

SYLLABI for B. Sc., Degree programme in Geography effect from (2015-16)

SUB. CODE	TITLE OF THE PAPER		Hours/ per week	C I A	EIA		Total Marks	Credits
					EIA Marks	Passing Min.		
	PART	SEMESTER – I						
	I	Language – I Tamil - I	6	25	75	30	100	3
	II	Language – II English –I	6	25	75	30	100	3
	III	Core –1 Geomorphology	6	25	75	30	100	4
	III	Allied –I Statistics –I	8	25	75	30	100	5
	III	Core –Practical - I Map Scales and Landscape Analysis	2	-				
	IV	Environmental Studies	2	25	75	30	100	2
Total			30				500	17
SEMESTER - II								
	I	Language – I Tamil –II	6	25	75	30	100	3
	II	Language – II English – II	6	25	75	30	100	3
	III	Core – 2 Climatology	6	25	75	30	100	4
	III	Allied – II Statistics – II	8	25	75	30	100	5
	III	Core –Practical - I Map Scales and Landscape Analysis	2	40	60	24	100	5
	IV	Value Education	2	25	75	30	100	2
Total			30				600	22
SEMESTER - III								
	I	Language – I Tamil –III	6	25	75	30	100	3
	II	Language – II English – III	6	25	75	30	100	3
	III	Core – 3 Oceanography	4	25	75	30	100	4
	III	Allied – III Cartography	6	25	75	30	100	5
	III	Core –Practical - II Map Interpretation and Climatic Diagrams	2	-				
	III	Core –Practical- III Cartographic Representation of Data	2	-				
	IV	Skill Based Subject – I Disaster Studies	4	25	75	30	100	3
Total			30				500	18

Comprehensive List of Papers

(Passing minimum for 100 marks = 40 marks)

SEMESTER - IV									
	I	Language – I	Tamil –IV	6	25	75	30	100	3
	II	Language – II	English – IV	6	25	75	30	100	3
	III	Core – 4	Human Geography	4	25	75	30	100	4
	III	Core – Practical II	Map Interpretation and Climatic Diagrams	2	40	60	24	100	5
	III	Core – Practical- III	Cartographic Representation of Data	2	40	60	24	100	5
	III	Allied –IV	Geography of Settlements	6	40	75	30	100	5
	IV	Skill Based Subject - II	Tourism and Management	4	25	75	30	100	3
	V	Extension Activities							1
Total				30				600	29
SEMESTER - V									
	III	Core - 5	Geography of India	5	25	75	30	100	4
	III	Core - 6	Geography of World Resources	5	25	75	30	100	4
	III	Core - 7	Regional Geography of the World	6	25	75	30	100	4
	III	Core -Practical –IV	Survey, Air Photo and Image Interpretation	5					
	IV	Non Major Elective - I	Basics of Physical Geography	3	25	75	30	100	2
	IV	Skill Based Subject - III	Principles of Remote Sensing	4	25	75	30	100	3
	III	Project and viva-voce		2					
Total				30				600	17
SEMESTER – VI									
	III	Core – 8	Geography of Tamil Nadu	5	25	75	30	100	4
	III	Core - 9	Political Geography	5	25	75	30	100	4
	III	Core – 10	Natural Regions of the world	5	25	75	30	100	4
	III	Core -Practical –IV	Survey, Air Photo and Image Interpretation	6	40	60	24	100	5
	IV	Non Major Elective-II	Basics of Human Geography	3	25	75	30	100	2
	IV	Skill Based Subject – IV	Fundamentals of GIS	4	25	75	30	100	3
	III	Project and viva-voce		2	20	80	30	100	15
Total				30				700	37
GRAND TOTAL MARKS / CREDITS				180				3500	140

SUBJECT	PART	PAPERS	CREDITS	TOTAL CREDITS	TOTAL MARKS
Language Tamil - I	I	4	3	12	400
English –I	II	4	3	12	400
Core	III	10	4	40	1000
Allied	III	4	5	20	400
Core Practical	III	4	5	20	400
project	III	1	15	15	100
Skill Based Subject	IV	4	3	12	400
Non-Major Elective, Environmental Studies and Value Education	IV	4	2	8	400
Extension Activities	V		1	1	
TOTAL				140	3500

SEMESTER – I

PART – III

Sub. Code:

CORE – 1

GEOMORPHOLOGY

Unit –I

Geomorphology – Scope and content, Interior of the earth –Diastrophism- Earthquakes –Volcanoes – Distribution – Fault and Folds – Types.

Unit –II

Origin of Continents and Oceans – Continental Drift Theory – Plate Tectonics – Isostasy.

Unit –III

Rocks – Definition, origin, classification –Weathering – Definition and classification –Mass Wasting – Types and classification – Soils – Formation and profiles.

Unit –IV

Davision's Normal Cycle of Erosion - Geomorphic processes – Rivers – Erosional and depositional landform features – Underground water and associated land forms.

Unit –V

Geomorphic processes – Erosional and depositional features of Glacier, Wind and Waves.

References:

1. Thornbury, W.D., (1984). Principles of Geomorphology, John Wiley and Sons, New York.
2. Strahler, A.N. and Strahler A.H., (1992). Modern Physical Geography, John and Wiley Sons, New York.
3. Dayal, P., (1995). Text Book of Geomorphology, Shukla Book Depot, Patna.
4. Savindra Singh, (2002). Geomorphology, Prayag Pustak Bhawan, Allahabad.
5. Das Gupta, A and Kapoor, A.N., (2001). Principles of Physical Geography, S.C. Chand & Company Ltd, New Delhi.
6. Sharma, V.K., (1986). Earth Surface Process and forms, Tata McGraw Hill Publishing Company Ltd, New Delhi.
7. Bloom, Arthur L. (1998), Geomorphology, Pearson Education Pvt.Ltd. Singapore.

SEMESTER – I

PART – III

Sub. Code:

ALLIED – I

STATISTICS – I

Unit I

Meaning, Scope and Limitations of Statistics – Primary and Secondary Data – Methods of Collecting Primary Data – Sources of Secondary Data – Classification and Tabulation of Data.

Unit II

Formation of Frequency Distribution – Presentation of Data – Diagrams: Bar Diagrams and Pie Diagram - Graphs: Histogram, Frequency Polygon, Frequency Curve and Ogives - Simple problems.

Unit III

Measures of Central Tendency: Mean Median, Mode, Geometric Mean and Harmonic Mean – Their Computations, Merits and Demerits – Properties of a Good Measure – Best Measure among Measures of Central Tendency- Simple problems.

Unit IV

Measures of Dispersion: Range, Quartile Deviation, Mean Deviation, Standard Deviation and Co-efficient of Variation - Skewness: Meaning – Measures of Skewness – Karl Pearson's Co-efficient of Skewness and Bowley's Co-efficient of Skewness - Simple problems.

Unit V

Concept of Probability – Basic Concepts – Events – Equally Likely and Mutually Exclusive Events – Mathematical, Statistical Definitions of Probability – Addition and Multiplication Theorems (Without Proof) – Simple Problems.

Note: No derivation, only the Concepts and Simple Problems throughout the Syllabus.

Text Book:

1. S.P.Gupta - Statistical Methods, Sultan Chand & Sons, New Delhi, 42nd revised Edition, 2012.

Reference Book:

1. PA. Navneetham - Business Mathematics & Statistics, Jai Publishers, Trichy, July 2008.

SEMESTER – II

PART – III

Sub. Code:

CORE - 2

CLIMATOLOGY

Unit –I

Atmosphere: Definition, structure and composition. Weather and climate: Definition and its significances.

Unit –II

Insolation - Heat balance of the earth, horizontal and vertical distribution of temperature – Factors affecting the distribution of temperature.

Unit –III

Atmospheric pressure: Major pressure belts. Winds – Planetary and local winds - Monsoon. Atmospheric moisture: Humidity – Condensation and clouds.

Unit-IV

Rainfall: Types and distribution. Air masses - Types. Fronts – Types. Cyclones: Tropical and temperate.

Unit –V

Climatic classification – Need and basis – Koppen’s classification – Global warming – El-Nino and La-Nino – Weather forecasting.

References:

1. Lal, D.S., (1990). Climatology, Chatianya Publishing House, Allahabad.
2. Tewartha, G.T., (1980). Introduction to Climate, Tata McGraw Hill, New York.
3. Critch field, H.J., (1987). General Climatology, Prentice Hall of India Pvt. Ltd, New Delhi.
4. Siddhartha, K., (2005). Atmosphere, Weather and Climate, Kisalaya Publications Pvt. Ltd., New Delhi.
5. Richmond W. Longley (1970). Elements of Meteorology, John Willey & sons inc, New York.
6. Savindra Singh, (2002). Physical Geography, Prayag Pustak Bhawan, Allahabad

SEMESTER – II

PART – III

Sub. Code:

ALLIED - II

STATISTICS – II

Unit I

Correlation – Scatter Diagram - Karl Pearson's Co-efficient of Correlation - Spearman's Rank Correlation – Regression – Construction of regression equations - Difference between Correlation and Regression – Simple Problems.

Unit II

Sampling Methods – Advantages and Limitations – Sampling and Non-Sampling Errors – Random sampling methods - Simple Random, Systematic and Stratified Sampling Methods – Non-Random sampling methods (No Derivations, Only Concepts).

Unit III

Sampling Distribution – Standard Error – Tests of Significance – Null and Alternative Hypotheses – Type I and Type II Errors – Large Sample Tests – Test for Single Mean, Difference of Means, Single Proportion and Difference of Proportions – Simple Problems.

Unit IV

Small Sample Tests - Student's 't' test – Test for Single Mean and Difference of Means (independent and paired samples) – Chi-Square Test – Test for Independence of Attributes and Goodness of Fit – F- test for Equality of Two Variances.

Unit V

Analysis of Variance – Assumptions – One way and Two way Classifications (No Derivations) – Simple Problems.

Text Books:

1. S.C.Gupta and V.K.Kapoor - Fundamentals of Mathematical Statistics, Sultan Chand & Sons, New Delhi, 11th revised Edition, June 2012.

Reference Book:

1. S.P.Gupta - Statistical Methods, Sultan Chand & Sons, New Delhi, 42nd revised Edition, 2012.

SEMESTER – II

PART – III

Sub. Code:

CORE PRACTICAL – I

MAP SCALES AND LANDSCAPE ANALYSIS

Unit –I

Map Scale: Methods of representation of scales - Statement, Representative Fraction - Graphical: Linear, comparative and diagonal.

Unit –II

Enlargement and reduction of maps: Square and Triangle methods - Measurement of Distance: Thread, Divider and Rotometer - Measurement of area: Square and Strip methods.

Unit –III

Representation of Relief: Contours – Interpolation and drawing relief features - Profile drawing: Simple, Serial, Super-imposed, Projected and Composite profiles.

Unit –IV

Stream analysis: Ordering and numbering - Stream order and density of drainage basin - Altimetric frequency curve.

References:

1. Monkhouse, F.J. and Wilkinson, H.R., (1989), Maps and Diagrams, B.I.Publications, New Delhi.
2. Sethu Rakkayi, S., (2014), Puvippadaviyal oor arimugam, Sree Meenakshi Offsets, Madurai.
3. Singh, R. L., (2005), Elements of Practical Geography, Kalyani Publishers, New Delhi.
4. Gopal singh, (1996), Map work and practical geography, Vikas Publishing House Pvt.Ltd.,
5. Khullar, (1997), Practical Geography, Educational Publishers, New Delhi.
6. Zulfequar Ahmad Khan, M. D., (1998), Text Book of Practical Geography, Concept Publishing Company, New Delhi.
7. Pijushkanti Saha and Partha Basu, (2010), Advanced Practical Geography, Books and Allied Pvt. Ltd, Kolkata.

SEMESTER – III

PART – III

Sub. Code:

CORE - 3

OCEANOGRAPHY

Unit I

Oceanography: Definition, Oceans and seas - Extent and distribution – Surface configuration of the Ocean floor, Hypsometric curve – Continental shelf – Continental slope – Abyssal Plain – Deeps and Trenches.

Unit II

Bottom Relief of the Pacific, Atlantic and Indian Oceans.

Unit III

Ocean Temperature and Salinity: Distribution and factors – Horizontal and vertical - Factors affecting temperature and salinity distribution.

Unit IV

Ocean water movement – Waves – Tides: Types - Ocean Currents: Types - Currents of Pacific, Atlantic and Indian Oceans.

Unit V

Ocean Deposits: Types - Coral Reefs: Formation and types - Ocean resources and need for conservation.

References:

1. Siddartha. K., (2005). Oceanography – A brief Introduction, Kisalaya Publications Pvt. Ltd., New Delhi.
2. Lal D.S., (1990) Oceanography, chatianya publishing house, Allahabad.
3. Savindra Singh, (2008), Oceanography, Prayag Pushtak Bhawan, Allahabad.
4. Sharma R.C., and Vital M. (1987), Oceanography for Geographers, chatianya publishing house, Allahabad.
5. Strahler, A.N. and Strahler A.H., (1992), Modern Physical Geography, John and Wiley Sons, New York.
6. Savindra Singh, (2004), Physical Geography, Prayag Pushtak Bhawan, Allahabad.
7. Gupta, A and Kapoor A. N., (2001), Principles of Physical Geography, S.Chand & Company Ltd., New Delhi.

SEMESTER – III

PART – III

Sub. Code:

ALLIED –III

CARTOGRAPHY

Unit –I

Cartography: Definition, scope and content - Map – Definition, types and uses - Development of Cartography.

Unit –II

Map scales: Determination of map scales – Enlargement and reduction – Direction and Bearings – Co-ordinate system – Projections – Classification and uses.

Unit –III

Map data: Collection and classification – Base map – Compilation – Generalization.

Unit –IV

Map design and layout – Symbolization – Lettering, standardization of names – Styles - Mechanics of Map Construction: Drawing materials, Equipments and instruments.

Unit –V

Thematic and complex Mapping – Topographic mapping – Atlas mapping – Mapping organizations of India: SOI, NATMO – Recent trends in cartography.

References:

1. Misra, R.P. and Ramesh, A., (2002). Fundamentals of Cartography, Concept Publication Company, New Delhi.
2. Robinson, A.H., (1984). Elements of Cartography, John Wiley, London.
3. Monkhouse, F.J. and Wilkinson, H.R., (1989), Maps and Diagrams, B.I.Publications, New Delhi.
4. Sethu Rakkayi, S., (2014). Puvippadaviyal oor arimugam, Sree Meenakshi Offsets, Madurai.
5. Keates, J. S., (1982). Understanding Maps, Longman, London and New York.
6. Erwin Raiz, (1948). General Cartography, McGraw Hill Company., New York.
7. Lawrence, G.R.P., (1979). Cartographic Methods, Methuen, London.

SEMESTER – III

PART – IV

Sub. Code:

SKILL BASED SUBJECT – I

DISASTER STUDIES

Unit I

Disaster: Meaning and classification – Concepts of disaster – Hazard – Catastrophe – Risk and vulnerability – Disaster zones of India.

Unit II

Geological Hazards: Earthquakes - Scale of measurement - Intensity and magnitude - Earthquake prone zones - Volcanic hazards - Landslides and Tsunami.

Unit III

Climatic Disasters: Cyclones – Flood – Drought – Avalanche and Frost.

Unit IV

Human induced: Nuclear and chemical disaster – Health hazard, Forest fire - Global warming – Ground water depletion and deforestation.

Unit V

Disaster management organizations: International – National – State and Local level - NGO - Disaster Cycle – Preparatory phase – Emergency phase, Rehabilitation and Reconstruction process – Mitigation and management.

References:

1. Ghosh G.K. (2008) Disaster Management, A.P.H. Publishing Corporation, New Delhi.
2. Saxena, H.M. (1996), Natural Disasters, Wm. C. Brown Publishing Co., New York.
3. Nicholas, K. (1995), Geohazards, Natural and human, Prentice hall of India, Delhi.
4. Agarwal, S.K. (2004), Global Warming and Climate Change, A.P.H. Publications, New Delhi.
5. Narayan, B. (2009), Disaster Management. A.P.H. Publishing Corporation, New Delhi.
6. Singh, R. B. (2008), Disaster Management, Rawat Publications. New Delhi.
7. Goel, S. L. (2008), Disaster Management. Deep & Deep Publication Pvt.Ltd, New Delhi.
8. Abbott, P.L. (1996), Natural Disasters, Wm. C. Brown Publishing Co., New York.
9. Agarwal Gurcharan Singh S.K., and Inderjeet Sethi, (1993), The Degrading Environment (cause of Concern) Commonwealth Publication, New Delhi.
10. Kumaraswamy. K, (2009), GIS for Natural Resources and Disaster Management, Union offset printers, Tiruchirappalli.

SEMESTER – IV

PART – III

Sub. Code:

CORE – 4

HUMAN GEOGRAPHY

Unit –I

Human Geography: Scope and Content – Man and Environment relationships – Determinism, Possibilism and Neo-determinism.

Unit –II

The First People: The pygmies of Congo basin – The Badawins of Arabian desert – Eskimos of Arctic region – The Kirghiz of Central Asia – The Bushmen of Kalahari desert – Aborigines of Australia.

Unit –III

Race and racial groups: Griffith Taylor's Theory of Human Race - Ethnic groups in India and World - Indian Tribes - Gonds - Bhill - Naga – Santhal.

Unit –IV

World Population: Factors – Distribution, Density and Growth - Language and Religion – Significance of Fertility and Mortality.

Unit –V

Migration: Types, causes and consequences, current trends, Ravenstein and Lee theory of migration.

References:

1. Balbeer Singh Negi, (2006), Human Geography- An Ecological approach, Kedarnath and Ramnath Publication, Meerut.
2. Majid Hussain (1999), Human Geography, Rawat Publications, Jaipur.
3. Perpillou (1967), Human Geography, A.V.H.G. Longman London.
4. Money D.C (1967), Introduction to Human Geography, University Tutorial Press, London.
5. Goh Chengleong (2006), Certificate: Physical and Human Geography, Oxford University Press, London.
6. Goh Chengleong and Morgan (1975), Human and Economic Geography, Oxford University Press, London.

SEMESTER – IV

PART – III

Sub. Code:

CORE PRACTICAL - II

MAP INTERPRETATION AND CLIMATIC DIAGRAMS

Unit –I

Survey of India Topographic Maps: Conventional signs and symbols - Cartographic appreciation and comparison of SOI, OS and US sheets - Interpretation of SOI maps.

Unit –II

Indian daily weather reports: Signs and Symbols – Interpretation of weather reports – Station model – Cyclone cross section and tracking.

Unit –III

Climatic diagrams: Climatic Graphs, Taylor’s Climograph – Hythergraph and Ergograph.

Unit –IV

Windrose and Rainfall diagrams: Simple - Star diagram - Super imposed - Octagonal and Compound – Drawing Isohytes.

References:

1. Monkhouse, F.J. and Wilkinson, H.R., (1989). Maps and Diagrams, B.I.Publications, New Delhi.
2. Pijushkanti Saha and Partha Basu, (2010). Advanced Practical Geography, Books and Allied (P) Ltd, Kolkata.
3. Zulfequar Ahmad Khan, M. D., (1998). Text Book of Practical Geography, Concept Publishing Company, New Delhi.
4. Singh, R. L., (2005). Elements of Practical Geography, Kalyani Publishers, New Delhi.
5. Gopal singh, (1996). Map work and practical geography, Vikas Publishing House Pvt.Ltd.,
6. Khullar, (1997). Practical Geography, Educational Publishers, New Delhi.

SEMESTER – IV

PART – III

Sub. Code:

CORE PRACTICAL - III

CARTOGRAPHIC REPRESENTATION OF DATA

Unit –I

Map Projections: Construction, properties and uses of zenithal projection - Equal area, Gnomonic, Stereographic and Orthographic, Polar cases only.

Unit –II

Construction, properties and uses of conical projection - One standard and Two standard parallel – Bonne’s projection – Polyconic projection.

Construction, properties and uses of cylindrical projection - Equi-distant and equal area – Mercator projection, Mollweide projection and Sinusoidal projection.

Unit –III

Drawing of graphs: Line graph: Simple and Multiple – Polygon - Frequency curve – Histogram – Ogive – Lorenz curve.

Unit – IV

Diagrams: Bar diagrams: Simple, Multiple and Compound - Circle – Sector – Pyramid - Maps: Dot – Single and Multiple - Isopleth – Choropleth – Flow Map.

References:

1. Monkhouse, F.J. and Wilkinson, H.R., (1989). Maps and Diagrams, B.I.Publications, New Delhi.
2. Sethu Rakkayi, S., (2014). Puvippadaviyal oor arimugam, Sree Meenakshi Offsets, Madurai.
3. Pijushkanti Saha and Partha Basu, (2010). Advanced Practical Geography, Books and Allied (P) Ltd, Kolkata.
4. Singh, R. L., (2005). Elements of Practical Geography, Kalyani Publishers, New Delhi.
5. Gopal singh, (1996). Map work and practical geography, Vikas Publishing House Pvt.Ltd.,
6. Khullar, (1997). Practical Geography, Educational Publishers, New Delhi.
7. Zulfequar Ahmad Khan, M. D., (1998). Text Book of Practical Geography, Concept Publishing Company, New Delhi.

SEMESTER – IV

PART – III

Sub. Code:

ALLIED - IV

GEOGRAPHY OF SETTLEMENTS

Unit – I

Geography of Settlements: Meaning, nature and scope - Factors affecting growth and development of settlements – Types.

Unit - II

Rural settlements: Definition, characteristics - Types and Patterns.

Urban Settlements: Definition, characteristics, types and patterns - Size and Spacing of Urban centers.

Unit - III

Urbanization and Urban Functions: Concept of urbanization, Factors affecting Urbanization - World urbanization and urbanization in India - Functional Classification of urban centers.

Unit - IV

CBD: Functions and characteristics - Urban Morphology: Classical models - Burgess, Homer Hoyt, Harris and Ullman - Rural–Urban Fringe.

Unit - V

Hierarchy of urban centers - Rank-size rule - Central place theory - Urban Problems - Slums - Urban Planning.

References:

1. R.B. Mandal (2009), Urban Geography: A Text Book; Concept Publishing Co., New Delhi.
2. R. Ramachandran (1989), Urbanization and Urban Systems in India, Oxford University Press, Delhi,
3. Majid Hussain (1999), Human Geography, Rawat Publications, Jaipur.
4. Siddhartha K, (2013), Cities, Urbanisation and Urban Systems, kisalaya publication Pvt. Ltd New Delhi.
5. Nath V. (2007), Urbanisation, Urban Development and Metropolitan Cities in India, Concept Publishing Co. New Delhi.
6. Singh, R. L., (1994). Geography of Settlements, Rawat Publications, New Delhi.
7. Perpillo, (1967). Human Geography, A.V.H.G. Longman, London.
8. Bala, Raj (1986), Urbanisation in India, Rawat Publishers, Jaipur.
9. Vasant Kumar Bawa (1985), Indian Metropolis, Urbanization Planning and Management, Inter – India Publication, New Delhi.
10. Pacione, Michael (2001), Urban Geography - A Global Perspective, Routledge, London.
11. Kundu, A (1992), Urban Development and Urban Research in India, Khanna Publication, New Delhi.

SEMESTER – IV

PART – IV

Sub. Code:

SKILL BASED SUBJECT – II

TOURISM AND MANAGEMENT

Unit –I

Tourism: Definition –Types of tourism –Development in India –Tourism and economic importance.

Unit –II

Tourism potentials in India: Tourist attractions – Religious, Recreations, Sports and games – Festivals.

Unit –III

Tourism management: Accommodation - Transport facility - Travel agencies - Publicity and marketing –Tourism visa - Passport and Tourist guides.

Unit –IV

Tourism organizations: WTO – PATA and tourism organizations in India – ITDC – Functions – TTDC – Functions.

Unit –V

Tourism in Tamil Nadu: Potential areas – Major tourist centers in Tamil Nadu – Planning and management – Government policy.

References:

1. Bhatia, A. K., (2010), Tourism Development – Principles and Practices, Sterling Publishers Pvt. Ltd., New Delhi.
2. Douglas Pearce (1949), Tourism today – A Geographical analysis, Longman Publications, New York.
3. Khullar, N., (1985), Dynamics of Tourism, Sterling Publishers Pvt. Ltd., New Delhi.
4. Praveen Sethi (1999), Tourism in Developing Countries, Rajat Publications, New Delhi.
5. Bhattacharya, P. (2006), Trend in Tourism Potentiality, Bani Mandir, Guwahati.

SEMESTER – V

PART – III

Sub. Code:

CORE – 5

GEOGRAPHY OF INDIA

Unit –I

Location and extent - Physical features – Major Physiographic Divisions - Drainage – Climate - Soil and Natural Vegetation.

Unit –II

Agriculture: Irrigation – Types and distribution – Major crops and their distribution: Rice, Wheat, Sugarcane, Cotton, Groundnut - Plantation Crops: Tea and Coffee - Agricultural Regions – Green revolution – Problems of Indian Agriculture.

Unit –III

Minerals: Iron, Copper, Mica, Manganese, Bauxite, and Atomic minerals - Power Resources: Coal, Petroleum, Natural gas, Hydal Power – Multipurpose river projects - Atomic power stations – Need for non conventional energy sources.

Unit –IV

Industries: Distribution and production of major industries: Cotton and textiles, Iron and Steel, Sugar, Cement, Chemical and Automobile – Major industrial regions.

Unit –V

Population, Transport and Trade: Population – Growth, density, distribution and problems. Transport: Land, water and air - Foreign trade of India.

References:

1. Gopal Singh, (1970), A Geography of India, Atnaram & sons, New Delhi.
2. Khullar, D. R., (2010), India – A Comprehensive Geography, Kalyani Publishers, New Delhi.
3. Majid Hussain (2008), Geography of India, Tata McGraw Hill Publishing company Ltd., New Delhi.
4. Pal, Saroj K. (2003), Physical Geography of India – A study in Regional Earth Sciences, Orient Longman Pvt. Ltd. Kolkata.
5. Singh, R.L., (1977), India - A Regional Geography, NGSI, Varanasi.
6. Sharma, T.C., (2003), India – An Economic & Commercial Geography, Vikas Publishing House Pvt. Ltd., New Delhi.
7. Krishnan, M.S. (1982), Geology of India and Burma, CBS Publishers, New Delhi.
8. Mathur, S.M. (1982), Physical Geology of India, National Book Trust, India, New Delhi.

Unit – I

Geography of resources: Definition, scope and content – Classification and types - Soil resources: Classification and distribution, fertility, soil erosion and soil conservation - Forest Resources: Types, distribution, economic importance, forest products.

Unit – II

Agricultural resources: Types, geographical distribution of Rice, Wheat, Tea, Coffee, Cotton and Sugarcane - Animal resources: Dairy farming - Fishing and major fishing grounds.

Unit – III

Mineral resources: Types, significance and distribution of Iron ore, Bauxite, Copper, Gold and Manganese - Power resources: Distribution and production of Coal, Petroleum, Natural gas, Hydal and Nuclear power.

Unit – IV

Industries: Locational factors and distribution of heavy industries – Iron and steel, Ship building, Automobile and Chemical - Cotton and Woolen - Paper and pulp - major industrial regions of the world.

Unit –V

Transport system: Road, Rail, Air and Waterways –Inland navigation and Ocean routes - Trade: Composition of international trade, pattern, balance of trade, recent trends and trade organizations.

References:

1. Alka Gautham (2013), Geography of resources: Exploration, Conservation and Management, Sharda Pustak Bhavan, New Delhi.
2. Goh Cheng Leong, (1987), Human & Economic Geography, Oxford University Press, New York.
3. Alexander, J.W., (2006), Economic Geography –Prentice Hall of India Pvt. Ltd. New Delhi.
4. Khanna, K.K. and Gupta, V.K., (2004), Economic and Commercial geography, Sultan Chand and sons, New Delhi.
5. K.Siddhartha,(2004), Economic Geography, Kisalaya publications Pvt. Ltd.
6. Thomas R.S,(1968), Geography of Economic Activity, McGraw Hill Book Company, New Delhi.

Unit –I

Asia – Physiography – Drainage – Climate - Soils - Natural vegetation.

Unit –II

North America – Physiography – Drainage – Climate - Soils - Natural vegetation.

Unit –III

South America – Physiography – Drainage – Climate - Soils - Natural vegetation.

Unit –IV

Africa – Physiography – Drainage – Climate - Soils - Natural vegetation.

Unit –V

Europe and Oceania – Physiography – Drainage – Climate - Soils - Natural vegetation.

References:

1. Darshan singh manku (1998), A Regional Geography of the world, kalyani publishers, New Delhi.
2. Dudley Stamp(1979), The World Regional Geography, Orient Longman Limited, New Delhi.
3. Dudley Stamp (1979), Asia – A regional and economic Geography, Orient B.I. publisher's Pvt Limited, New Delhi.
4. Ward P.W. & Miler, A.(1989) : World Regional Geography : A Question of Place, John Wiley, New York.
5. Singh, R.L., (1971), India - A Regional Geography. NGSI. Varanasi.
6. Cole, J. (1996), A Geography of the World's Major Regions, Routledge, London,
7. Deblij, H.J. (1994) Geography : Regions and Concepts, John Wiley, New York,
8. Jackson, R.H. & Hudman. L.E. (1991)World Regional Geography : Issues for Today, John Wiley, New York.

SEMESTER – V

PART – IV

Sub. Code:

Non Major Elective – I

BASICS OF PHYSICAL GEOGRAPHY

UNIT –I

Universe – Galaxy - Solar System – Earth – Movements – Latitude – Longitude - International Line.

UNIT –II

Major Continents – Plates – Mountains – Plateau – Plains – Deserts and Islands.

UNIT –III

Interior of the Earth – Distribution of Earthquake and Volcano- Fold and Fault.

UNIT –IV

Atmosphere – Structure and Composition – Pressure belts – Winds – Clouds – Precipitation – Types.

UNIT –V

Major Oceans – Ocean bottom relief features – Salinity – Ocean Currents – Wave and Tides.

References:

1. Savindra Singh, (2004), Physical Geography, Prayag Pustak Bhawan, Allahabad.
2. Strahler, A.N. and Strahler A.H., (1992), Modern Physical Geography, John and Wiley Sons, New York.
3. Das Gupta, A and Kapoor, A.N., (2001), Principles of Physical Geography, S.C. Chand & Company Ltd, New Delhi.
4. Thornbury, W.D., (1984), Principles of Geomorphology, John Wiley and Sons, New York.
5. Sharma, V.K., (1986), Earth Surface Process and forms, Tata McGraw Hill Publishing Company Ltd, New Delhi.
6. Dayal, P., (1995), Text Book of Geomorphology, Shukla Book Depot, Patna.
7. Bloom, Arthur L. (1998), Geomorphology, Pearson Education Pvt.Ltd. Singapore.

PRINCIPLES OF REMOTE SENSING**Unit –I**

Remote Sensing: Historical development - Definition - Types – EMS – Ideal remote sensing system.

Unit –II

Electro magnetic radiation: EMR interaction with earth and atmosphere – Basic principles – Platforms.

Unit –III

Aerial Remote Sensing: Principles – Types - Stereoscopic vision – Elements of interpretation.

Unit –IV

Satellite Remote Sensing: Types of satellite – Orbit – Resolution – Sensors – Resolutions and characteristics of LANDSAT – SPOT.

Unit –V

Remote sensing in India: ISRO – NRSC – IRS satellite – Sensors – Resolution characteristics and applications - Recent development of remote sensing in India.

References:

1. Lillesand, T.M. and Ralph W. Keifer (2002), Remote Sensing and Image Interpretation, John Wiley & Sons, Inc., New York.
2. Sabins, Jr. (1978), Remote Sensing: Principles and Interpretation, Freeman and Co, Sanfrancisco.
3. Curran, P.J., (1985), Principles of Remote sensing, English Language book society Longmans, London.
4. Anji Reddy, M., (2004), Geoinformatics for Environmental Management, BS Publications, Hyderabad.
5. Kumar, S., (2003), Basics of Remote sensing and GIS, Laxmi publications, New Delhi.
6. Chanrda, A.M. and S.K. Ghosh (2006), Remote Sensing and Geographical Information System, Narosa Publishing House, New Delhi.
7. Joseph, George (2003), Fundamental of Remote Sensing, University's Press (India) Pvt. Ltd., Hyderabad.
8. Panda, B.C., (2005), Remote Sensing: Principles and Applications, Viva Books Pvt. Ltd., New Delhi.
9. Singh Surendra and A.N. Patel (1999), Principles of Remote Sensing, Scientific Publishers (India), Jodhpur.

Unit –I

Location and extent - Physical divisions – Climate – Rivers - Soils and Natural vegetations.

Unit –II

Agriculture and Irrigation: Types and distribution – Problems – Major crops: Paddy, Sugarcane, Cotton and Groundnut - Plantation crops: Tea, Coffee and Rubber.

Unit –III

Minerals and power resources: Coal, Iron ore, Petroleum, Atomic and Thermal power - Major Hydal projects – Non-conventional energy sources: Solar and Wind energy.

Unit –IV

Industries: Cotton textiles – Cement – Sugar – Chemical - Paper Industry and Automobiles.

Unit –V

Population, Transport and Trade: Population growth and distribution – Rural and Urban population – Transport: Major Roadways and Railways - Trade.

References:

1. Kumaraswamy,V., (2014), Geography of Tamil Nadu, Sakthi Abrami Publishers, Kumbakonam.
2. Gopal Singh (1988), A Geography of India, Atnaram & sons, New Delhi.
3. Kullar, D. R. (2010), India: A Comprehensive Geography, Kalyani Publishers, New Delhi.
4. Ramesh, A and Tiwari, P.S., (1983), Basic Resources Atlas of Tamil Nadu, Dept. of Geography, University of Madras, Chennai.
5. Sharma, T.C. (2003), India: An Economic & Commercial Geography, Vikas Publishing House Pvt. Ltd., New Delhi.
6. Velappan, D., (1986), Economic Development of Tamil Nadu – Emerald Publishers, Chennai.

SEMESTER – VI

PART – III

Sub. Code:

CORE – 9

POLITICAL GEOGRAPHY

Unit –I

Political Geography – Definition, scope, content and development – Geopolitics - State: Powers and functions of the state – Categories of the state - Nations and Nationalism.

Unit –II

Core areas: Types, Capitals – Types, Morphological classification, Factors of development, Federal capitals – New and neutral capitals – Capitals in post -1945 federations.

Unit –III

Boundaries and Frontiers: Definition, boundary classification, Genetic and functional, Morphological classification (Buffer zone – Land locked countries) – Border disputes.

Unit –IV

Electoral Geography: Geography of elections – Geography of campaigning, Voting pattern, Voters' participation – Gerry mandering – Election Commission.

Unit –V

Political Geography of India: Integration of Indian states – Integration of Sikkim – India's bilateral relationship with Pakistan and Sri Lanka – SAARC countries - India's foreign policy.

References:

1. Dikshit, R.D. (1982). Political Geography: A contemporary perspective, McGraw Hill Publishing co., New Delhi.
2. Sudeeptha Adhikari, (2004), Political Geography, Rawat publications, New Delhi.
3. Muir, R., (1981). Modern Political Geography, Macmillan, London.
4. Presscott, J.R.V., (1972), Political Geography, Methuen, London.
5. De Blij Harm, J., (1980), Systematic Political Geography, John Wiley and sons, New York.
6. Taylor and Peter (1972), Political Geography, Methuen, London.
7. Cohen Sayl, B., (1973), Geography and Politics in a divided world, OUP, New York.
8. Adhikari, Sudeeptha (2008), Political Geography of India, Sharda Pustak Bhawan, Allahabad.
9. Bose, Sugata and Ayesha Jalal (eds.) (1998), Nationalism, Democracy and Development, Oxford University Press. New Delhi.
10. Brass, Paul (1992), Politics of India since Independence, Cambridge University Press. Cambridge.
11. Dikshit, R.D. (1975), Political Geography of Federalism: An Inquiry into Origins and Stability, Macmillan publication. New Delhi.
12. Panikkar, K.M. (1955), Geographical Factors in Indian History, Bharatiya Vidya Bhawan. Mumbai.
13. Singh, Chandra Pal (1994), Readings in Political Geography, Heritage Publishers. New Delhi.
14. Taylor, Peter and Collin Flint (2000), Political Geography: World Economy, Nation-State and Locality, Prentice Hall. New York.

SEMESTER – VI

PART – III

Sub. Code:

Core - 10

NATURAL REGIONS OF THE WORLD

Unit –I

Equatorial Regions – Amazon type and Ecuador type: Situation, Extent, Climate, Natural vegetation, Animal life, Natural resources, Human life and economic development.

Unit –II

Tropical Regions – Types: Monsoon, Sudan, Sahara and Caribbean - Situation, Extent, Climate, Natural vegetation, Animal life, Natural resources, Human life and Economic development.

Unit –III

Warm temperate Regions – Types: Mediterranean, China and Steppe - Situation, Extent, Climate, Natural vegetation, Animal life, Natural resources, Human life and Economic development.

Unit –IV

Cool temperate Regions – Types: West European, Lawrence, Prairie - Situation, Extent, Climate, Natural vegetation, Animal life, Natural resources, Human life and Economic development.

Unit –V

Cool temperate Polar Regions – Types: Taiga and Tundra - Situation, Extent, Climate, Natural vegetation, Animal life, Natural resources, Human life and Economic development.

References:

1. Goh Cheng Leong (1982), Human & Economic Geography, Oxford University Press, New York.
2. Khanna, K.K. and Gupta, V.K., (1988), Economic and Commercial geography, Sultan Chand and Sons, New Delhi.
3. Dudley Stamp (1979), The World Regional Geography, Orient Longman Limited, New Delhi.
4. Singh, R.L., (1971), India: A Regional Geography, NGSI, Varanasi.
5. Darshan singh manku (1998), A Regional Geography of the world, kalyani publishers, New Delhi.
6. Dudley Stamp, (1979),The World Regional Geography, Orient Longman Limited, New Delhi.
7. Dudley Stamp (1979), Asia – A regional and economic Geography, Orient B.I. publisher's Pvt Limited, New Delhi.
8. Ward P.W. & Miler, A.(1989) : World Regional Geography : A Question of Place, John Wiley, New York.
9. Cole, J. (1996), A Geography of the World's Major Regions, Routledge, London,
10. Deblij, H.J. (1994), Geography: Regions and Concepts, John Wiley, New York.
11. Jackson, R.H. & Hudman. L.E. (1991), World Regional Geography : Issues for Today, John Wiley, New York.

SEMESTER – VI

PART – III

Sub. Code:

CORE PRACTICAL – IV

SURVEYING, AERIAL PHOTO AND IMAGE INTERPRETATION

Unit –I

- Surveying: Chain surveying - Open and closed traverses,
Prismatic compass - Open and closed traverses, Closing error in closed traverse methods.
Plane table surveying - Radiation and intersection method.
GNSS Survey - Observation, co-ordinate measurements – Point, line, area.

Unit –II

Height measurement and Leveling:

- Height measurement in degrees using Indian Clinometer and Abney level,
Dumpy level – Level difference and Height measurement.

Unit –III

Aerial remote sensing – Elements of visual interpretation - Marginal of photographs - Stereoscopic vision test - Visual Interpretation of aerial photographs (physical and cultural)

Unit –IV

Satellite remote sensing - Marginal information of satellite and satellite image interpretation (physical and cultural).

References:

1. Monkhouse, F.J. and Wilkinson, H.R., (1989), Maps and Diagrams, B.I.Publications, New Delhi.
2. Misra, R.P. and Ramesh, A., (2002). Fundamentals of Cartography, Concept Publication Company, New Delhi.
3. Pijushkanti Saha and Partha Basu, (2010), Advanced Practical Geography, Books and Allied (P) Ltd, Kolkata.
4. Lillesand, T.M. and Kiefer, R.W., (1979), Remote Sensing and Image Interpretation, John Wiley and sons, New York.
5. Sabins, Jr. (1978), Remote Sensing: Principles and Interpretation, Freeman and Co, Sanfrancisco.
6. Curran, P.J., (1985), Principles of Remote sensing, English Language book society Longmans, London.
7. Rampal, K.K. (1999) Handbook of Aerial Photography and Interpretation, Concept Publishing Co., New Delhi.
8. Robbert, G. Reaves et.al. (1981) Manual of Remote Sensing (eds.), Fourth Edition, Vol. I & II, American Society of Photogrammetry, Falls Church, U.S.A.

NON MAJOR ELECTIVE – II**BASICS OF HUMAN GEOGRAPHY****Unit – I**

Human Geography: Nature and scope - Man and Environment relationship - Growth, Distribution and Problems of world population.

Unit – II

Human races: Types and Distribution – Occupations - Important Tribes: Eskimo, Pygmy, Bushman, Gond and Irula - Their adaptation to the environment - Social and Economic activities.

Unit – III

Economic Geography: Definition, Nature and Scope - Natural resources: Water, Forests, Soil – Distribution and conservation - Energy resources: Coal, Petroleum, Atomic and Hydal Power.

Unit – IV

Agriculture: Types - Geographical condition and Distribution of Wheat, Rice, Sugarcane, Cotton, Tea, Coffee.

Unit – V

Minerals: Distribution - Iron ore, Copper, Manganese and Mica – Distribution of Industries: Iron and Steel, Cotton Textiles.

References:

1. Balbeer Singh Negi, (2006), Human Geography- An Ecological approach, Kedarnath and Ramnath Publication, Meerut.
2. Majid Hussain (1999), Human Geography, Rawat Publications, Jaipur.
3. Perpillou (1967), Human Geography, A.V.H.G. Longman London.
4. Money D.C (1967), Introduction to Human Geography, University Tutorial Press, London.
5. Goh Chengleong (2006), Certificate: Physical and Human Geography, Oxford University Press, London.
6. Goh Chengleong and Morgan (1975), Human and Economic Geography, Oxford University Press, London.

SKILL BASED SUBJECT – IV**FUNDAMENTALS OF GIS****Unit –I**

GIS: Definition - Components – Development - GIS and Geography – Digital Cartography.

Unit –II

GIS data: Spatial and Non-Spatial Data - Sources of data – Data structure: Raster and Vector.

Unit –III

Data Base Management System: Structure, Functions and Organizational aspects – RDBMS - GIS software: Data Storage –Analysis –Buffering –Overlay.

Unit –IV

GIS modules: Network, TIN, DTM, DEM and Trends in GIS.

Unit –V

Application of GIS – Agriculture –Environment- Urban - Disaster.

References:

1. Ian Heywood, (2009), An Introduction to Geographical Information System, Pearson Education Pvt. Ltd., New Delhi.
2. Peter, A. Burrough Rachael, A. and McDonnell, (1998), Principles of Geographical Information Systems, Oxford University Press Inc., New York.
3. LO, C.P., Albert K.W.Yeung, (2007), Concepts and Techniques of Geographic Information Systems, Prentice-Hall of India, New Delhi.
4. Anji Reddy, M., (2004), Geoinformatics for Environmental Management, BS Publications, Hyderabad.
5. Kang-tsung chang, (2006), Introduction to Geographic Information systems, Tata McGraw – Hill Publishing Company Limited, New Delhi.
6. Kumar, S., (2003), Basics of Remote sensing and GIS, Laxmi publications, New Delhi.
7. Chang, Kang-tsung (2002), Introduction to Geographic Information Systems, Tata McGraw Hills Publishing Company Ltd, New Delhi.
8. Siddique, M.A. (2006), Introduction to Geographical Information Systems, Sharda Pustak Bhawan, Allahabad.

SEMESTER – VI

PROJECT

Report of 25 pages to be submitted

Viva-voice - 20 Marks.

Report - 80 Marks.

25

MODEL QUESTION PAPER

B.Sc., GEOGRAPHY

TIME : 3 Hours

Maximum Marks : 75

SECTION – A

10 x 2 = 20

Answer all questions

All answer carry equal marks

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Two questions from each unit to be set

SECTION – B

5 x 5 = 25

Answer all questions

All answer carry equal marks

Two Questions from each unit to be set questions either a) or b) type

11. a) or
 b)
12. a) or
 b)
13. a) or
 b)
14. a) or
 b)
15. a) or
 b)

SECTION – C

3 x 10 = 30

Answer any **THREE** questions out of **FIVE** questions given

All answer carry equal marks

One question from each unit to be set

- 16.
- 17.
- 18.
- 19.
- 20.