

BHARATHIAR UNIVERSITY COIMBATORE- 641046**SCHOOL OF DISTANCE EDUCATION****M.Sc. GEOGRAPHY****(for the candidates admitted from the academic year 2011-12 onwards)****SCHEME OF EXAMINATION**

Subject Title	University Exam	
	Duration in Hours	Maximum Marks
I YEAR		
I. Physical Basis of Geography.	3	100
II. Geography of India With Special Reference to Tamilnadu.	3	100
III. Advanced Cartography.	3	100
IV. Environmental Geography.	3	100
V. Practical I – Representation of Geographical Data.	3	100
II YEAR		
VI. CAD in fashion Designing	3	100
VI. Agricultural Geography.	3	100
VIII. Urban Geography.	3	100
IX. Remote Sensing and GIS.	3	100
X. Practical II – Map and Image Interpretation.	3	100
Project	-	100
Total		1100

PAPER-II GEOGRAPHY OF INDIA WITH SPECIAL REFERENCE TO TAMILNADU

UNIT I

Location - Physiographic Divisions - Drainage - Climate- Soil - Natural vegetation.

UNIT II

Classification of resources. Agriculture: Food crops: Rice – Wheat; Cash crops: Cotton – Sugarcane; Plantation crops: Tea. – Coffee; Other crops; Pulses and Oil seeds. Irrigation: Types ; Multipurpose Projects. Role of green revolution in Indian agriculture.

UNIT III

Mineral and Industrial resources: Classification of minerals. Distribution of iron ore, mica, manganese, and bauxite ; Power resources: coal, petroleum ,atomic minerals. Industries: iron and steel, sugar, cement, cotton textiles, engineering and chemical industries.

UNIT IV

Population – growth, distribution and density, Population problems and policy, Transport: land, water and air. India’s foreign trade.

UNIT V

Tamil Nadu: Physical Geography of Tamilnadu; Resources: Agricultural, Mineral, Industrial, Transport and Trade

REFERENCE:

1. Singh R.L. (1971) India a regional Geography, NGSI. Varanasi.
2. Mamoria C.B., Economic & commercial Geography of India, Kitab Mahal, Allahabad.
3. Sharma T.C. (1980) Economic & Commercial Geography of India, Vikas Publication.
4. Tirtha , R., (2002),Geography of India , Rawat Publication.
5. Nag, P., and Sengupta, S., (1992), Geography of India, Concept of Publishing Company, New Delhi.
6. Spate,O.H.K., and Learmonth O.T.A.: India and Pakistan, B.I.Publications,Maras, 1972.

Paper III

ADVANCED CARTOGRAPHY

UNIT I

Meaning and scope of Cartography ; Historical development – Maps – Types of maps, Base map – Compilation and Generalization of maps.

UNIT II

Map design and layout – Lettering and Toponymy – Tools and Techniques – Map reproduction – Developing process – Photographic and printing.

UNIT III

Symbolization - Point , Line , Area and Volume symbols Statistical database- source, types and techniques of data collection ; Preparation of diagrams

UNIT IV

Methods of representing relief ; Mapping the climatological and Hydrological data – Mapping the socio economic data.

UNIT V

Recent developments in the field of Cartography Computers and Cartography – Digital Cartography – 3D Cartography.

REFERENCE:

1. Robinson A.H. Elements of Cartography, John Wiley, London.
2. Erwin Raiz General Cartography, Mc Graw Hill Company., New York.
3. Mishra R.P. & Ramesh A. Fundamentals of Cartography, Concept Publication, New Delhi.
4. Lawrence G.R.P (1979) Cartographic Methods, Methuen, London.
5. Burroughs P.A., Geographic Information Systems For Land Resource Assessment Oxford University Press, New York, 1986.

Paper IV ENVIRONMENTAL GEOGRAPHY

UNIT I

Nature and Scope of Environmental studies –Geography and environment Man - Environment relationship Concept of Ecosystem.

UNIT II

Ecosystem: Structure – Classification– Functioning of the ecosystem Biogeochemical cycles – Natural disruptions of the ecosystem – natural hazards – floods, drought and others – human interference on ecosystem Population growth and its impact on the ecosystem.

UNIT III

Man's modification of the environment: Agriculture – Green revolution – HYV and pesticides Man's impact on land – mining – soils – coastal areas.

UNIT IV

Human settlements and environment – Urban environment Industrial environments ; Environmental degradation – emerging environmental issues –Pollution Environment and health

UNIT V

Environmental management and planning Environmental impact assessment Environmental law and protection

REFERENCE:

1. Odum E.P.(1971) Fundamental of Ecology, W.B. Sanders Co Philadelphia.
2. Strabler, J.Man's environment, Hamilton publication Co California.
3. Peter Hagett Geography, A modern synthesis. Wilkey Drabal, K.K.
4. Savindra Singh Environmental Geography, Prayag Publication, Allahabad,1991
5. Saxena Environmental Geography.
6. Chandna R.C. (1998) Environmental Awareness, Kalyani Publishers, New Delhi

Paper V PRACTICAL- I REPRESENTATION OF GEOGRAPHICAL DATA

UNIT I

Geographical Data: Types – Qualitative and Quantitative data. Sources of Geographical data – Sampling - types .

UNIT II

Preparation of graphs and Diagrams: Simple graph - Semi log – Triangular graph – Lorenz curve- Bar diagram - Pie chart – Spherical diagram.

UNIT III

Distribution maps: Isopleths, Choropleth, Dasymetric map, Flow map.

UNIT IV

Mapping of Physical data: Contour diagrams – Profiles ; Slope analysis --Wentworth and Smith method.

REFERENCE:

1. Monhouse & Wilkinson (1967) Maps and Diagrams Mathuen, London.
2. Peter Toyne & Newby Techniques in Human Geography.
3. Mishra R.P. & Ramesh .A (1989). Fundamentals of Cartography, Concept Publication, New Delhi.
4. R.L.Singh (1979) , Elements of Practical Geography, Students Friends, Allahabad.
- 5.Ragunandan Singh & Kanuja, Mapwork and Practical Geography, Central Book depot, Allahabad.
- 6.Gopal Singh (2000) Map Work and Practical Geography, Vikas Publishing House Pvt., Ltd., New Delhi.

PAPER VI

GEOGRAPHICAL THOUGHT

UNIT I

History of Geographical thought – Impact of Greek, Roman and Arab exploration and discoveries on Geographical development.

UNIT II

Four traditions in Geography: Man – Land, Area studies, Spatial and Earth science.

UNIT III

Major Geographical thoughts: **American:** Davis, Bowman, Hartshorne
British: Mackinder, Herbertson, Roxby. **German:** Humbolt, Ritter, Penck
France: Vidal de la Blache, Jean Brunhes, Albert Demangeon
Indian: R.L. Singh, R.P. Mishra. A. Ramesh, R. Vidhyanathan,

UNIT IV

Dualism in Geographical studies

1. Determinism Vs possibilism
2. Physical Vs Human
3. Systematic Vs Regional
4. Idiographic Vs Nomothetic
5. Quantitative Vs Qualitative
6. Visual Vs Digital.

UNIT V

Recent trends in Geography; Quantitative revolution Paradigms in Geography –
Systems approach

REFERENCE:

1. Freeman.R (1970) Hundred year of Geography, Hutchinson. London.
2. Ha.vey.(1969) Explanations in Geography, Edward Arnold Publications, London.
3. Wayne, Davis K.D. (1972) Conceptual Revolution in Geography, University of London press, London.
4. Hussain.M (1984) Evolution of Geographical Thought, Rawat Pub., Jaipur,1984.
5. Hartshorne, R., Perspectives on Nature of Geography, (1959), Rand Mc Nally & Co.

PAPER VII

AGRICULTURAL GEOGRAPHY

UNIT I

Scope and content – Approaches – origin and Development of Agriculture .
Major agricultural Systems of the world's (Whitlessey).

UNIT II

Determinants of agriculture – Physical, Social, Economic, Institutional and technological determinants;

UNIT III

Models in agricultural Geography - Von Thunen's model, Landuse types - land use surveys – Land capability classification Role of remote sensing in land use studies.

UNIT IV

Factors affecting agricultural productivity – measurement of agricultural productivity. Crop combination -, crop combination regions – Weaver, Doi and Rafiullah methods. Crop diversification regions – Bhatia's method.

UNIT V

Green revolution – Salient features and impact on land use – Agricultural regions of India.

REFERENCE:

1. Husian.M (1979) Agricultural Geography, Inter India publication, New Delhi,.
2. Mohamkand N. (1981) Perspective Agricultural Geography, Voll. Concepts publishing company. New Delhi.
3. Morgan, W.B. & Munton R.J.C (1971) Agricultural Geography, Methuen, London.
4. Jaspir Singh and Dhillion Agricultural Geography, Tata McGraw Hill, New Delhi

PAPER VIII **URBAN GEOGRAPHY**

UNIT I

Nature – Scope and development of Urban Geography – Factors of urban growth – World urbanization – urbanization in India.

UNIT II

Urban demography – Population density models – Age and sex structure – Occupational structure Basic and Non basic function – Functional classification of urban centers.

UNIT III

Urban land use – Types – Models – Social area analysis – CBD delimitation – Urban ecology

UNIT IV

Hierarchy of urban centers – rank size rule – Christaller's central place concepts – Principle of Nesting City region – Umland demarcation.

UNIT V

Urban expansion –Vertical and horizontal – urban sprawl–Rural urban fringe–Suburbs Urban problems – Slums – Pollution – Water supply, transport planning.

REFERENCE:

1. Northam R.M (1975) Urban Geography, John Wiley Sons, New York.
2. Carter.H.(1972) The study of Urban Geography, Edward Arnold, London.
3. Misra R.P & K.V.Sundaram(1971) Regional planning and Development, University of Mysore, Mysore.
4. Jhonson.H (1967) An Urban Geography: An Introductory Analysis, Pergamon Press, London.

PAPER IX REMOTE SENSING AND GEOGRAPHICAL INFORMATION SYSTEM**UNIT I**

Over view of Remote Sensing and Remote Sensing Systems – EMR and its characteristics – Interaction of EMR with atmosphere and earth features – atmospheric windows – types of remote sensing – platforms – sensors - Ground Truth Verification.

UNIT II

Aerial Remote Sensing: History – Types of Aerial cameras – films – photographs - Elements of photographs: marginal information and scale – measurement of scale Stereo model – relief displacement – measurement of height Elements of photo Interpretation.

UNIT III

Remote sensing satellites – LANDSAT – SPOT – ERS – JRS – IKONOS – QUICK BIRD – orbiting characteristics – resolution and sensor characteristics –

UNIT IV

Indian Remote Sensing satellites – resolution and sensor characteristics – Application Satellite data products: types: hard and soft copies – standard and special Products – referencing systems – annotation – elements of Image Interpretation

UNIT V

GIS and GPS: Geographical information system – Definition – Components of GIS- function of GIS – Spatial and Attribute data- Types of GIS software. GPS – Principles and functions.

REFERENCES:

1. American Society of Photogrammetry, (1982) : Manual of Photogrammetry, IV Edition.
2. Anji Reddy, M., (2001) : Remote Sensing and Geographical Information System, BS Publications, Hyderabad.
3. Avery T.E., and G.L. Berlin, (1992) : Fundamentals of Remote Sensing and Air Photo Interpretation, V Edition, Macmillan, New York.
4. Joseph, George., (2003) : Fundamentals of Remote Sensing, Universities Press, Hyderabad.
5. Lillesand, T.M., (1994) : Remote Sensing and Image Interpretation, John Wiley and Sons, New York.
6. Ahmed, El Rabbany(2000): Introduction to Global Positioning System, Artech House Publishers, London.
7. Burrough, P.A., (1986): Principles of Geographical Information Systems for Land Resources Assessment, Oxford University Press, Oxford.
8. Heywood, I.,(2003): An Introduction to Geographical Information Systems, Pearson Education Asia Pvt. Ltd., Delhi.
9. Jhon R. Jenson 2003 Remote sensing of the Environment - An Earth Resource Perspective , .Pearson Education series.

PAPER X PRACTICAL II- MAP & IMAGE INTERPRETATION

UNIT-I

Map symbol: Conventional signs and symbols. Cartographic appreciation of survey of India
Topographic maps Interpretation of Topographic maps.

UNIT II

Weather maps & symbols- Synoptic chart- Station Model Interpretation of weather maps

UNIT III

Air photos – Types of aerial photos- marginal Information – Elements of photo
Interpretation Interpretation of Air photos

UNIT IV

Satellite Image: Annotation- Interpretation keys Satellite Image Interpretation

REFERENCES:

1. Avery & Berlin, Fundamentals of Remote sensing and Air photo Interpretation.
2. Arnold Interpretation of Air Photos and Imageries, Prentice Hall
3. Ramamoorthy(1972) Map Interpretation.
4. R.L.Singh (1979) , Elements of Practical Geography, Students Friends, Allahabad.
5. Rangunandan Singh & Kanuja, Mapwork and Practical Geography, Central Book depot, Allahabad.
6. Gopal Singh (2000) Map Work and Practical Geography, Vikas Publishing House Pvt., Ltd., New Delhi.
7. Anji Reddy, M., (2001) : Remote Sensing and Geographical Information System, BS Publications, Hyderabad.
8. Lillesand, T.M., (1994) : Remote Sensing and Image Interpretation, John Wiley and Sons, New York