

DIRECTORATE OF DISTANCE EDUCATION
KURUKSHETRA UNIVERSITY KURUKSHETRA
(Established by the State Legislature Act XII of 1956)
("A+" Grade, NAAC Accredited)

Scheme of Examination
For
M.Sc.(Final) in Geography
Session 2019-20

Paper No.	Title	Max. Marks	Internal Marks	Total Marks	Time
VI	History of Geographical Thought	80	20	100	3 hours
VII	Agricultural Geography	80	20	100	3 hours
VIII	Population Geography	80	20	100	3 hours
IX(a)	Geographic Information Systems and Computer Mapping(Practical)	50	--	50	3 hours
IX(b)	Field Methods & Applications in Geography(Practical)	50	--	50	3 hours
X(a)	Remote Sensing Techniques, Toposheets Interpretation & Morphometric Analysis (Theory)	40	10	50	3 hours
X(b)	Remote Sensing Techniques, Toposheets Interpretation & Morphometric Analysis(Practical)	50	--	50	3 hours

Paper-VI

History of Geographical Thought

Max. Marks: 80

Time: 3 Hours

Note:- There will be nine questions in all. Question No. 1 is compulsory and consists of 10 short notes (required to be answered in not more than 25 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each section. The candidate shall attempt FOUR long questions, one from each section. Question 1 carries 20 marks while remaining four questions carry 15 marks each.

Section -A

1. Classification of knowledge and place of geography in the realm of knowledge.
2. Scientific Explanations: routes to scientific explanations (inductive/deductive logic), types of explanations-cognitive description, ; cause and effect, temporal, functional and systems.
3. Geography, its nature and relation with other natural and social sciences.
4. Changing nature of geography: study of distributions, relationships, interactions. Areal differentiation and spatial organization.

Section-B

1. Contribution of Greeks, Romans and Arab geographers in development of Geography.
2. European Renaissance and Emergence of scientific geography: Varenus and Kant.
3. Classical period of modern geography: Humboldt, Ritter and their legacy.
4. Geography in Germany during post-classical period:
 - a) Shifting viewpoint during second half of 19th Century.
 - b) Emergence of geography as a (i) Study of man-land relationships (ii) Chorological Science (iii) Landscape Science.
5. French School of Regional Geography, regional studies in Britain and contribution of W.M. Davis, Carl Sauer and V. V. Dokuchaev.

Section-C

1. Dichotomy and Dualism in Geography.
 - a) Physical and Human Geography.
 - b) Regional and Systematic Geography.
2. Fundamental Concepts in Geography
 - a) Environmental determinism and possibilism.
 - b) Region, regionalization and regional methods.
 - c) Time and genesis in Geography.
3. Changing paradigms in Geography.

Section –D

(Geography Since World War-II)

1. Quantitative Revolution and School of Locational Analysis:
2. Positivism in Geography -laws, theories and models.
3. Behavioral approach in Geography.
4. Humanism in Geography.
5. Re-emergency of ecological approach in Geography.
6. Socio-Political concern in Geography- (a) Welfare approach (b) Radical approach
(c) Feminist approach
7. Post modernism in Geography.

Suggested Readings:

1. Dickinson, R.E. (1969): The Makers of Modern Geography. Routledge and Kegan Paul, London.
2. Dikshit, R.D. (1997): Geographical Thought -A Contextual History of Ideas. Prentice Hall of India. New Delhi.
3. Hartshorne. R. (1958) : Perspective on the Nature of Geography, Rand MacNelly. Chicago.
4. James P.E. and Martin J. Geoffrey (1972): All Possible Worlds, John Wiley & Sons, New York.
5. Johnston, R.J. (1983): Geography and Geographers, Edward- Heinemann, London.
6. Taylor. G. (1951): Geography in the 20th Century. Methuen & Co., London.
7. Wyne, K.D. (1972): The Conceptual Revolution in Geography, University of London Press Ltd.
8. Peet. Richard Malden, M.A. (1998): Modern Geographical Thought, Oxford,: Blackwell Publishers.

Note:- There will be nine questions in all. Question No. 1 is compulsory and consists of 10 short notes (required to be answered in not more than 25 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each section. The candidate shall attempt FOUR long questions, one from each section. Question 1 carries 20 marks while remaining four questions carry 15 marks each.

Section –A

1. Nature, scope: and significance of Agricultural Geography;
Agricultural Geography versus Agricultural Economics.
2. Approaches to the study of Agricultural Geography: Commodity,
systematic and regional.
3. Determinants of Agricultural Patterns:
 (i) Physical Factors
 (ii) Technological factors
 (iii) Cultural factors

Section-B

1. Surveys in Agricultural Geography :
 (i) Land-use Survey
 (ii) Land Capability Survey
 (iii) Land Evaluation Survey
2. Models in Agricultural Geography with special reference Von
 Thunen Model. Diffusion Model, Input-Output
3. Measurement of crop combination, crop concentration diversification and
 commercialization.

Section C

1. Agricultural Regions: Concept and Techniques of Delineation...,.
2. Whittlessey's bases of Agricultural regionalization.
3. Agricultural Typology: Its Pases and Methodology

Section-D

1. Techniques of measuring regional imbalances in levels of agricultural
 productivity.

2. Agriculture in India: Land use and shifting cropping pattern. Regional patterns of productivity in India Specific problems in Indian Agriculture and their management and planning.
3. (i) Green Revolution -its impact and consequences
(ii) White Revolution in India.

Suggested Readings:

1. Symons, Laslie (1967): Agricultural Geography; G. Bell and Sons, ; London. .
2. Gregory, Howard F. (1970): Geography of Agriculture: Themes in Research, Prentice Hall., N.J.
3. Anderson, James, R. (1970): Geography of Agriculture, W.M.C., Brown Dubique.
4. Morgan, W.B. and Munton, R.J.C. (1971): Agricultural Geography, Methuen, London.
5. Singh, Jasbir and Dhillon, S.S. (1984): Agricultural Geography, Tata McGraw-Hill, New Delhi.

Paper-VIII

Population Geography

Max. Marks: 80

Time: 3 Hours

Note:- There will be nine questions in all. Question No. 1 is compulsory and consists of 10 short notes (required to be answered in not more than 25 words each). Short notes shall cover entire syllabus. There will be 8 long questions, two from each section. The candidate shall attempt FOUR long questions, one from each section. Question 1 carries 20 marks while remaining four questions carry 15 marks each.

Section-A

1. Nature, scope and objectives of Population geography, Methodological problems in Population geography, Recent developments in Population geography, Population geography in India.
2. Sources of Population data : Quality and reliability of data; problems of mapping Population data.

Section -B

- I Concept, determinants and world patterns of following attributes of Population .:
 - (a) Distribution and Density
 - (b) Vital rates: birth and death rates .

- (c) Migration (including laws of migration)
- (d) Growth
- (e) Race, Religion, Age and Sex Composition
- (t) Literacy
- (g) Residence (urban/rural)
- (h) Occupation

Section –C

1. Population and resources : Concepts of optimum Population, over-population and under-Population: Population-resource regions; Concept of Demographic Transition. Theories of Population (Malthus, Ricardo and Marx), Malthus's theory of population consumption and Liebenstein's Theory of Population and economic growth.
2. Population Policy, Concept, principal policy, objectives for future its global, national and household consequences; Population policy of India.
3. Gender issues with special references to India.

Section-D

1. A Comparative study of the Population problems and policies of developed and less developed Countries with special focus on the following countries:

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(a) Developed: U.S.A, Sweden, Japan.

(b) Less Developed: China, India, Brazil.

2. Human Development Index and its components.
3. Population and environment: implications for the future.

Suggested Readings:

1. Beaujeu Garnier, J. (1966) : Geography of Population, Longman. London.
2. Brooks. S. (1977): The World Population Today (Ethnodemographic process), USSR Academy of Sciences, Moscow. .
3. Cassen, Robert & Bates Lisa M. (1994) : Population Policy: A New Consensus Overseas Development Council, Washington. D.C.
4. Chandna, R.C. (1998) : Jansankhya Bhugol, Kalyani Publishers, New Delhi.
5. Chandna, R.C. (1998) : Population, Kalyani Publishers, New Delhi.
6. Chandna, R.C. (1998) : Environmental Awareness, Kalyani Publishers, New Delhi.
7. Chandna, R.C. (1998): A Geography of Population : Concepts. Determinants and Patterns, Kalyani Publishers, New Delhi.

8. Clarke, John. 1. (1971) : Population Geography and the Developing Countries. Pergamon Press, New York.
9. Demin, G.J. and Others (Eds.) (1971) : Population Geography- Reader, McGraw-Hill Books Co., New York.
10. Jones, Huw, R. (1981) : A Population Geography. Harper and Row Publishers, London.
11. Petrov, V. (1985): India: Spotlight of Population, Progress Publishers, Moscow.
12. Trewartha, G. T. (1972) : The Less-Developed Realm-A Geography of its Population, John Wiley & Sons, Inc., New York.
13. Trewartha. G.T.(1978): The More Developed Realm -A Geography of its Population Pergamon Press, New York.
14. Woods, I. (1979) : Population Analysis in Geography. Longman. London.

**Paper-IX(a): Geographic Information Systems and Computer Mapping
(Practical)**

Max. Marks: 50

Time: 3 hours

Note:- There will be seven questions in all. Question No.1 is compulsory and consists of 5 short notes (required to be answered in not more than 25 words each). Short notes shall cover entire syllabus. There will be 6 long questions, three from each section. The candidate shall attempt THREE long questions selecting at least one from each section. All questions carry equal marks.

Section-A

Geography as Spatial-Science, Maps and Spatial Information, dynamics of Spatial Information, GIS: definition and development, computer environment for GIS.

Section-B

Spatial Data: Elements of Spatial data; data sources: Primary/ Secondary, census/sample. Raster and Vector data structures, Data Conversions, GIS Data formats for Computer Environment.

Section-C

Elements of GIS: Data Capture, Storage and maintenance of data base, Database Management System, Data Analysis.

Section-D

GIS Applications in Land Information System, Urban Management, Environment Management.

Distribution of Marks:

Record book -10 marks
Viva voce -10 marks
Lab. Work(3x10)=30 marks

Note: The practical examination shall consist of three compulsory questions of 10 marks each.

Suggested Readings:

1. Mathur, P.M. 1991: Computer Applications in Geography. John Wiley & Sons, New York.
2. Matheer, P.M. 1976: Computational Methods of Multivariate, Analysis in Physical Geography, John Wiley & Sons, London.
3. Mather. P.M. : 1989, Computer Processing of Remotely-Sensored Images: An Introduction, John Wiley & Sons, Chichester.
4. Monmonier, M.S. 1981: Computer Assisted Cartography: Principles and prospectus Prentice Hall, Englewood Cliffs, New Jersey.
5. Morrison, J.L. 1980: Computer Technology and Cartographic Change in : The Computer in Contemporary Cartography. ed. D.R. Fraser Taylor, John Wiley & Sons, Chichester.
6. Penckar, T. 1972: Computer Cartography. Commission on College Geography, Association of American Geographers, Washington, D.C.

Paper: IX (b) Field Methods and Applications in Geography (Practical)

Max. Marks: 50

Time: 3 hours

Distribution of Marks:

Project/Field Report -10 marks
Viva voce -10 marks
Written (3x10)=30 marks

Note:-Examiner will set three compulsory questions based on the syllabus given below:

1. Methods of Field Study in Geography. '
 - (a) Statement of the objectives and scope of a field enquiry. -.
 - (b) Methods of Field Work for Studies at Macro, Meso and Micro Scales.

2. Preparation of Questionnaire, sampling techniques for Primary data collection.
3. Hypothesis and its Functions,- Problems in formulation of Hypothesis: Types of Hypothesis, Characteristics of a usage Hypothesis, Testing the Hypothesis.

PREPARATION OF A REPORT BASED ON FIELD WORK

Suggested Readings:

1. Dickinson's G.C: (1979): Maps and Air Photographs Edward's Arnold, London.
2. Hammond & Mc Cullagh : Quantitative Techniques in Geography, Claredon, Oxford.
3. Kellaway's G.P. (1962): Map Projections, Methuen, London.
4. Singh. R.L. and Skingh, Rana, P.B. : Elements of Practical Geography Kalyani Publishers, New Delhi.
5. Good, W.J". and Hatt, P.K. (1981) : Methods in Social Research, McGraw Hill. Singapore.
6. Wolf, P.R. (1974): Elements of Photogrammetry, McGraw Hill. Koga Kusha.

Paper-X (a): Remote Sensing Techniques, Toposheet Interpretation and Morphometric Analysis (Theory)

Max. Marks: 40

Time: 3 Hours

Note:- There will be seven questions in all. Question No.1 is compulsory and consists of 5 short notes (required to be answered in not more than 25 words each). Short notes shall cover entire syllabus. There will be 6 long questions, three from each section. The candidate shall attempt THREE long questions selecting at least one from each section. All questions carry equal marks.

Section-A

Remote sensing: definition, definition, electromagnetic energy, electromagnetic spectrum, remote sensing systems, types of satellite imagery, image characteristics, approaches to image interpretation-manual and computer assisted, use of satellite remote sensing in environmental, landuse/land cover and natural hazards studies.

Air photo interpretation: history and development. types of air photographs, characteristics, resolution, photographic scale, relief displacement elements of air photo interpretation, stereoscopic viewing, uses of air photo in land use, Urban and regional studies.

Section -B

Toposheet interpretation : Basic information on topographical sheets (arrangement and identification of topographical sheets of India, preliminary information, conventional signs) interpretation of relief, drainage, settlement, landuse, vegetation and transport. Spatial relations between the abiotic and biotic elements of landscape.

Drainage basin delimitation; hypsometric analysis; area height curve, hypsographic curve, hypsometric integral curve, Hanson Lowe's clinographic curve : slope analysis ; Wentworth's Smith's and Robinson's methods : profiles; transverse and longitudinal : drainage network - analysis (linear and areal properties after strahler)

Suggested Readings:

1. American Society of Photogrammetry: Manual of Remote Sensing, ASP, Falls Church, V.A.,1983.
2. Barret E.C. and L.F. Curtis: Fundamentals of Remote Sensing and Air Photo interpretation MacMillan, New York, 1992.
3. Compbell J : Introduction to Remote Sensing, Guilford, New York 1989,
4. C'urran, Palll J.: Principles of Remote Sensing Longmans, London,1985.
5. Hord. R,M.: Digital Image Processing of Remotely Sensord Data, Academic. New York. 1989.

6. Luder D.: Aerial Photography Interpretation; Principles and Application, McGraw Hill, New York, 1959.
7. Prett W.K.: Digital Image Processing, Wiley, New York, 1978.
8. Rao D.P. (eds):, Remote Sensing for Earth Resources, Association of Exploration Geophysicist, Hyderabad, 1998.
9. Thomas M. Lilies and Ralph W. Kefer: Remote Sensing and Image Interpretation, John Wile & Sons, New York, 1994.

Paper-X (b): Remote Sensing Techniques, Topo-Sheets Interpretation, and Morpbometric Analysis (Practical)

Max. Marks: 50

Time: 3 Hours

The distribution of marks will be as under:

Laboratory Work	:	(10x3) =30 Marks
Practical Record Book	:	10 marks
Viva-voce	:	10 marks

Note : The Practical Examination will consist of 3 questions of 10 marks each. All the Questions are compulsory.