GEOGRAPHY OF INDIA (Non- Major)

Paper code:12UGGN01

UNIT I: - General aspect – Location and Extent – Neighbouring Countries – Administrative Units – Major Physiographic Division .

UNIT II: - Climate- Seasons and Monsoon - Major River system - Irrigation – Type and Distribution – Major Multipurpose Projects

UNIT :-III - Natural Vegetation – Major Soil type — Agricultural: Distribution and Production of Major Crops – Rice, Wheat, Tea , Coffee, Rubber, Sugar cane and Cotton

UNIT:- IV - Mineral Resources and their Distribution -_ Iron ore, Manganese, Bauxite Power Resources and their Distribution _ Hydel , Atomic, thermal and Wind energy

UNIT: - V - Major Industries – Cotton Textiles, Iron and Steel – Population Distribution – Transport ,Trade and Commerce

REFERENCE BOOKS:

1. Radhakrishnan K. Indian Geography (Tamil)
2. Gopal singh. Geography of India
3. India Physical Environment, NCERT Publication
4. T.C. Sharma and O. Coutinho- Economic and Commercial Geography India.
5. Mamoria- Economic and Commercial Geography of India.
7. Gopal Singh – Geography of India
8. R.N. Dubey and B.S Negi- Economic and Commercial Geography of India.
9. R.C. Tiwari- Geography of India.
10. Govt. of India Publications- Year Book.

SEMESTER - IV
GEOGRAPHY OF TAMIL NADU

Paper code: 12UGGN02

Unit I: Location and Extent – Administrative units – Major relief features
– Major rivers – Climate: temperature, Seasonal and Annual rainfall
– distribution, Soil: types and their distribution.

Unit II: Forest, livestock and fisheries - types and distribution, forest products, Livestock: cattle, sheep, dairying and fisheries-inland and deep-sea fishing.

Unit III: Irrigation and Agriculture Resources: types and distribution – canal, tank and well irrigation, Agriculture: distribution and production of rice, cotton, sugarcane, and rain fed crops, oil seeds, tea and coffee.

Unit IV: Mineral and Industrial Resources: General distribution and production. Power resources: Hydel, thermal, atomic and wind power, Industries: distribution and production of – cement, sugar, cotton, automobile and paper.

Unit V: Transport: Development and distribution of roads, railways, air and sea transportation - Important ports, Population – growth and distribution of rural and urban population.

REFERENCE BOOKS:

1. Sakthi Venkata Kumaraswamy, (2002): Geography of Tamil Nadu (Tamil edition), Sakthi Abirami Pathipagam, Kumbakonam.
2. Statistical Hand Book of Tamil Nadu, (2004): Special Commissioner and Director Department of Economics and Statistics Government of Tamil Nadu, Chennai.
3. Tamil Nadu – An Economic Appraisal 1999-2000, Director, Department of Evaluation and Applied Research, Chennai.
4. Season and Crop Report of Tamil Nadu for the Agricultural year 2003-2004, Commissioner, Department of Economics and Statistics, Chennai.