

SYLLABUS

GEOGRAPHY

M.A. (Previous) Examination, 2020

M.A. (Final) Examination, 2021

**JAI NARAIN VYAS UNIVERSITY
JODHPUR**

IMPORTANT

With a view to bring about greater reliability, validity and objectivity in the examination system and also for closer integration of teaching, learning and evaluation.

- (1) The syllabus has been divided into units. Questions will be set from each unit with provision for internal choice.
- (2) In order to ensure that the students do not leave out the important portion of the syllabus, examiners shall be free to repeat the questions set in the previous examinations.

(Ref. Resolution No. 21(c) of Academic Council dated 9-2-84)

The examinees be permitted to use their personal transistorized pocket battery operated calculators in the examinations. The Calculator to be used by the candidates in the examinations should not have more than 12 digits, 6 function and 2 memories and should be noiseless and cordless. A calculator belonging to one candidate shall not be allowed to be used by another candidate. The superintendent of the centre will have complete discretion to disallow the use of a calculator which does not confirm to the above specification.

(Ref. Res. No. 6/90 of Academic Council dated 20th July, 1990)

In Engineering and any other examinations where the use of calculators is already permitted; it shall remain undisturbed.

NOTIFICATION

In compliance of decision of the Hon'ble High Court all students are required to fulfil 75% attendance rule in each subject and there must be 75% attendance of the student before he/she could be permitted to appear in the examination.

REGISTER
(Academic)

SYLLABUS

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JAI NARAIN VYAS UNIVERSITY
JODHPUR

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FACULTY OF ARTS, EDUCATION AND SOCIAL SCIENCES

Academic Members of the Geography Department

Head of the Department

Dr. Jai Singh

Professor

Prof. Rajendra Parihar

Prof. Irfan Mehar

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Dr. Arjun Lal Meena

Dr. Asha Rathore

Mr. Govind Singh

Dr. Lalit Singh Jhala

Dr. Omprakash

Dr. Gaurav Kumar Jain

Dr. Ashwani Arya

Dr. Anamika Poonia

FACULTY OF ARTS, EDUCATION & SOCIAL SCIENCES

MASTER OF ARTS

GENERAL INFORMATION FOR STUDENTS

The examination for the degree of Master of Arts, Education and Social Sciences shall consist of two parts : (i) The Previous Examination and (ii) The Final Examination

The examination will be through theory papers/practical/viva. Pass marks for the previous and final examination are 36% of the aggregate marks in all the theory papers and viva/practical's and not less than 25% marks in the individual theory paper /viva /practical. A candidate is required to pass in the written and the practical/viva examination separately.

Successful candidates will be placed in the following divisions on the basis of the total marks obtained in previous and final examinations taken together:

First division 60% , second division 48% and third division 36% no students will be permitted to register himself simultaneously for more than one post-graduate course.

ATTENDANCE

1. For all regular candidates in the faculties of arts, education and social sciences, science, law, commerce and engineering, the minimum attendance requirement shall be that a candidate should have attended at least 75% of the lectures delivered and tutorials held taken together as well as 75% of practical and sectionals from the date of his/her admission.
2. Condonation of shortage of attendance:
The shortage of attendance up to the limits specified below may be condoned on valid reasons:
 - i) Up to 6% each subject plus 5 attendance in all the aggregate subject/papers may be condoned by the Vice-Chancellor on the recommendation of the Dean/Director/principal for undergraduate students and on the recommendation of the Head of the Department for the post-graduate classes.
 - ii) The N.C.C./N.S.S. cadets sent out to parades and camps and such students who are deputed by the University to take part in games, athletic or cultural activities may, for purpose of attendance, be treated, as present for the days of their absence in connection with the aforesaid activities and that period shall be added to their subject wise attendance.

- Note: 1. The attendance for supplementary will be counted from the date of their admission
2. In the Faculty of Engineering the attendance requirement will apply to each semester.
However, in case of practical where examination is not held at the end of the first semester but the end of the second semester, attendance will be counted at the end of the second semester taking into account attendance put in both the semesters (i.e., first and second) taken together.

MEDIUM

Candidates are not allowed to use any medium except Hindi or English for answering question papers.

For answering papers in the subjects of English/Hindi the medium will be corresponding language only.

For answering question papers in the subject of Sanskrit the candidates are allowed to use Sanskrit, Hindi or English unless specified otherwise.

GEOGRAPHY

M.A. (Previous) Examination 2020

M.A. (previous) examination will consist of 500 marks. There will be four theory papers of 100 marks each and a practical of 100 marks.

Candidates will be required to pass separately in theory and practical examinations.

Candidate's choice among the optional papers and groups would be restricted only to those paper or groups for which regular teaching is provided in the department.

Use of map stencils (political outline only). Log tables and calculators are allowed in the examination.

Paper I advanced physical geography
Paper II economic geography
Paper III evolution of geographical thought

Available (IV-1 or 2) others are not available

Paper IV

1. Geography of Arid Lands

Or

2. Advance and systematic and Regional Geography of U.S.A
3. Japan
4. Monsoon Asia (except India)
5. Western Europe
6. South-western Asia
7. Three southern Continents
8. Neighboring countries of India

Paper V Cartography and Project/ Instrumental Survey of A Reputed Institute/

Geographical

Tour

M.A. (Final) Examination 2021

M.A.(Final) Examination, will consist of 500 marks, there will be four theory papers of 100 marks each or three theory paper of 100 marks each and a dissertation of 100 marks on an approved topic-evaluation of dissertation will be done by two external examiners and average

marks will be awarded. There will be no viva-voce examination. There will also be a practical examination of 100 marks.

Candidates will be required to pass separately in theory and practical examination.

Candidate's choice among the optional papers and groups would be restricted to the papers or groups for which regular-teaching is provided in the department.

Use of map, stencils (political outline only), log tables and calculators are allowed in the examination.

Paper	VI	Research methodology
Paper	VII	Geography of India
Paper	VIII	Geography of tourism

These are not available

1. Advanced Geomorphology
2. Bio-Geography
3. Applied Geography and Regional Planning
4. Pedology
5. Climatology and Meteorology
6. Quantitative Methods in Geography
7. Aerial Photo-Interpretation and Remote Sensing

Available (IX-1 or 2) others are not available

Paper- IX

1. Urban Geography
or
2. Geography of Population
3. Geography of land use
4. Political Geography
5. Cultural Geography
6. Industrial Geography
7. Transportation Geography
8. Geography of Rural Development

Paper- X Cartography, Surveying (Practical) and Socio- Economic Survey of Village

M.A. (Previous) Examination 2020

Note: Each theory paper is divided in three parts i.e. Section-A, Section-B, and Section-C.

Section-A: Will consist of 08 compulsory questions. There will be two questions from each unit and answer of each question shall be limited up to 30 words. Each question will carry of 3 marks.

Section-B: Will consist of 08 questions. Each unit will be having two questions; students will answer one question from each unit. Answer of each question shall be limited up to 250 words. Each question will carry 9 marks.

Section-C: Will consist of total 04 questions. Students will answer any 03 question and answer of each question shall be limited up to 500 words. Each question will carry 20 marks.

PAPER I
ADVANCED PHYSICAL GEOGRAPHY

- Unit 1 : Interior of the earth, Isostasy, distribution of continents and ocean basins; Continental drift; Revival of continental drift theory and plate tectonics, Earth movements, folding and faulting; mountain building, earthquakes
- Unit 2 : Work of sub-aerial denudation: Erosional and depositional work of rivers, winds, glaciers, marine erosion; Karst topography; Geomorphic cycle
- Unit 3 : Isolation, heat balance of the earth and distribution of temperature, distribution of atmospheric pressure and winds; Forces controlling the atmospheric circulation, Jet streams; characteristics, types and origin of air masses and fronts; Atmospheric disturbances, climatic classification-Koppen Thronthwaite and Trewartha; modified Koppen's classification
- Unit4 : Oceanography : Ocean bottom relief, salinity, temperature and density of water masses, ocean currents, coral reefs, tides, ocean deposits.

RECOMMENDED READINGS

Critchfield : General climatology

Davis, WM, : Geographical Essays: 2nd ed.

Jeffereys, H. : The earth

Jenkins, J.T. : A Text-Book of Oceanography

Miller, A.A. : Climatology

Monkhouse, F.J. : The principal of Physical Geography

Murray, J. : The ocean

Patterson, S. : Introduction to meteorology

Seeman, A. : Physical Geography

Stress, J. : The Unstable Earth

Strahler, A.N.: Modern Physical Geography

Thornbury, W.D.: Principles of Geomorphology

Worcester, P.G.: A text-book of Geomorphology

Wooldrighed & Morgan: A text book of Geomorphology

Kaushik, S.D. : Bhu-Akriti-Vigyan, Rustogi. & Co., Meerut, 1983

Savindra Singh : Bhu-Akriti-Vigyan, Tara Publication, Varanasi, 1976

Dayal, P. : Bhu- Akriti Vigyan, Shukla Book Depot, Patan, 1982

PAPER II
ECONOMIC GEOGRAPHY

- Unit 1. : Economic geography: scope, content and recent trends; relation with allied social sciences; approaches and its study; decision making; natural resources classification and conservation
- Unit 2 : Agriculture: spatial distribution of major food and cash crops; world's major agricultural systems; Von Thunen's' theory of agricultural location; Whittlesey's agricultural regions; world food problem
- Industries: Iron and Steel, Cotton textile and Chemicals; Industrial regions, Lake regions (U.S.A.), Ruhr (West Germany) and manufacturing belts of Japan
- Unit 3 : Minerals: Iron-ore, Copper and Bauxite-distribution, production and supply problems
- Energy resources: Coal, Hydro-electricity, Petrol and Nuclear; Non-Conventional sources of energy; energy crisis
- Unit-4. : World trade: determinants, barriers, composition and changing trends; globalization
- Transport : Major oceanic and inland waterways; transportation costs and location of economic activities; role of market centers in trade development

RECOMMENDED READINGS

- Berry, J.B.L. Cooking, E.C. & Ray, D.M. : Economic Geography, Prentice Hall, 1987
- Alexander, J.W. and Gibson: Economic Geography, Prentice Hall of India, New Delhi, 1988
- Thoman & Corbin: The Geography of Economic Activity, McGraw Hill, N.Y.
- Lloyd Perter E. and Peter Dicken : Location in Space- A Theoretical Approach to Economic Geography, Harper and Row, London and N.Y.
- Janaki, V.A. : Economic Geography, Concept Publishing Co., New Delhi, 1985
- Robinson, H. : Economic Geography, Mac Donald and Evans, 1979
- Jarret, H.R. : A Geography of Manufacturing, MacDonald and Evans, 1977
- Singh, K.N. : Arthik Bhugol Ke Mool Tatva, 1993
- Boesch, H. : A Geography of World Economy, D. Van Nostrand Co., New York, 1964
- Chapman, J.D. : Geography and Energy, Longman, London, 1989
- Griggs, DB. : The Agricultural Systems of the World, Cambridge University Press, New York, 1974
- Hartshorne, T.N. and Alexander, J.W.: Economic Geography, Prentice Hall, New York, 1988
- Millar, E. : Geography of Manufacturing, Prentice Hall, New York, 1962
- Thomas, R.S. : The Geography of Economic Activities, McGraw Hill, New York, 1962

PAPER III

EVOLUTION OF GEOGRAPHICAL THOUGHT

- Unit 1 : Geography in ancient period: Contribution of Greeks and Arab geographers;
Dark age in Geography, Renaissance in Geography
- Unit 2 : Geography in pre-modern and modern classical period; Geography in the 18th
and 19th centuries with special reference to the contribution of Kant,
Humboldt, Ritter and Ratzel ; Recent trends in Geography
- Unit 3 : Schools of Geographic thought: German, French and Russian School of
Geography; Dichotomies in Geography, Physical vs. Human, Regional vs.
Systematic, Historical vs. Contemporary, Development of Geography in India
- Unit 4 : Concept of Areal Differentiation and landscape; Regional and Systematic
methods, Environmental Determinism, Possibilism and Human ecology:
General Ideas of Hypotheses, Theories in Geography

RECOMMENDED READINGS

- Ali, S.M.: Geograhy of Puranas
- Bunbury, E.H. : A History of Ancient Geography, 1955 (in two volumes)
- Chatterjee S.P. : 50 years of Science in India, Development of Geography, Indian Science
Congress Association, 1964.
- Dickinson: Makers of Modern Geography, 1970
- Dickson and Howarth : The Makers of Geography
- East and Wooldridge : The Sprit and purpose of Geography
- Freeman: A Hundred years of Geography
- James , P.E. : American Geography- Inventory and Prospect
- James, P.E. : All possible World – A study of Geographical ideas, Indian Edition, Sachin
Publication, Delhi 1980
- Sykes, P. : A History of Exploration, routledge and Kegan Paul, London, 1954
- Tylor, G. (ed.) : Geography in the 29 Century Wooldridge: Geographers as a Scientist
- I.C.S.S.R. : A survey of Research in Geography, Popular Prakashan, Bombay, 1972
- Board, C. Chorley, R., Hagget, P. and Stoddort, D.R.(ed.): Progress in Geography, Arnold,
London, 1969-1993
- Dovisi, Wayne, K.D.(ed.) : Conceptual Revolution in Geography, University of London
Press, 1972
- UNESCO : Source Book of Geography, Thompson press, UNESCO, Paris, 1965
- Rex Welford : Game in Geography, Logmans, 1972
- Harvey David: Explanations in Geography
- O.H.K. Spate : Let us enjoy geography
- Kaushik, S.D. : Bhaugolik Vichardharayan avam Vidhi Tantra, Rastogi Pub., meerut, 1982
- Haggett. : Geography – Modern Synthesis, Harper, 1983(Third Edition)

PAPER IV

1. GEOGRAPHY OF ARID LANDS

- Unit 1 : Meaning and causes of aridity; Indices of Aridity; Delimitation of Arid lands of the world on the basis of Indices; Climate; Topography, Soils, Water resources and Minerals of the Arid lands of the world
- Unit 2 : Desertification : Extent of desertification in the world; causes of desertification: parameters of desertification measures to control desertification
- Unit 3 : Detailed study of arid regions of Israel, Egypt and the western arid interior of the U.S.A. with reference to Physiography, Soil, Agriculture, Irrigation and land reclamation
- Unit 4 : Great Indian Desert: Origin, Physiography, Climate, Agriculture, Irrigation, Livestock raising and population

RECOMMENDED READINGS

- Amiran, D.H.K. & Wilson, A.W. (ed.) : Coastal Deserts- Their Natural and Human Environments, The University of Arizona Press, Tucson, 1973
- Arnon, I : Crop Production in Dry Regions; Vols. I & II, Leonard and Hill, London, 1972
- Bhandari, M.M.: Flora of the Indian Desert, Scientific Publishers, Jodhpur, 1978
- Biswas, M.R. & Biswas, A.X. : Desertification, Pergamon Press, New York, 1982
- Chouhan, T.S. : Desertification in the World and its Control, Scientific Publishers, Jodhpur, 1997
- Drenge, H.E. : Desertification of Arid Lands, Harwood Academic Publishers, 1983
- Goudie, A. & J. Wilkinson: The Warm Desert Environment, Cambridge University Press, Cambridge, 1977
- Hills, E.S.(ed.): Arid Lands, UNESCO. London, 1966
- Hillel, D. : Negev Land, Water and Life in a Desert Environment, Praeger, N.Y. . 1982
- Heatcote: Arid Lands- Their Uses and Abuses, Longmans, 1964
- ICAR: Desertification and its Control, New Delhi, 1977
- Jeanes, D.N. : Australia-A Geography, Routledge and Kegan Paul, London, 1978
- Mann, H.S. (ed.) : Arid Zone Research and Development, Scientific Publishers, Jodhpur, 1980
- Matlook, W.G.: Realistic Planning for Arid Lands, Harwood Academic Pub. 1981
- Mann, H.S.(ed.) Scientific Reviews on Arid Zone Research, Scientific Publishers, Jodhpur, 1981
- Meginnies, W.G., B.J. Godman and P. Paylore : Deserts of the World University of Arizona Press, 1968
- Ministry of Food and Agriculture: Proceedings of the symposium on the Problems of Indian Arid Zone, New Delhi, 1967
- Mishra, V.C.: Geography of Rajasthan, NBT, New Delhi, 1967

- National committee for Geography Symposium on Arid Zone, Calcutta, 1968
- Nirdov: The Semi-Arid World: Man in the Fringe of the Desert ; Longmans, London, 1974
- Omi, B. & E. Efrat: Geography of Israel, Israel Translation, Jerusalem, N.P. Lydolph, P.A.: Geography of U.S.S.R.
- Proceedings of the Symposium on the Rajputana Desert, Bull, 1. National Institute of Sciences, New Delhi, 1952
- Proceedings of the symposium on the Problems of Indian Arid Zone Ministry of Food and Agriculture, New Delhi, 1971
- Roonwal, M.L. : Natural Resources of Rajasthan, Vol. I and II. The University of Jodhpur, 1977
- Sharma, R.C. : Settlement Geogrpahy of Indian Desert, New Delhi, 1970
- Sharma, R.C. (ed.) Resource Management in Dry Lands (Rajasthan a example) Rajesh Publication, Delhi
- Singh R.L.(ed.) : A Regional Geography of India, National Geographical Society, Varanasi, 1977
- Stamp, LD.: Africa, John Wiley & Sons, London UNESCO Publications:
A History of Land use in Arid Regions(ed. By L.D. Stamp) Vol. XVII
Problems of the Arid Zone, Proceedings of the Paris Symposium, Vol. VII
- Walton, K: The Arid Zones, Hutchinson Univ. Library, London, 1969
- White, G.E. (ed.) : The future of Arid lands, Publication no. 43, M.A. Associ. Adv. Scin., Washington, 1956.

2. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY U.S.A.

- Unit 1 : Physiography; Physiographic regions, Climate; Climatic regions, Soil-Soil Groups, Natural Vegetation.
- Unit 2 : Agriculture Crops: Corn, Cotton, Wheat, Tobacco, Agriculture Belts;
Minerals: Iron Ore, Copper, Manganese and Atomic Minerals
- Unit 3 : Power resources: Coal, Petroleum and Hydroelectricity, Location and distribution of Industries: Iron and Steel, Ship Building, Cotton Textile, Automobile and Chemical Industries, Transport: Rail and Inland Waterways
- Unit 4 : A detailed study of Major Geographical Regions

RECOMMENDED READINGS

- Atwood,E(ed.): The Physiographic Provinces of North America
- Fenneman, N.M.: Physiography of Wstern United States
- Green, C.M. : American Agriculture
- Loomix, F.B.: Physiography of the United States
- Monkhouse, FJ & H.R. Cair, North America, Longman
- Peterson, J.H.: North America, London

White, C.L. and Foscoe, F.J.: Regional Geography of Anglo-America Watson, W.: North America, Methuen, London

3. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY JAPAN

- Unit 1 : Physiography: Climate, Soil and Natural Vegetation
Unit 2 : Major Agricultural produce, Agricultural regions, Important minerals
Unit 3 : Major power resources; Locations and distribution of important industries, Industrial regions; Transportation
Unit 4 : Detailed study of major geographical regions.

RECOMMENDED READINGS

Trewatha, GT : Japan Physical, Cultural and Regional Geography, 1953
Prue Dempster : Japan Advances, Methuen and Co., London
Keob: East Asia
Ackerman, E.A. : Japan's Natural Resources

4. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY MONSOON ASIA (EXCEPT INDIA)

- Unit 1 : Meaning and Delimitation of Monsoon Asia, Physiography, Climate, Soil and Natural vegetation
Unit 2 : Major Agricultural Crops of Monsoon Asia: Rice, Tea, Coffee, Rubber, Coconut; Agricultural regions of China
Unit 3 : Important Minerals of Monsoon Asia: Coal, Tin and Petroleum; Industrial development and important industries of Japan : Iron and Steel, Cotton Textile and Automobile
Unit 4 : Major Geographical regions of China and Japan

RECOMMENDED READINGS

Cressey, G.B. : Land of 500 Million- A Geography of china
Cressey, G.B. : Asia's Land and Peoples
East, W.G. and Spate, O.H.K. : The changing Map of Asia
Peterson, A.D.C. : The Far East
Spencer, J.E. : Asia , East by South
Stamp, L.D. : Asia
Trewartha, G.T. : Japan – Physical, Cultural and Regional Geography, 1953
Robinson : Monsoon Asia
Dubby, E.H.G. : Monsoon Asia

Fisher, C.A. : South East Asia-Social, economic And Political Geography
 Ginsburg, N. : The pattern of Asia
 Rawson, R.R. : Monsoon Asia
 Robequain, C. : M.alaya, Indonesia, Borneo and Philippines
 Nigam M.N. and
 Garg B.L. : Monsoon Asia
 Kashi Nath Singh And Jagdish Singh : Monsoon Asia

5. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY OF WESTERN EUROPE

Unit 1 : Physiography, Climate, Soil and natural vegetation
 Unit 2 : Major agricultural produce, Agricultural regions; Important Minerals
 Unit 3 : major power resources; Location and distribution of important industries, Industrial regions; Transportation
 Unit 4 : Detailed study of major geographical regions

BOOKS RECOMMENDED

Cole, J.A. : Italy, 1964
 Demangeon, A. : the British Isles.
 Dickinson, R.f. : The Regions of Germany
 Elkin, T.N. : Germany
 Freeman, T.V. : Ireland
 Houston, J.M. : A Social Geography of Europe
 Hoffman, G.w. : A geography
 Labrode, E.D. : Western Europe, 1955
 Moratonne, e. : Geographical Regions of France
 Mead, WR. : An Economic Geography of Scandinavia and Finland
 Milward, Roy: Scandinavia Lands, 1960
 Monkhouse, F.J.: Western Europe
 More jesper: F.J.: The Land of Italy
 Newbiggin, M.I. : Southern Europe
 Siegfried, A : Switzerland-A Regional Geography
 Shackleton, M.R. : Europe
 Smaith, : An Economic Geography of Britain
 Stamp, L.D. and Beaver, S.S.H. : the British Isles
 Stamp, L.D.: The land Of Britain Its use And Misuse

6. ADVANCED SYSTEMATIC AND REGIONAL

GEOGRAPHY OF SOUTH WEST ASIA

- Unit 1: Physiography; Climate, Soil and Natural vegetation
- Unit 2: Major agricultural produce, Agricultural regions, Important minerals
- Unit 3: Major power resources; Location and distribution of important industries; Industrial regions; Transportation
- Unit 4: Detailed study of major geographical regions

RECOMMENDED READINGS

Beaumont, P.G.H., Blake, H. and Wagstaff: The Middle- East Geographical. Study, John Wiley London, 1977

Fisher, W.A.: Middle East, Methuen, London

Stamp, L.D. : Asia, Methuen, London

7. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY OF THREE SOUTHERN CONTINENTS

- Unit 1: Physiography; Climate, Soil and Natural vegetation
- Unit 2: Major agricultural produce, Agricultural regions, Important minerals
- Unit 3: Major power resources; Location and distribution of important industries; Industrial regions; Transportation
- Unit 4: Detailed study of major geographical regions

RECOMMENDED READINGS

Carlosn: Latin America

Colin Legum: Africa-A Hand-book of the Continent, Asia Publishing House, Bombay

Fitzgerald, W. : Africa

Stamp, L.D. : Africa – Study in Tropical Development, Jonh Wiley and Sons, New York

Siley, A. : Africa – Social Geography, Gerald Duckworth and Co. Ltd. , London

Shanhan : South Amrica – An Economic And Regional Geography, Methuen

8. ADVANCED SYSTEMATIC AND REGIONAL GEOGRAPHY OF NEIGHBOURING COUNTRIES OF INDIA

- Unit 1 : Physiographic and climate of Pakistan and China, Soil and Natural vegetation of Bangladesh and SriLanka
- Unit 2 : Major agricultural production and agricultural regions of China And Pakistan, Population of Bangladesh
- Unit 3 : Important minerals of China, Important Industries of China And Pakistan, Industrial regions of China and Bangladesh

Unit 4: Detailed study of major geographical regions of China, Pakistan, Bangladesh and SriLanka

RECOMMENDED READINGS

Stamp, L.D. : Asia

Spate, O.H.K. : India and Pakistan

Rasid, M. : Bangladesh

Robinson: Monsoon Asia

PAPER V

CARTOGRAPHY AND PROJECT /INSTRUMENTAL SURVEY OF AN REPUTED INSTITUTE/ GEOGRAPHICAL TOUR (PRACTICAL)

Teaching in Geography Practical shall be imparted in groups of 15 students.

Out of 100 marks assigned for geography practical, 60 marks are reserved for Laboratory Work Test, 10 marks for Project report & 10 marks for viva on project report *or* instrumental survey of a reputed institute *or* Geographical Tour (For every 15 students one teacher shall accompany the party), 10 marks for the evaluation of record book and 10 marks for viva on record book.

Laboratory Test: Scheme and nomenclature of Survey of India topographical maps, interpretation of topographical sheets of typical regions, interpolation of contours, methods of determination of intervisibility

Profiles: Serial, Superimposed, composite, projected, transverse and longitudinal; usefulness of profile in studying landforms spatial and temporal angles

Methods of slope analysis of C.K. Wentworth, G. H. Smith and Henry and Raisz, Area-height diagram, Hypsometric curves, Drainage density, orders and confluences

Map Projections; Projections and their classification; simple conical equal area (Lambert's Projection), Bonne's Projection, Polyconic, International Mercators, Gall's Stereographic, Gnomonic Zenithal (Polar and Equatorial cases), Orthographic Zenithal(Polar and Equatorial cases) Sinusoidal (Normal and Interrupted), Mollweide (Normal and Interrupted), Choice of Projections

Statistical Methods: Classification and Tabulation of Statistical data, Frequency Distribution and graphs, Measures of Central tendency (Arithmetic mean, geometric mean, median and mode; Measures of dispersion (Quartiles mean deviation and standard deviation), Variability Indices

RECOMMENDED READINGS

Monkhouse, fJ and Wilkinson, H.R. : Maps and Diagrams, Methuen & Co., London

Raisze, E. : General Cartography, McGraw Hill, New york, 1960

Strees, J.A. : Maps Projections

Gregory, S : Statistical Methods and the Geographers, Methuen & Co., London, 1971

Singh R.L. : Elements of Practical Geography, Kalyani Publishers, new Delhi, 1979

Robinson, A.H. : Elements of Cartography, Chapman and Hall, London

Lawrence, G.R.P. : Cartographic methods, Methuen & Co., London 1971

Singh R. and Kanujia, L.R.S. : Map Work and Practical Geography, Allahabad

J. Kellaway : Map Projections

PROJECT REPORT /GEOGRAPHICAL TOUR

The project will be selected by candidates in consultation with the Head of the Department and the study report, duly approved by the teacher(s) concerned, is to be submitted along with the Practical Record.

The geographical tour and study and field tour or execution of typical areas with particular attention to anyone of the following aspects : Structure, terrain and geomorphology; Drainage and river valley development; Vegetation forms, Agricultural Industrial land use; Communication, Regional synthesis and analysis of physical and cultural landscape

M.A. (Final) Examination 2021

Note: Each theory paper is divided in three parts i.e. Section-A, Section-B, and Section-C.

Section-A: Will consist of 08 compulsory questions. There will be two questions from each unit and answer of each question shall be limited up to 30 words. Each question will carry of 3 marks.

Section-B: Will consist of 08 questions. Each unit will be having two questions; students will answer one question from each unit. Answer of each question shall be limited up to 250 words. Each question will carry 9 marks.

Section-C: Will consist of total 04 questions. Students will answer any 03 question and answer of each question shall be limited up to 500 words. Each question will carry 20 marks.

PAPER VI

Research Methodology

Unit 1: Meaning, objectives, types, significance and ethic of research, Problems of geographical research, Identification of problematic areas, Sources and natures of data to be used, Preparation of questioner, Basic techniques of collecting primary data through interviews, Hypothesis and Preparation of research projects and writing of reports, Preparation of field reports, How to write thesis

Unit 2: Spatial data classification and sampling problems; Need for sampling, types of sampling, sample size and sampling area, Selected techniques of spatial analysis, methods of measuring concentration and dispersal of economic activities, Nearest Neighbour analysis, Regional interaction analysis.

Unit 3: Gravity potential, Inter-regional flow-analysis, Methods of Delimiting Regions, Economic Regions, Industrial Regions, Planning Regions, Agricultural Regions, Regional Population Analysis, Population Projection, Population Migration, Network Analysis, Techniques of Urban Analysis with reference to land use

Unit 4: Population and Hinterland relationship, delimiting sphere of city influence, determining of core and marginal areas, Techniques of Map Analysis, Morphometric analysis, Drainage basin analysis, Slope analysis, Analysis of Biogeochemical cycles, Integrated Area Development Planning, Fundamentals of Computers:- Operating Systems, Use of Software(MS office/Auto CAD),Internet uses

Books Recommended:

1. Worthington and Gant: Techniques of Map Analysis.
2. King, C.A.M.: Techniques of Geomorphology.
3. Hoyle, B.S.(Ed.): Spatial Aspects of Development.
4. Misra, R.P.,(Ed.): Regional Planning, Concepts, Techniques, Policies and Case Studies, 1969.
5. Isard and Cumberland: National Economic Planning 1961.
6. Mukerjee, R.K.: Planning the country side.
7. Stamp, L.D.: Applied Geography.
8. Stamp, L.D.: Our Development World.
9. Freeman: Geography and Planning.
10. Prakasa Rao: Regional Planning.
11. Chapin, F.S.: Urban Land Use Planning.
12. Graham, F.H. Natural Principles of Land Use.
13. Hagget Peter: Geography A Modern Synthesis.
14. Hagget and Chorley: Models in Geography
15. Kerlinger Fred. N. : Foundations of Behavioral Research
16. K.L. Narasimha Murthy : Geographical Research
17. Najma Khan: Quantitative methods in Geographical Research
18. Young, P.V. : Scientific Social Survey and Research.

PAPER VII

GEOGRAPHY OF INDIA

Unit 1 : Major terrain units of India and their characteristics; Drainage systems; Origin and Mechanism of Indian Monsoon; Climatic divisions; Soil and forests-their types, distribution and conservation

Unit 2 : Population-growth, distribution and density; Population problems and policies; Urbanization-growth trends and causes; Population resource regions of India

Agriculture-main characteristic and problems, Agricultural regions; Major Irrigation schemes-Damodar, Bhakra Nagal and Chamal

Unit 3 : Major minerals (Iron-ore, Manganese, Mica and Copper,) and Power Resources (Coal, Petroleum, Hydro-electricity and Nuclear)- their distribution, reserves, production and conservation

Major Industries (Iron and Steel, Cotton Textile, Sugar, Cement and Paper) - their localization factors, spatial patterns and problems, Industrial regions

Unit 4 : Transportation and trade-different modes and their functional significance; International trade composition and trends; planning regions of India

RECOMMENDED READINGS

Choudhary, M.R. : An Economic Geography of India, Oxford and IBH Publishing Co., New Delhi, 1976

Chouhan, T.S. : Bharat Ka Bhugol, Vigyan Prakashan, Jodhpur, 1997 Nag. Pub. And S. Sengupta : Geography of India, Concept Publishing Co., New Delhi, 1992

Sharma T.C. : and O. Coutinho : Economic and Commercial Geography of India, Vikash Publishing Pvt. Ltd. , New Delhi, 1993

Singh J. : India-A Comprehensive Systematic Geography, Gyanodaya Prakashan, 234, Daudpur, Gorakhpur, 1995

Spate, O.H.K. and A.T.A. Larnmouth : India, Pakistan and Ceylon, Methuen & Co., London, 1967

Ramamoory and Gopalkrishan : Geography of India, Jawahar Publishers and Distributors, New Delhi, 1996

Tirtha, R. : Geography of India, Rawat Publication, Jaipur, 1996

Sharma, R.C. : Reading in General Geography and Geography of India, Jawahar Publishers and Distributors, New Delhi, 1992

Mamoria, C.B. : Economic and Commercial Geography of India, shiva lap Agarwal & Co., Agra, 1986

Despande, C.D. : India- A Regional Synthesis, new Delhi, 1996

Dutta, R. and K.P., Sundkram : Indian Economy

Tiwari, R.C. : Geography of India, Prayag Pustak Bhawan, Allahabad, 2003

PAPER VIII

GEOGRAPHY OF TOURISM

Unit 1 : Tourism : Growth of travel through the ages, growth and development of modern tourism International organizations and tourism

Unit 2 : Elements of Tourism : Economic and social significance of tourism, Domestic and Foreign tourism, Tourism transport and accommodation

Unit 3 : Tourism in India : A land for all seasons; places of tourist interest, Cultural tourism, Problems and facilities, Role of Indian Tourism Development Corporation

Unit 4 : Tourism in Rajasthan : Salient Features of desert and wild life of Rajasthan, Survey of the places of tourist interest; Cultural Heritage of Rajasthan, Fairs and Festivals, A study of internal and foreign tourist influx

RECOMMENDED READINGS

- Robinson, J.H. : A Geography of Tourism, Macdonald and Evans Ltd.
- Bhatia, A.K. : Tourism Development: Principles and Practices, Sterling Publishers, New Delhi(1982)
- Nagi, J.N. : Tourism and Hostelling: A worldwide Industry, Gitanjali Publishing House, New Dehli
- Robinson, H. : Geography and Tourism, Macdonald and Evans, New York(1976)
- Bhatia, A.K. : Tourism in India-History and Development, Sterling Publishers, New Delhi
- Ram Acharya : Tourism in India, National Publishers, New Delhi
- Dass Manoj : India- A Tourist Paradise, Sterling Publishers, New Delhi
- Crowthor, Geoff Raj Prakash and Wheeler Tony : India- A Travel- Survival Kit Lonely Plant Publications, Australia
- Dharampal : Idia- The Land People, National Book Trust, New Delhi
- Rathore, G.S. : Marwar Ki Sanskratic Dharohar, Sudha Prakashan, Jodhpur
- Seth, D.N. : Successful Tourism Management, Sterling Pub. Pvt. Ltd., New Delhi
- Kaul, R.N. : Dybamism DfTourism, Vol, 1,2,3, Sterling Pub. Pvt. Ltd., New Delhi

PAPER VIII

(1) ADVANCED GEOMORPHOLOGY

- Unit 1 : Earth as a member of the solar system; main theories regarding the origin of the Earth Surface of the earth, distribution of land and sea; Isostasy and its bearing on surface configuration, Materials of the earth's crust: Minerals and rocks, tow fold classification, Knowledge of the more important rock forming minerals like quartz, feldspar, amphiboles, pyroxene, carbonates, uiro-noxide in as far as they lead to better understanding of the rocks; Model of formation and structure associated with rock science, features of important rock types.
- Unit 2 : Geological structure : Dip, Strike, Folds, formation of the earth's crust, joints, faults, tensional and compressional forces and topographic effects
Geographical time scale: Basis of division, standard time scale and the Indian equivalence, elementary knowledge of Indian stratigraphy : main divisions, geological distribution and economic importance
- Unit 3 : Landforms : Classification into first, second and third order, constructional and destructional land forms and Geomorphic process : weatering, rivers, gourndwater, wind, glacier, waves, currents and organisms; Geomorphic unit: simple structures-plateaus and karsts, complex structures-domes, fold mountains, faulted block mountains, shields and their structures.
- Unit 4 : Cycle concept in geography- development of the fluvial cycle in young and old lands, dome and fold structures, interruptions of the fluvial cycle and their

consequences, Davisian and Walter Penck system; Geomorphic cycle in deserts, limestone area, glaciated lands, volcanic plains and plateaus, domes and mountains; Evolution of relief in volcanic areas, Coastal forms erosional and, constructional progradation and retrogradation, mountains: origin, development, dissection and destruction

RECOMMENDED READINGS

Branson, Tarr And Koller : Introduction to Geology

Cotton, C.A. : Geomorphology

Davis, C. : Coral Reefs

Englein Von, O.D. : Geomorphology,

Henderson, j. : Geology and its Relation to Landscape

Holmes, A. : Principles of Physical Geology

Geikie, J. : Earth Sculpture

Jefferys, H. : The Earth

Kuenen,P.H. : Marine Geology

Lobeck, A.K. and Amounts, S.M. : Geomorphology

Stone, D.B. : Earth Science- the Earth We Live in

Penck,W. : Morphological Anaysis of Land Forms

Steers, J. : The Unstable Earth

Thornbury, W.D. and Umbgrvoe , J. : The Pulse of the Earth

Wooldridge, S.W. and Morgan, R.S. : An Introduction to Geomorphology

Door Kamp, J.C. and king, C.A.M. : Numerical, Analysis in Geomorphology, Arnold,1973

PAPER VIII

(2) BIO-GEOGRAPHY

- Unit 1: Introduction: Characteristics of plants and animals, and their classification
General bio-geography : Reproduction of plants animals, Dispersal, Struggle for existence, survival of the fittest, evaluation, Different theories
- Unit 2: Environment : Habitat Factor; origin and classification of soils, major soil groups of the world, water, salt and organic matter; climate factors, effect on plant life, world climatic, xerophytes, hydrophytes and epiphytes
- Unit 3: Animals : Environment, its effect on development and habitat;
Habitat-terrestrial, Aquatic, arboreal; vertical distribution of animals in the sea, corals and coral reef; Zoo - geography regions of the world – oges

(Australian, Malayan, Polynesian and Hawaiian regions), Actogecca (Ethiopian, African and Oriental with reference of India)

Unit 4: Palaeogeographic distribution: Geological areas and their subdivision with special reference to the dominant plant and animal forms, present and past distribution and land connections Vegetation and floral regions, zoo-geographical belt of India, economic importance, Economic aspect of plants, animals and fauna with reference to food-stuffs, raw materials, domesticated animals

RECOMMENDED READINGS

Anderson, M.R. : Geography of Living Things

Clark, G.R. : The study of Soils in the field

Densereau, P. : Biogeography and Ecological Perspective

Hall, A.D. & Russel, P.J. : Social Conditions and plant Growth

Robinson, G.W. : Soils

Jones, R.L. : Biogeography-Structure, Process, Pattern and Change within the- Biosphere,

Hulton Educational Publication Ltd., Amersham, Bucks

PAPER VIII

(3) APPLIED GEOGRAPHY AND REGIONAL PLANNING

- Unit 1 : Definition, nature and content of geography; its emergence, evolution and recent trends; training, Problems in applied geography
- Unit 2 : Geographical applications of aerial photographic, remote sensing and filed techniques; applied geomorphology, applied climatology; oceanography
- Unit 3 : Geographer's role in regional planning; growth of regional concept with particular reference to France, U.S.A. and U.K. ; Planning regions-delimitation and hierarchy; planning regions of India
- Unit 4 : River basin planning; Landuse planning; resource conservation; agricultural regionalization of India with emphasis on planning and problems

CORE BOOKS

Jain, J.K. & Bohra, D.M. : Vyavharik Bhougol, Rajasthan Hindi Granth Academy, Jaipur, 1989

Sadasyuk Galina & P. Sen Gupta: Economic Regionalisation, 1968, Government of India, Census, 1961

BOOKS RECOMMENDED

Balchin, W.G.V. (ed.) : Geography – An outline for the Intending Student, Routledge and Kegan Paul, London, 1970

Christanis (ed.) : Colloque International de Geographie Appliquee 3me Reunions de la Commission de Geographie Appliquee. D L' Union Geographic International (Liege Sept. 7-10-1967)

Dziewonski, K. et al. : Problems of Applied Geography, Polish Academy of Science, Geographical Studies No. 25, PWN-polish Scientific Publishers, Warszawa, 1961

Daysh, C.H. et al. ; Studies in Regional Planning

Dickinson, R.E. : City And Regional- A Geographical Interpretation, Routledge and Kegan Paul Ltd. , London, 1964

Griffiths, J.F. : Applied Climatology, O.U.P. , 1968

Gupta, R.K. : Planning Natural Resources, Navayug Traders, New Delhi, 1971

Glikson : Regional Planning and Development

Isard, W. : Methods of Regional Analysis, John Wiley & Sons, Inc. ; New York, 1960

James, P.E. & Jones, C.F. : American Geography: Inventory and prospect, Assoc. Ame. Geogra, Syracuse University Press, 1964

Keebie : Principles and Practice of Regional Planning

Institute of British Geographers: Land Use and Resources studies in Applied Geography, Institute of British Geographers, London, Special Publication No. 1, 1968

Leszki, L. et al. (ed.) : Problems Applied Geography II, Geographia Polonica, 3PWN-Polish Scientific Publishers, Warszawa, 1964

Michel, A. Aloys and Nash, P.H. (ed.) : Proceedings of the Second International Meeting, Commission on Applied Geography, International Geographical Union, University of Rhode Island, Kingston, Rhode Island, 1966

Nat. Inst. Sc. India : Role of River Valley Project in National Planning,

Nat. Inst. Sc. India, New Delhi, Bull 40, 1969

Stress, J.A. (ed.) : Field Studies in the British Isles, Nelson, London, 1965

Steel, R.W. & R. Lawton (Ed.) : Liverpool Essays in Geography, Longmans Green & Co. Ltd. , London. 1967

Stamp, L.D. : Applied Geography, J Penguin Books, A-449, Middlesex, 1963

Stamp, L.D. : The Land of Britain – its Use and Misuse, Longmans, Green & Co. Ltd., London, 1962

Stamp, L.D. : Geography of Life and death

Singh, R.L. (ed.) : Applied Geography, Proc. Summer School (1966), Deptt. Geog., B.H.U., N.G.S.I., Varanasi-5 1968

Stride, M. (ed.) : La Geographie Appliquee Dans Le Monde, Applied Geography in the World, Proc Prague Meeting (1966)

I.G.U. : Commission on Applied Geography, Czechoslovak Academy of Science, Prague, 1969

Sarfalvi, B. : Research Problems in Hungarian Applied Geography, Academia Kiado, Budapest, 1969

SELECTED JOURNALS

Applied Science and Development (Published under the revised title Applied Geography and Development since Vol. 18(1980), Institute for Scientific Co-operation, Tubngen, Federal Republic of Germany ,

Bainnual Journal Beginning with Vol/ I, 1973

Geoforum : Journal of Physical, Human and Regional Geography, Pergamon press ltd. , Oxford.,, A quarterly journal beginning with Vol. I, 1970

National Geography : Vol. 5, Special Issue, Geography and Planning, Department of Geograh, University of Allahabad, Allahabad, 1962

PAPER VIII

(4) PEDOLOGY

- Unit 1 : Formation of soil, inorganic, organic and geographic factors in soil formation, climate and soil formation, time factor in soil formation
- Unit 2 : Process of soil formation: soil description, classification and nomenclature
- Unit 3 : Soil Groups of the world; Soils of India; problems of soil erosion, with special reference to India, conservation of soil
- Unit 4 : Detailed study of the soils of Rajasthan

RECOMMENDED READINGS

Bun ing. B.T. : The Geography of Soil, Hutchinson University Library, London , 1969

Joffe, J.S.C. : Pedology, New Brunswick, 2nd Edition, 1949

Moge, S. : Rajasthan Ki Mrida, Rajasthan Hindi Granth Academic, Jaipur, 1981

Ramann, C. : The Evolution aand Classification of Soils, Trans, C.L. Ohitilers Cambridge, 1928

Robinson,G.W. : soils- The Origin, Constitution and Classification, Mury, 1949

Lyon, T.L. and Associates : Nature and Properties of Soils, 1960

Jany, H : Factors of Soil Formation- A system of Quantitative Pedology, Mc Graw Hill, New York, 1941

Raychoudhuri : Soils of India, I.C.A.R., New Delhi, 1963 Rama Rao, H.S.V. : Soil Conservation in India, I.C.A.R. , New Delhi, 1962

PAPER VIII

(5) CLIMATOLOGY AND METEOROLOGY

- Unit 1 : Construction and use of chief meteorological instruments, physical process of atmosphere, radiation and head balance; condensation, stability and instability
- Unit 2 : Origin, Characteristics and transformation of airmasses, fronts and cyclones, general circulation of atmosphere, weather forecasting, application of general principles of elementary physical, dynamical and synoptic meteorology to the study and classification of climates.

- Unit 3 : Modification of atmosphere by surface features; evidence of climatic changes during geological and historical times and critical assessment of such evidences.
 Use of field evidence to provide quantitative estimates of the extent and character of such changes, theories of causation of such changes.
- Unit 4 : Reaction of man to climatic environment, modification of terrestrial climates by human agency

RECOMMENDED READINGS

- Benstead, C.R. : The Weather Eye
 Conard, V. and Plok, L.W. : Methods in Climatology
 Finch, V.C., Trewartha, G.T., Shearer and Candler: Elementary Meteorology
 Geiger, H. : The Climate Near the Ground
 Haynes, B.G. : Techniques of Observing the Weather
 Hole, P.X. : The Restless Atmosphere
 Kendrew, W.G. : Climatology
 Middleton, W.G. : Meteorological Instruments
 Miller, A.A. : Climatology
 Petterson, S. : Introduction to Meteorology
 Petterson, S. : Weather Analysis and Forecasting
 Richi, H. : Tropical Meteorology
 Saucier, M.J. : Principles of Meteorological Analysis
 Sutton, O.G. : Micrometeorology
 Tannehill, I.R. : Hurricanes
 Trewartha, G.T.: An Introduction to Weather and Climate
 Trewartha, G.T.: The Earth's Problem Climate, 1962
 Walths, J.E.S. : Equatorial Air
 Willett H.C. & Sanders, F. : Descriptive meteorology
 Crowe, P.R. : Concepts in Climatology, Longmans, London, 1971
 McBoyle, G.(ed.) : Climate in Review, Houghton Mifflin Comp. Boston, 1973

PAPER VIII

(6) QUANTITATIVE METHODS IN GEOGRAPHY

- Unit 1 : Use of quantitative methods in Geography, Classification and tabulation of statistical data; Frequency distribution and graphs; Lorenz curve, Measures of central tendency and measures of dispersion .
- Unit 2 : simple and multiple correlation: Linear and nonlinear regression; Residuals from regression: Significance tests; Chi-square test; students 't' test and

snedecotr's F-test

Unit 3 : Sampling and its objective; Sampling techniques and their application to geographical problems; Estimates from sample, theory of probability and normal frequency distribution.

Unit 4 : Multivariate analysis: Principal component analysis.

RECOMMENDED READINGS

Bunge, W. : Theoretical Geography and Studies in Geography, Ser, C. General and Mathematical Geography, No. 1, Department of Geography, University of Lund, C.W.K. Gleerup, Lund, 1973

Cole, J.P. and Kin, C.A.M. : Quantitative Geography, Wiley, 1968

Dalton, R. and others: Correlation Techniques in Geography, George Phillip & Sons Ltd. London, 1972

Dixon, C. and B. Lech: sampling Methods for Geographical Research, CAMOG 17, Geo Abstracts, University of East Angila, Norwich, U.K., 1978

Duncan, O.D. : Statistical Geography- Problems in Analysing Areal Data. 1961

Elhance, D.N. : fundamentals of Statistics, Kitab Mahal, Allahabad, 1962

Fesguon, R. : Linear Regression in Geography, CATMOG, 15, Geo Abstract University of East Angila, 1981`

Gregory, S. : Statistical Methods and the Geographers, Longman, London, 1978

King, L.J. : statistical Analysis n Geography, Prentice Hall, 1960

Monkhouse, F.J. and Wilkson, H.R. : Maps and Diagrams, B.I. Publication, Bombay, 1980

Toyne, P. and Peter, T. Newby: Techniques in Human Geography, Macmillan, London, 1976

Yeastes, M. : An Introduction to Quantitative Anlysis in Human Geography, MacGraw hill Book Company , New York, 1974

Mohammed, A. : Statistical Methods in Geography, Rajesh Publications, New Delhi, 1977

David Ebon: Statistics in Geogrpahy- A Practical Approach, 1980

PAPER VIII

(7) AERIAL PHOTO-INTERPRETATION AND REMOTE SENSING

Unit 1 : Fundamental of aerial photography system : types of photography, types of stereoscopes; coverage and vision; geometry of aerial photographs, photographic resolution, parallax equation, flight planning, stereoscopic parallax

Unit 2 : Development of air photo interpretation techniques elements interpretation Identification and mapping of natural and cultural land scape

Unit 3 : Remote sensing techniques: meaning and scope, development; types of

imagery; Elements of interpretation

Unit 4 : Fundamental of digital image processing; geographic information system;
Application of remote sensing in geography

RECOMMENDED READINGS

Burrough; P.A. : Principles of Geographical Information Systems for Land Resources Assessment, Oxford University, Clarendon Press, 1986

Chouhan, T.S. and K.N. Joshi : Applied Remote Sensing and Photo-Interpretation, Vigyan Prakashan, Jodhpur, 1955

Colwell, Robert, N. : Manual of Remote Sensing, I & II editions, Vol. I & II, American Society of Photogrammetry, 1983

Jensen, J.R. : Introductory Digital Image Processing : A Remote Sensing Perspective, Prentice Hall, new Jersey, 1986

Lillesand, T.M. and Kiefer, R.W. : Remote Sensing and Image Interpretation, II edition, John Wiley and sons, 1987

Wolf, Paul, K. : Elements of Photogrammetry(with air photo-interpretation an remote sensing) McGraw Hill Book co., 1974

Karani, P.J. : Remote Sensing, ELBS. London, 1985

Gautam, N.C. : SPGU Technology of Geography, NRSA, Hyderabad, 1994

Survey of India: Photogrammetry : Chapter Twelve, S.O.I., Dehradun, 1972

Singh. S. : Remote Sensing Technology, Scientific Publishers, Jodhpur, 1996

PAPER IX

(1) URBAN GEOGRAPHY

Unit-1. : Meaning, scope and methods of approach in urban geography, origin and growth of cities from the earliest to the modern times, forces and processes of urban growth, Theories of urban structure

Unit-2. : Urban morphology and land use pattern, City retail structure and delimitation of CBD, Residential land use, Urban population, Characteristics, Functional Classification of towns

Unit-3. Location, spacing and size of towns, urban hierarchy; The Central Place Theory, Rank-size rule, Growth Pole Theory

Unit-4. : Urban sphere of Influence- Methods and criteria of delimitation, Rural- urban fringe, Elements and principles of town planning, Law of Garden City.

RECOMMENDED READINGS

Abercombie, P. : Town and Country Planning, Oxford University Press, London, 1961

Alam, S.M. : Hyderabad-Secunderabad(Twin-cities) – A Study in Urban Geography, Allied Publishers, Bombay, 1965

Bartholomew, H. : Urban Landuse, Harwad University Press, Harward, 1932

- Berry B.J. L. & A. Pred : Central Place Studies-Bibliography of Theory Applications, Regional Science Research Institute, Philadelphia 1961
- Chorley, R.J. & P. Hagget : Socio-Economic Models in Geography(Part II and III or Models in Geography) Methuen, London, 1968
- Dickinson, R.E. : The West European City, Rutledge and Kegan Paul, London, 1964
- Gallion, A.B. & S.E. Isner : The Urban Pattern, City Planning and Design, D. Van Nostrand, Princeton, New Jersey, 1965
- Garnier, B.J. & G. Chabot : Urban Geography, Longmans Green and Co. Ltd., London, 1967
- Ghose, M. : Calcutta – A study in Urban Growth Dynamics, 1972
- Jackson, J.N. : Surveys for Town and Country Planning, Hutchinson University Press, Syracuse, N.Y. , 1954
- Jonson, J.N. : Urban Geogrphahy- An Introductory Analysis, Pergamon Press, 1967
- Mayer, H.M. and Kohn, O.P.(ed.) : Readings in Urban Geography, University of Chicago Press, Chicago, 1959
- Humford, L. : The city in History, Pehcan: 1966
- Murphy, R.S. : The American City an Urban Geography, McGraw Hill, N.Y. 1966
- King, I.J. & Golledge, R.G. : Cities, Space, and Behavior- The elements of
- Norgorg, K (ed.) : Proceedings of the I.G.U. Symposium on Urban Geography, John Wiley & Sons, 1975
- Putnom, R.G. FJ – Taylor and P.G. Kettle (ed.) : A Geography of Urban Places, Methuen, London, 1970
- Robson, B.T. : Urban Growth, Methuen, Lodnon, 1963
- Singh, R.L. : Banaras – A Study in Urban Geography, Nand Kishore & Sons, Banaras, 1965
- Singh O.P. : Urban Geography (in Hindi), Tara Publishers, Varanasi, 1979
- Smailes, A.E. : The Geography of Town, Hutchinson University Press, London, 1961
- Taneja, K.L. : Morphology of Indian Cities, 1971
- Taylor, T. : Urban Geography, Methuen, London, 1961
- Toyne, JP. And Peter Newby : Techniques in Human Geography; Macmillan, 1971
- Turner; R. (ed.) Indian’s Urban future, Oxford University Press, Bombay, 1962

PAPER IX

(2) GEOGRAPHY OF POPULATION

- Unit 1 : Nature and Scope of population geography; World population growth, distribution and density; Major population theories
- Unit 2 : Components of population growth, Trends and factor affecting fertility, mortality and migration in the world; Laws of Migration and Theories

- Unit 3 : Population structure of India and its characteristics; Sex and age structure, fertility and mortality; distribution, density and growth of population in India; Population problems and policies
- Unit 4 : Population Geography of Rajasthan: Distribution and density of population; Sex-ratio; Rural and Urban population; Study of Scheduled Castes and Scheduled Tribes population of Rajasthan with Special reference to their distribution, literacy and welfare programmers

RECOMMENDED READINGS

- Asha, A. Bhide and Mrs. Tara Kimitkar, : Principles of Population Studies; Himalaya Publishing House, Girgaon, Bombay
- Ashish Bose & D. Gupta : Population Studies in India, Vikas Publishing House, Ansari Road, New Delhi
- Agarwal, S.N. : India's Population Problems, Tata McGraw Hill, New Delhi
- Chandra Shekar : Infant Mortality, Population Growth and Family Planning in India, London
- Mamoria, C.B. : India's Population Problems, Ktab Mahal, Allahabad
- Mehta, B.C. : Regional Population Growth : A Case Study of Rajasthan, Research Books, Tilak Nagar, Jaipur
- Lal, S.K. & Nahar, U.R. : Higher Education of SC & ST in Rajasthan, Jain Sons, Publication, New Delhi
- Purohit B.D.&S.D. Hand Book of reservation for SC& ST, jain sons publication, New Delhi
- Singh, munshi hardaya: the castes of manivar, census report of 1891, book treasure, Sojati gate jodhpur

PAPER IX

(3) GEOGRAPHY OF LAND USE

- Unit 1 : Influence of physical factors on land use, Study of soil with special reference to the physical and chemical properties of soil fertility and problems of soil erosion and soil conservation.
- Unit 2 : Climatic factors in Agriculture, variations and variability of climate, average and median rainfall in relation to Crop production
- Unit 3 : Social and institutional factors in land use, crop combination regions, agricultural regions.
- Unit 4 : Land use and land capability surveys in Britain, China, India and U.S.A.; Techniques of land use surveys in India and International Commission

for World land Use. Surveys. Land use analysis and planning.

RECOMMENDED READINGS

- Baker, G.E. and others : Agriculture in Modern Life
Buck, J.L.: Land Utilization in Chicago, 1937
Bennet, N.H. : Elements of Soil Conservation, New York, 1933
Clarke, G.R. : A Study of Soils in Field, London, 1961
Duckhan, A.N. : The Fabric of Farming
Garham, E.H. : Natural Principles of Land Use, New York, 1944
Klegez, K.H.W. : Ecological Crop Geography
Ranta Rao, M.S.V. : Soil conservation in India, J.C.A.R. 1962
Mighall, R.L. and Black, J.D. : International Competition in Agriculture
Raychoudhuri : Soil of India, Delhi, 1963
Russel, J. : World Population and food Resources, London, 1954
Shafi, M. : Land Utilization in Eastern Uttar Pradesh, Aligarh, 1960
Stamp, L.D. : The Land of Britian-Its Use and Misuse London, 1960
Tempony, H.and Crist, D.H.: An Introduction to Tropical Agriculture
Thirumalia, S.: Agricultural Problems and Policies, Bombay, 1955
Found, W.C.: A Theoretical Approach to Rural Land Use Patterns, Arnold London, 1973
Gautam, N.C. : Urban Land Use in Bikaner, Minaxi, 1978

PAPER IX

(4) POLITICAL GEOGRAPHY

- Unit 1 : Definition and scope of political geography : Development of political geography- Concept of Mackinder, Housofe Meinnin, Spykmen Hooson, and de Ceversky; political geography and geopolitics ; various approaches to the study of political geography functional approach, unified field theory, system analysis models
- Unit 2 : Elements of political geography- physical, economic and human
The State emergence and structuring of state; unitary and federal states; elements of state-territory, population, organization and power, capital cities, ethnographic and racial problems, colonialism and nationalism

- Unit 3 : The nature, function and impact of frontiers and boundaries land locked states, electoral geography, contents and methods
- Unit 4 : Factor of power hood; world power; emergence of third world politics, geographical study of India and its neighbouring countries; the Middle East

BOOKS RECOMMENDED

Weight, A.W. et al. : Principles of Political Geography, Appleton Century Craft, Inc., New York.

Crove ; Background to Political Geography.

H.Joe Bliz : Systematic Political Geography, John Wiley and Sons, New York Percy, J.C.E. and Fifield, R.H.: World Political Geography, Thomas V. Crowell Co., N.Y.

Horradin; J.F. : An Outline of Political Geography, Autree A. Knob., N.Y.

Sukhwai, B.L. ; Political Geography of India

Carson ; Geography and World Politics

Cohen, Saul, B., : Geography and Politics in a Divided World

Kasperson and Minghi : The Structure of Political Geography

Moodie, A.E., Geography Behind Politics

Prescot, J.R.V. : Political Geography

PAPER IX

(5) CULTURAL GEOGRAPHY

- Unit 1 : Nature, scope and contents of cultural geography; Evolution of cultural geography; Environment, culture and resources; Techniques and methods in cultural geography; Man's role as socio-cultural agent; Future tasks for cultural geography
- Unit 2 : Analysis of world population in terms of ethnic, religious and language groups; World pattern of literacy
- Unit 3 : Cultural regionalization of the world : A Study of the Culture, World with special reference to new world revolution – Polar World; European Worlds, American World
- Unit 4 : Dry World, Oriental World, African World and Pacific World

RECOMMENDED READINGS

Carter, G.F. : Man and Land – A Cultural Geography, Holt, Rinehart and Winston, Inc. New York, 1968

De Blij, Harm, J. : Man Shapes the Earth – Topical Geography, Hamilton Publication Company, Santa Barbara, California, 1974

De Blij, Harm, J. : Human Geography- Culture, Society and Space, John Wiley and Sons, Inc., New York, 1977

Dicken, S.N. and Pitts, F.R. : Introduction to Cultural Geography- A Study of Man and His Environment, Exrox College Publishing, Walnam, Massachusetts, 1970

Dohrs, F.E. : Cultural Geography – Selected Readings, Dun-Donnelly Publishing Corporation, New York, 1967

Eidt. R.C., Singh K.N. and Rana, P.B. Singh (ed.) : Man Culture and Settlement, Kalyani Publishers, New York, 1977

Haggett, P. : Geography A Modern Synthesis, Harper and Row, New York, 1975

Jones E. (ed.) : Readings in Social Geography, Oxford University Press, London, 1975

Jordon, T.G. and Rowtree, L. : The Human Mosaic – A Thematic Introduction in Cultural Geography, Canfield Press, Harper and Row, New York, 1976

Kariel H.G. and Kariel, P.F. : Explorations in Social Geography, Addison-Wesley Publishing Company, Inc. Reading, Massachusetts, 1972

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Phillbrick, A.K. :- The Human World, John Wiley and Sons. Inc., New York, 1967

Raitz, Kari, B. : Cultural Geography on Topographic Maps, Hamilton Publishing Company, Santa Barbara, California, 1975

Rolstlung, F. : Outline of Cultural Geography, California Book Company, Berkeley, California, 1963

Russel, R.J.F.B. Kniffen and E.L. Pruitt ; Culture Worlds, the Max Million Company Ltd., London, 1969

Saure, Carl O. : Agricultural Origins and Dispersal, The Domestication of Animals and Foods Stuffs, The M.L.T. Press, Massachusetts, 1970

Sopher, David E. : Geography of Religions : Foundations of Cultural Geography Series, Prentice Hall Inc., Englewood Cliffs, New Jersey, 1967

Spencer, E; & W.L. Thomas: Asia, East by South – A Cultural Geography Jon Wiley & Sons, Inc. New York, 1971

Wagner, P.L. & M.W. Mikesell : Readings in Cultural Geography, The University of Chicago Press, Chicago, 1962

Wagner, P.L. : The Human Use of Earth, The Free Press, New York, 1964.

जैन, जे.के. एवं बोहरा, डी.एम. : विष्व का सांस्कृतिक भूगोल, ऐकेडेमिक पब्लिषर्स, जयपुर, 1983

Prakasa Rao, V.L.S. : Urbanization in India, Spatial Dimensions concept Publishers, 1983

PAPER IX

(6) INDUSTRIAL GEOGRAPHY

Unit 1 : Contents and scope of industrial geography: Locations of Industry: Factors of industrial location, Theories and concepts of industrial location- the least cost school, the market area school, the marginal location school and the behavioural school

- Unit 2 : The location pattern of selected industries: iron and steel, cotton textile, pulp and paper industry, petroleum refining, machinery and machine tools
- Unit 3 : The Locations pattern of selected industries: automobile industry, ship building industry, cement industry, aluminum industry
- Unit 4 : Manufacturing in selected regions: Kwanto plain, the Ural Region, the ruhr Basin, the New England Region, Bengal Bihar Industrial Belt

TEXT BOOKS

- Reley R.C. : Industrial Geography, Charto and Winpuls, London
- Smith, Daird, M. : Industrial Location, Wiley and Sons, New York
- Miller, E.W. : A geography of Manufacturing Prentice Hall, New Jersey

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- Jorred, A.R.: A Geography of Manufacturing, MacDonald and Evans Ltd. , London
- Hunter, H.L. and Writght, A.J. : Factors of Industrial Location in Ohio, Columbus, 1969
- Choudhary, M.R. : Indian Industries Development and Location, Calcutta, 197
- Jarret, H.R. : Geography Manufacturing, MacDonald and Evans Ltd. London, 1964
- Pounds, N.I.G. : The Geography of Iron and Steel
- Smith W. : Geography of Location of Industry, Liverpool
- Thoman, R.S. and Paltoh, D.H. : Focus on Geographic Activity, New York, 1964
- Mountjoy, A.C. : Industrialization and Underdeveloped Counties, London, 1963
- Howver, E.M. : The Location of Economic Activity, London, 1948
- Alexander, J.W. : Economic Geography, Prentice Hall, New Jersey, 1963
- Alexanderson, G. : Geography of Manufacturing, Prentice Hall, New Jersey, 1967
- Bos, H.C.: Spatial Dispersion Activity, University Press, Rootterdam, 1965
- Greenhert, M.L. : Plant Location in Theory and Practice University of North Caroline Press, Chapal Hill, 1956
- Isard, W. : Location and Space Economy, MIT Press, Cambridge Mass, 1965
- Losch, A. : The Economics of Location, Yale University Press, New Hevan, 1954
- Eshail, LC.: Plant Location, American Research Council, New York, 1956
- Estant, R.O. and Buchana, R.D. : Industrial Activity and Economic Geography Hutchinson & Co. Ltd., London, 1964
- Ghose, B.C. : Industrial Location.
- Britto Jh, H.H. : Regional Analysis and Economic Geography, G. Belland Sons, London,
- Carlson, A.S.: Economic Geography of The Industrial Material, Rhid Shell Pub. Corp. New York, 1965
- Mastin, J.S. : Greater London- An Industrial Geography, G. Bell and Sons, London
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- Aiderfer, E.B. and Midal, H.E. : Economic of American Industry, New York, 1957

Hunder, H.L. and Wright, A.J. : Factors of Industrial Location in Ohio, Columbus, 1969

Florence, P. Sargant : Industrial Investment, Location and Size of Plant, Cambridge, 1949

Wilber Zelinsky : "A Method of Measuring Change in Distribution of Manufacturing Activity"

Economic Geography, April, 1958, pp- 94-126

Alexander, J.W. and Linberg, James B. : Measurement of Manufacturing: Coefficients of Correlation, Journal of Regional Science, Vol. 3 1961 Pp. 71-81

Thomson, Hohn, H. : A New Method of Measuring Manufacturing Annals of Association of American Geographers, Vol- 45, 1955, PP. 416-35

Elliot Francis, E. : Location Factors Affecting Industrial Plant, Economic Geography, Vol, 24, 1941m pp. 283-85

PAPER IX

(7) TRANSPORTATION GEOGRAPHY

- Unit 1 : Geographic study of transportation: Definition, nature of contents : Theory of transportation geography as spatial interaction. Evolution and recent trends in transportation geography in the world: Reasons for a separate subject Geography as discipline in distance
- Unit 2 : Application of geographical methods; Population –and accessibility, Physical and relative accessibility by the modern transport system-accessibility case studies
- Unit 3: Flow analysis: Concepts and methods: Competition and coordination; Concept of urban and rural transportation; Economic, Political and social functions of transportation
- Unit 4 : Transport and development: transport expansion in underdeveloped countries; Transportation problems and planning

REFERENCE READING

Hurst, Michale, Eloit : Transportation Geography; Comments and Readings. McGraw Hill Book Co., New York

Appleton, J.H. : The Geography of Communication in Britain, London, 1962

Thomas, B.E. : Methods and Objective in Transportation Geography, Professional Geographer, Vol. 8, 1956

Bheekmon, M. Mc. Gurie, C.B. and Winsten, C.B. ; Studies in the Economic of Tansportation, Yale University Press, 1956

O'Dell, A.C. and Richards, T.S. : Railways and Geography, Hutchinson University Library, London, 1971

Sealv, K.R. : The Geography of Air Transport, Hutchinson University Library, London, 1957

Ullman, E.L. : American Geography: Inventory and Prospects, James and C.F. Jones (editors),

Kuhn, T.E. : Public Enerprise, Economic and Transport problems, University of California Press, 1962

Ministry of Transport : Better use of Town Roads, HMSA. London, 1967

Bingham, T. : Transportation – Principles and Problems McGraw Hill, New York, 1964

PAPER IX

(8) GEOGRAPHY OF RURAL DEVELOPMENT

- Unit 1 : Geography and rural development; Agricultural Geography and rural development; Agricultural location theory, Rural land use; Agricultural, pastoral and forestry land use competition. Land use and landscape, Approaches to rural development, growth centre approach, infrastructure reformist
- Unit 2 : Rural settlement, Housing, population and employment, rural transport, service provision, derivation, recreation, health nutrition
- Unit 3 : Rural planning and land management; Resource development and integrated rural development; Crop and soil management, livestock range and management; Water management, Ecological management, desertification – monitoring and control
- Unit 4 : Rural development in Rajasthan; Major tools and techniques, Rural development schemes – Irrigation and land development schemes; Drought prone areas schemes, Desert Development programme ; integrated rural development in Rajasthan, Tribal areas development: Watershed development

REFERENCE READING

Giig, A. W. : An Introduction to Rural Geography, Edward Arnold, 1985 Association of country Councils: Rural Deprivation London, Acc, 1979

Allan J.A. ; Remote Sensing in Landuse Studies, Geography 65, 1980

Tewari, A.K. : (ed.) : Desertification : Monitoring and Control, Scientific Pubs., Jodhpur, 1988

Anderson, J.R.L.J. : Hardarkar: Agricultural Decision Analysis, Ames: Iowa State University Press, 1977

Andreas, B. Farming Development and Space – World Agricultural Geography, New York: Water Gryter, 1981

Morgan, W.B. and R.J.G. Munom : Agricultural Geography, Methuen, London, 1971

Pacione, M.: Rural Geography, Pappur Clarks, (Ed.) and Row 1984- Register of Research in Rural Geography, Leicester : Rural Geography Study Group, 1981

BOwier, I.R. : Agricultural Geography – Profess in Human Geography-8, 1987

Newbury, P.A.R.P. : Geography of Agriculture Machonald and Evans, plymouth, 1980

Grigg, D.B. : The Agricultural Systems of the World, Cambridge university Press, 1974

Grigg, D.B. : An Introduction of Agricultural Geography, Hutchinson, London, 1984

Jones, A : Rural Housing – The Agricultural Tied College, Bell, London, 1975

Lassey, W.R. : Planning in Rural Environment, Mc Graw hill, New York, 1973

Lavety, P. (ed.) ; Recreational Geography, David and Charles, Newton Abbot, 1974

Leasdale, R. Settlement Systems in Sparsely Populate

Regions and Homes (ed.), Oxford, Pergamon, 1981

DISSERTATION

On an approved topic in Lieu of either paper VIII or IX, Dissertation of around 100 pages, typed on thesis size paper with double spacing, complete with maps and diagrams, must be submitted, in duplicate, to the Head of the Department before the commencement of theory examination of the session. The topic and the supervisor of the dissertation will be selected by the candidates securing 55% or above marks in M.A. (Pervious) Geography will be eligible for offering the paper of dissertation. Evaluation of dissertation will be done by two external examiners and average marks will be a awarded. There will be no Viva- voce examination.

PAPER X

CARTOGRAPHY, SURVEYING (PRACTICAL) AND SCIO-ECONOMIC SURVEY OF VILLAGE

Out of 100 marks assigned for geography practical, 50 marks are reserved for Laboratory Work Test, 8 marks for the field survey/plotting and 7 marks for viva on field survey/plotting, 8 marks for the evaluation of record book and 7 marks for viva on record book and 20 marks for socio-economic survey of a village,(10 marks Survey Report, 10 marks viva on Survey Report) Particular focus on population density, distribution SC and ST population, Caste Structure, Literacy Rate, Creed work force, land holding ratio, occupation structure, income gap, acute poverty analysis etc. (For every 15 students one teacher shall accompany the party).

Representation of geographical data by means of Graphs (Simple, Compound, Smoothed, Cumulative, Frequency and Triangular)

Diagrams (Bar and Pie diagrams; Proportional bars, Circles, Spheres and Cubes) and maps (Choroschematic, Choropleth and Isopleths maps, Dot maps; Accessibility maps), Interpretation and construction of Climatic Maps; Isopleth and Choropleth Maps showing rainfall distribution; variability, intensity and duration, Isopleth maps showing temperature conditions, Climatic graph, hythegraph, rainfall dispersion diagrams, rainfall intensity, duration variability graphs; Wind direction diagram

Graphs showing pressure and relative humidity conditions, interpretation of air photos: Simple photo-interpretation with the help of pocket and mirror stereoscope as applied in identification and analysis of feature of landforms; geographic units, settlements, communication, vegetation and land use, Numerical exercises pertaining to the aerial photographs ; Calculation of flying height, number of strips of aerial photographs in given area, Fundamentals of digital image processing; geographic information systems (GIS); Applications of remote sensing in Geography

Statistical Techniques: correlation, Spearman's rank correlation and Karl Pearsons product moment correlation, Simple linear, regression, residual from regression, Chi-square test and student 't' Test

Surveying: Small Geographical surveys of given areas by Theodolite (verniner scale), Plane table and Prismatic compass. Leveling; Principles and method; Contouring of small areas through Dumpy level and Clinometers (Indian pattern)

TEXT BOOKS

Monkhouse, F.J. & Wilkerson, H.R. : Maps and Diagrams, Methuen and Co. London

Raisz, E. : General Cartography, McGraw, 1977

Gregory, S. : Statistical Methods and the Geographers, Methuen and Co., 1971

Kanetkar, T.P. : Surveying and Leveling, Parts I and II

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Robinson, A.H. : Elements of Cartography, Chapman and Hall, London

Dickinson, G.C. : Statistical Mapping and the Presentation of Statistics, Edward and Arnold, 1973

Lawrence, G. RY. : Cartographic Methods, Methuen, 1971

Brich, T.W. : Maps Topographical and Statistical

Faith, EA. : Surveying- Theory and Practice

Higgins, A.L. : Elementary Survey

Hinks, A. : Maps and Surveying

Low, J.R.: Plane Table Mapping

Threlfair, H : A Text books of Surveying and Leveling

Lewis, P. : Maps and Statistics, Methuen, 1977

King, L.J. : Statistical Analysis in Geography, Prentice Hall, N.J.

Laeder D.R. : Aerial Photographic Interpretation

Sharma, J.P. : Prayogic Bhoogol, Rastogi & Co. Meerut, 1983

Unwin, D.J. and J.A. Dawson : Computer Programming for Geographers, Longman, 1986

Zuylen LVan : Computer Assistant Cartography, N.Y. , 1985