

4116
M.A. (Previous) Geography
Paper - II: Advanced Physical Geography

Unit - I

- a) Earth's interior: seismological evidences of the structure and zoning of the earth's interior.
- b) Revival of the continental drift theory.
- c) Plate tectonic theory: division of the crust in plates; plate boundaries and plate margins, mechanism of plate movements; plate tectonics and associated structures.
- d) Process of denudation; mass wasting: types and results.
- e) Development of slopes: approaches to the study of slopes; views of W. Penck, A. Wood and A.N. Strahler.

Unit - II

- a) Fluvial morphometry:
- b) Linear properties: stream orders, bifurcation ratio, stream numbers and stream lengths.
- c) Areal properties: basin area, drainage density and texture of topography;
- d) Cycle of erosion: views of W.M. Davis and Penck.
- e) Fluvial landforms, Fluvial cycle of erosion and interruptions in it.

Unit - III

- a) Land form of arid and semi-arid lands.
- b) Arid cycle of erosion.
- c) Glacial topography: erosional and depositional landforms; fluvo-glacial landforms.
- d) Coastal landforms.
- e) Karst cycle.

Unit - IV

- a) Atmospheric heat: insolation, heat budget; horizontal and vertical distribution of temperature.
- b) Motions in the atmosphere: atmospheric pressure and its thermal and dynamic controls.
- c) General atmospheric circulation; forces controlling the atmospheric circulation; tri-cell model of atmospheric circulation.
- d) Jet streams: characteristics, types and origin.
- e) Air masses: source region, modifications in air masses and their classification; Fronts and their types.

Unit - V

- a) Tropical and extra tropical cyclones: origin, areas and weather association with them.
- b) Atmospheric humidity: sources and types.
- c) Condensation, Sublimation and their forms.
- d) Submarine topography.
- e) Relief features of the Indian and Atlantic Ocean floors.

Suggested Readings:

- Barry, R.G. and R.J. Chorley, Atmosphere, Weather and Climate, Routledge, 1998.
- Critchfield, H., General Climatology, Prentice-Hall, New York, 1975.
- Dayal, P., A Text Book of Geomorphology, Shukla Book Depot, Patna, 1996.
- Garrison, T., Oceanography, Wadsworth Co., USA, 1998.
- Kale, V., and A. Gupta, Elements of Geomorphology, Oxford University Press, Calcutta, 2001.
- Mather, J.R., Climatology, McGraw Hill, New York, 1974.
- Monkhouse, F.J., Principles of Physical Geography, Hodder and Stoughton, London, 1960.
- Pitty, A., Introduction to Geomorphology, Methuen, London, 1974.
- Sharma, H.S., Tropical Geomorphology, Concept, New Delhi, 1987.
- Singh, S., Geomorphology, Prayag Pustakalaya, Allahabad, 1998.
- Sparks, B.W., Geomorphology, Longmans, London, 1960.
- Strahler, A.N. and A.H. Strahler, Modern Physical Geography, John Wiley & Sons, 1992.
- Trewartha, G.T., An Introduction to Climate, International Students Edition, McGraw Hill, New York, 1980.
- सिंह, सविन्द्र, भौतिक भूगोल, वसुन्धरा प्रकाशन गोरखपुर
- सिंह, सविन्द्र, भू आकृति विज्ञान का स्वरूप, प्रयाग पुस्तक भवन, इलाहाबाद
- सिंह, सविन्द्र, पर्यावरण भूगोल, प्रयाग पुस्तक भवन, इलाहाबाद
- सिंह, सविन्द्र, समुद्र विज्ञान, प्रवालिका पब्लिकेशन्स, इलाहाबाद
- सिंह, सविन्द्र, जलवायु विज्ञान, प्रवालिका पब्लिकेशन्स, इलाहाबाद
- शर्मा, डॉ. जे. पी., भूआकृति विज्ञान, रस्तोगी पब्लिकेशन्स, मेरठ
- शर्मा, एच.एस., शर्मा, एन. एल., मिश्रा, आर.एन. भौतिक भूगोल, पंचशील प्रकाशन, जयपुर
- हुसैन, माजिद, भौतिक भूगोल, रावत पब्लिकेशन्स, नई दिल्ली
- बंसल, डॉ. सुरेश चन्द्र, चौहान, डॉ. पंकज कुमार, भौतिक भूगोल, मीनाक्षी प्रकाशन, मेरठ
- लाल, डी. एस., जलवायु एवं समुद्र विज्ञान, शारदा पुस्तक भवन, इलाहाबाद
- चतुर्भुज मामोरिया एव जैन : भौतिक भूगोल एवं जीव मण्डल, साहित्य भवन आगरा
- चौहान, वीरेन्द्र सिंह : भौतिक भूगोल, रस्तोगी पब्लिकेशन्स, मेरठ
- उपाध्याय एल. एन. : भौतिक भूगोल, राज. हिन्दी ग्रन्थ अकादमी, जयपुर
- तिकखा, रामनाथ : भौतिक भूगोल, केदारनाथ रामनाथ, मेरठ
- तिवारी, ए. के. : जलवायु विज्ञान के मूल तत्व, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर
- नेगी, बी. सी. : जलवायु विज्ञान तथा समुद्र विज्ञान, केदारनाथ रामनाथ, मेरठ
- सिसौदिया, डॉ. एम. एस., जलवायु एवं समुद्र विज्ञान, कैलाश पुस्तक सदन, भोपाल

4117

M.A. (Previous) Geography
Paper - III: Economic and Resource Geography

Unit - I

- a) Scope, approaches and recent trends in economic geography.
- b) Spatial variation in transport costs: location and structure of transport cost.
- c) Location of economic activities and spatial organisation of economies.
- d) Transportation development and spatial impact.
- e) Spatial variation in production costs: labour, capital, technical knowledge; location impact.

Unit – II

- a) Classification of economies, sectors of economy: primary, secondary and tertiary.
- b) Types of farming; subsistence agriculture.
- c) Tropical plantations.
- d) Commercial grain farming and corn region of USA.
- e) Mediterranean agriculture.

Unit - III

- a) Study of Great Lake industrial region of USA.
- b) Study of Ruhr industrial region.
- c) Study of industrial belt of Japan.
- d) Study of industrial region of Ukraine.
- e) World pattern of water transportation and trade.

Unit - IV

- a) Scope, approaches and trends in resource geography.
- b) Resources: concepts and classification.
- c) Distribution, production and problems of conservation of iron-ore and manganese.
- d) Distribution, production and problems of conservation of coal, petroleum and nuclear resources.
- e) Forest and water resources: distribution, utility and conservation.

Unit – V

- a) Distribution, density and growth of human resources.
- b) Population-resource equilibrium.
- c) Population resource regions of the world.
- d) Problems of resource utilization and conservation of resources.
- e) Resource regions of world.

Suggested Readings:

- Alexander, J.W., Economic Geography, Prentice Hall of India, New Delhi.
- Bengston, N.A. and M.W. Royen, Fundamental of Economic Geography, Prentice Hall.
- Berry, B.J.L. et al, D.M., Economic Geography, Prentice Hall.
- Hamilton, F.E.I. (ed.), Resources and Industry, Oxford University Press, New York, 1992.
- Janaki, V.A., Economic Geography, Concept Publishing Co., New Delhi.
- Robinson, H., Economic Geography, MacDonald and Evans.
- Singh, G., Economic and Commercial Geography, Manol Talao.
- Thomas, R.S., The Geography of Economic Activity, McGraw Hill, New York.
- Wheeler, J.O. et al, Economic Geography, John Wiley, New York, 1995.
- Whitbeck, R.S. and Finch, V.L. Economic Geography, McGraw Hill, New York.
- Zimmermann, E.W., World Resources and Industries, Harber.
- सिंह, डॉ. जगदीश, सिंह, डॉ. के. एन., आर्थिक भूगोल के मूल तत्व, ज्ञानोदय प्रकाशन, गोरखपुर
- कौशिक, एस. डी., गौतम, अलका, संसाधन भूगोल, रस्तोगी पब्लिकेशन्स, मेरठ
- कौशिक, एस. डी., आर्थिक भूगोल के सरल सिद्धांत, रस्तोगी पब्लिकेशन्स, मेरठ
- सिसौदिया, डॉ. एम. एस., तिवारी, डॉ. अर्चना, आर्थिक भूगोल, कैलाश पुस्तक सदन, भोपाल
- तिवारी, आर. सी., सिंह, बी. एन., कृषि भूगोल, प्रवालिका पब्लिकेशन्स, इलाहाबाद
- लोढा, डॉ. राजमल, माहेश्वरी, डॉ. दीपक, औद्योगिक भूगोल, राजस्थान हिंदी ग्रंथ अकादमी, जयपुर
- शर्मा, डॉ. बी. एल., भारद्वाज, डॉ. पलक, कृषि भूगोल, रस्तोगी पब्लिकेशन्स, मेरठ
- हुसैन, माजिद, कृषि भूगोल, रावत पब्लिकेशन्स, नई दिल्ली
- सिंह, के. एन., परिवहन भूगोल, ज्ञानोदय प्रकाशन, गोरखपुर

4118
M.A. (Previous) Geography
Paper - IV: Advanced Geography of India

Unit - I

- a) Geographical structure of India.
- b) Physiographic divisions and sub divisions.
- c) Climate: regional variations, phenomena of Monsoon and cycle of seasons.
- d) Vegetation types and vegetation regions; problem of deforestation.
- e) Major soil types; problem of soil erosion.

Unit – II

- a) Water resources: status and problems; problem of floods and droughts.
- b) Coastal and marine resources.
- c) Irrigation: sources; multipurpose schemes and their problems with reference to Cauvery, Chambal and Sutlej.
- d) Agro-climatic regions;
- e) Cropping pattern.

Unit – III

- a) Major mineral resources: ferrous - iron ore and manganese; and non-ferrous - bauxite and copper.
- b) Power resources: conventional - thermal and hydro; and non-conventional - solar and wind.
- c) Major industries: cement, chemical and engineering industries.
- d) Industrial regions of India.
- e) India's international trade : items, destination/origin, problems and policies.

Unit - IV

- b) Population: distribution and growth; tribal population distribution pattern and belts.
- c) Population problems and population policy of India.
- d) Settlement types and pattern.
- e) Transportation: rail, road, air and water.
- f) Regional disparities and socio-economic development in India; Indian five year plans: objectives and achievements.

Unit - V

- a) Concept of geographical regions; outline scheme of regions proposed by R.L. Singh.
- b) Detailed study of Kashmir region,
- c) Detailed study of Middle Ganga plain region.
- d) Detailed study of Malwa plateau region.
- e) Detailed study of Tamil Nadu coastal plain and Bay of Bengal islands.

Suggested Readings:

- Blandford, H.F., Climate and Weather of India, Ceylon and Burma, Meteorological Department of India.
- Brown, C. and Dey, India's Mineral Wealth, Oxford University Press, London.
- Chandrashekhar, S., India's Population: Facts and Policy, Allen and Unwin.
- Chatterjee, S.D., Climatology of India, Calcutta University, Calcutta.
- Chhibber, H.L., India, Part-III, Nand Kishore and Bros.
- Davis, K., The Population of India, Princeton.
- Deshpande, C.D., India - A Regional Interpretation, Northern Book Centre, New Delhi, 1992.
- Joshi, H., Industrial Geography of India: A Case Study of Fertiliser Industry, Rawat Publication, Jaipur.
- Khullar, D.R., India: A Comprehensive Geography, Kalyani Publishers, Ludhiana, 2000.
- Mitra, A., Levels of Regional Development of India, Census of India, Vol. 1, Part I-A (i) and (ii), New Delhi, 1967.
- Routray, J.K., Geography of Regional Disparity, Asian Institute of Technology, Bangkok, 1993.
- Shafi, M., Geography of South Asia, McMillan & Co., Calcutta, 2000.
- Singh, G., Geography of India, Atmaram & Sons, Delhi.
- Singh, R.L. (ed), India: A Regional Geography, National Geographical Society, India.
- Wadia, D.N., Geology of India, McMillan & Co., London, 1967.
- खुल्लर, डी. आर., भारत का भूगोल, कल्याणी पब्लिशर्स, नईदिल्ली
- गौड़, कृपाशंकर : भारत की भौगोलिक समीक्षा, हिन्दी प्रचार पुस्तकालय, वाराणसी
- मामोरिया, चतुर्भूज : भारत का आर्थिक भूगोल, आगरा बुक स्टोर, आगरा
- मामोरिया, चतुर्भूज : भारत का भूगोल, साहित्य भवन पब्लिकेशन्स, आगरा
- दुबे, रामनाथ : भारत का आर्थिक भूगोल, किताब महल, इलाहाबाद
- तिवारी, विश्वनाथ : भारत का वृहद् भूगोल, रामप्रसाद एण्ड सन्स, आगरा
- चौहान, वीरेन्द्र सिंह : विशाल भारत, रस्तोगी एण्ड कम्पनी, मेरठ
- चौहान, तेज सिंह : भारत का भूगोल, विज्ञान प्रकाशन, जयपुर
- माथुर, शंकर मोहन, भारत का प्राकृतिक भूविज्ञान, नेशनल बुक ट्रस्ट इंडिया, नई दिल्ली

4115
M.A. (Previous) Geography
Paper - I: Evolution of Geographical Thought

Unit - I

Philosophy of geography and geography during ancient and medieval period:

- a) Definition, nature and scope of geography
- b) Brief study of Greek and Roman scholars.
- c) Geographical concept in ancient India.
- d) The dark age of geography.
- e) The Arab period.

Unit - II

The beginning of modern geography:

- a) Contribution of Bernhardus Varenius.
- b) Contribution of Immanuel Kant.
- c) Impact of Darwinian Theory on geographical thoughts.
- d) Contribution of Alexander von Humboldt.
- e) Contribution of Carl Ritter.

Unit - III

Major school of thoughts and their contribution:

- a) Main characteristics of German school of thoughts and contributions of Friedrich Ratzel, Alfred Hettner and Ferdinand von Richthofen.
- b) Main characteristics of French school of thought and contributions of Paul Vidal de la Blache and Jean Brunhes.
- c) Main characteristics of American school of thought and contributions of W.M. Davis, Richard Hartshorne and Carl O. Sauer.
- d) Main characteristics of British school of thought and their contribution to geography.
- e) Main characteristics of contemporary Indian geographical teaching and research.

Unit - IV

Major conceptual trends in geography:

- a) The study of man-land relationship: environmental determinism, possibilism and neo-determinism.
- b) Geography as chorological science and areal differentiation.
- c) Geography as morphology of landscape.
- d) Dichotomies in geography: physical v/s human and systematic v/s regional geography.
- e) Dichotomies in geography: qualitative v/s quantitative approach, analysis v/s synthesis approach.

Unit - V

Issues related to explanations in geography:

- a) General ideas of hypothesis, theories and laws in geography.
- b) Forms of explanations in geography.
- c) Exceptionalism in geography and the Schaefer-Hartshorne debate.
- d) Impact of positivism and scientific method in geography.
- e) Behaviouralism, humanism and radicalism in geography.

Suggested Readings:

- Abler, Ronal F. et al, Geography's Inner Worlds: Pervasive Themes in Contemporary American Geography, Routledge, New Jersey, 1992.
- Ali, S.M., Arab Geographers, Institute of Islamic Studies.
- Ali, S.M., The Geography of Puranas, People's Publishing House, New Delhi.
- Dikshit R.D., Geographical Thought: A Contextual History of Ideas, Prentice Hall of India Pvt. Ltd. 2000.
- Dikshit R.D., The Art and Science of Geography: Integrated Readings, Prentice Hall of India, New Delhi, 1994.
- Dohrs, F.E. and Sommers, L.W. (eds.) Introduction to Geography, Thomas Y. Crowell Co., New York, 1967.
- Fischer, E. et al, A Question of Place: The Development of Geographic Thought, R.V. Beatty Ltd., Arlington, 1967.
- Ruson, R.H., A Geography of Geography: Origins and Development of the Discipline, W.M.C. Brown Company.
- Hartshorne, Richard, The Nature of Geography, Association of American Geographers, Lancaster, Pennsylvania, 1939.
- Hartshorne, Richard, Perspective on the Nature of Geography, RandMcNally and Co., Chicago, 1959.
- Harvey, M.E. and B.P. Holly (eds.), Themes in Geographic Thought, Rawat Publications, Jaipur, 1999.
- Husain, Majid, Evolution of Geographical Thought, Rawat Publications, Jaipur, 1984.
- Mandal, R.B. and V.N.P. Sinha, Recent Trends and Concepts in Geography (three volumes), Concept Publishing Company, New Delhi.
- Peet, R., Modern Geographical Thought, Blackwell, Oxford, 1998.
- Prasad, H., Research Methods and Techniques in Geography, Rawat Publications, Jaipur.
- Raza, Moonis, A Survey of Research in Geography, ICSSR, New Delhi.
- हुसैन, माजिद, भौगोलिक चिन्तन का इतिहास, रावत पब्लिकेशन, नई दिल्ली
- जैन, एस. एम., भौगोलिक चिन्तन का विकास, साहित्य भवन आगरा
- कौशिक, एस. डी., भौगोलिक विचारधारा एवं विधि तंत्र, रस्तोगी प्रकाशन, मेरठ
- माथुर एवं जोशी, भौगोलिक विचारधाराओं का इतिहास, आर.बी.एस. पब्लिशर्स, जयपुर

4119
M.A. (Previous) Geography
Practical - I: Advanced Cartography

Unit - I

- a) Meaning of cartography, art & science of cartography, history of cartography.
- b) Cartographic materials and techniques.
- c) Quantitative and qualitative symbols.
- d) Maps and their classification.
- e) Sources of geographic data (India).

The representation of data, information, features related to the following geographical aspects through maps and diagrams and their interpretation (to be submitted along with the record work)

Unit - II

Climatic aspects:

- a) Isohyets or isotherms
- b) Rainfall dispersion diagram.
- c) Rainfall variability graphs (running average and cumulative deviation).
- d) Rainfall trend line.
- e) Temperature variation graph.

Unit - III

Geomorphic aspects (based on toposheets of 1:50,000 or 1:25,000 scale):

- a) Profiles: serial, composite, superimposed and projected.
- b) Slope: average slope map according to Wentworth's method.
- c) Stream orders and basin demarcation
- d) Drainage density and texture.
- e) Hypsometric curve

Unit - IV

Demographic, transport and settlement aspects (atleast with 20 administrative units):

- a) Density and population trend.
- b) Age and Sex composition.
- c) Urban and rural composition.
- d) Traffic flow: cartograms.
- e) Nearest neighbour analysis.

Unit - V

Economic and social aspects (atleast 20 administrative units):

- a) Occupational structure.
- b) Cropping pattern
- c) Crop production and area.
- d) Literacy.
- e) SC and ST population.

Note: The record work will comprise of a minimum of 20 exercises drawn on one-fourth of a full drawing sheet and methodological and analytical interpretation of each one.

Distribution of Marks

Total Marks 50

Practical – Assessed by Internal Examiner

Part – Advance Cartography, (50 marks)

A Test paper Lab exercise – 30 marks, asked 6 questions, attempt three questions and duration 3 hours.

B - Record work – 10 marks

C - Viva-voce – 10 marks

The Cartographic record work should contain 20 exercises drawn on one fourth of the full drawing sheet.

Suggested Readings:

- Arthur G., Advance Practical Geography, Heinemann.
- Campbell, J., Introductory Cartography, Prentice Hall Inc., New York.
- Govt. of Rajasthan, District Census Handbooks, latest as well as of previous Census,
- Keates, J. S., Cartographic Design and Production, Longman, London.
- Loxton, J., Practical Map Production, John Wiley & Sons, New York.
- Mishra, R. P. and A. Ramesh, Fundamentals of Cartography, Concept Publishers, New Delhi.
- Monkhouse, F. J. and H. R. Wilkinson, Maps and Diagrams, Methuen & Co., London.
- Raisz, E., General Cartography, McGraw Hill Book Co., New York.
- Robinson, A. H., Elements of Cartography, Chapman & Hall.
- Sing, R. L., Elements of Practical Geography, Kalyani Publishing.
- Singh, R. N., Map Work and Practical Geography, Central Book Depot.
 - शर्मा, जे. पी. : प्रायोगिक भूगोल, रस्तोगी प्रकाशन, मेरठ
 - खुल्लर, डी. आर., प्रयोगात्मक भूगोल, कल्याणी पब्लिशर्स, नईदिल्ली
 - मिश्रा, आर. एन. एवं शर्मा, पी. के.: प्रायोगिक भूगोल, रावत पब्लिकेशन्स, जयपुर
 - जैन, शेषमल : प्रयोगात्मक भूगोल, साहित्य भवन, आगरा
 - भल्ला, आर. एल. : प्रायोगात्मक भूगोल, के. डी प्रकाशन, अजमेर
 - मामोरिया, चतुर्भज : मानचित्र विज्ञान एवं प्रायोगात्मक भूगोल, साहित्य भवन, आगरा
 - वर्मा, एल. एन. व लोढ़ा, आर. एम. : प्रायोगात्मक भूगोल, राज. हिन्दी ग्रंथ अकादमी, जयपुर
 - सिंह, एल. आर. : मानचित्र एवं प्रायोगात्मक भूगोल, सेन्ट्रल बुक डिपो, इलाहाबाद
 - सिंह एवं कन्नोजिया : प्रायोगात्मक भूगोल की रूपरेखा, सेन्ट्रल बुक डिपो, इलाहाबाद

4120

M.A. (Previous) Geography

Practical - II: Air Photo Interpretation and Remote Sensing

Unit - I

- a) Definition, Scope and Development of air photo interpretation techniques.
- b) Types and quality of aerial photographs; factors affecting quality of aerial photographs.
- c) Tools and geometry of air photographs: Pocket and mirror stereoscope; geometry of aerial photographs.
- d) Aerial camera, lens and filters.
- e) Stages of production of aerial photographs.

Unit - II

- a) Construction of stereograms and stereotriplets; mosaics: types and their characteristics.
- b) Basic air photo measurements: Photographic scale and flying height; measuring height of objects.
- c) Displacement: relief and tilt.
- d) Calculation of area, number of strips and number of air photos; measuring angles, shutter speed and exposure interval.
- e) Parallax: slope measurement.

Unit - III

- a) Basic concepts and historical development of Remote Sensing techniques.
- b) Process and stages of remote sensing.
- c) Electromagnetic spectrum, properties of electromagnetic waves, energy interaction in the atmosphere and earth surface features.
- d) Basic principles of thermal Remote Sensing: properties, characteristics of India remote sensing imageries.
- e) Remote sensing platforms, sensors and resolution.

Unit - IV

- a) Data analysis: Ground truth collection, concept of signatures, data processing and digital processing.
- b) Satellite remote sensing platforms - Landsat, SPOT, IRS, INSAT; principal characteristics and geometry of scanner.
- c) Orbital characteristics and data production: MSS, TM, LISS, I, LISS II and LISS III, HMR.
- d) Equipment and their uses: Optical reflecting projector; diazo printer; overhead reflecting projector; analog image analyzer.
- e) Working of above equipment.

Unit - V

- a) Elements of object identification.
- b) Comparisons of maps, air photos and imageries.
- c) Mapping and interpretation of natural and cultural landscapes, field checking with air photos and imageries.
- d) Application of remote sensing in geomorphic, agricultural, forestry, resource management, and environmental studies.
- e) Computer based analysis of remote sensing data; GIS data model and structure; GIS and remote sensing integration.

Practical Exercises

1. Based on Aerial Photographs:
2. Object identification by Pocket Steoscope.
3. Indexing of aerial photographs Interpretation of the following:
Topographical aspects: General physiography, drainage orders and basins, vegetation, surface materials. (One exercise of each aspect).
Cultural aspects: Landuse-land covers (agricultural and general), field patterns settlement and transportation lines. (One exercise of each aspect).

Based on Satellite Imageries: (One exercise of each aspect)

- a) Landuse-land covers.
- b) Urban settlement pattern.
- c) Forest: types and density.
- d) Drainage order and basins.
- e) Settlement and transportation lines.
- f) Topographical aspects.

Distribution of Marks

Total Marks 50

Practical – Assessed by Internal Examiner

Part - Air photo Interpretation and remote sensing 50 marks A.- Test paper Lab exercise – 30 marks (20+10),

- a) Practical exercise shall be of three hours duration and of 20 marks and candidates will be required to attempt any 2 exercises out of 4.
- b) The identification of objects (at least 10) on the air photo pairs shall be of 30 minutes duration and will carry 10 marks

B -Record work – 10 marks

C -Viva-voce – 10 marks

Suggested Readings:

- American Society of Photogrammetry: Manual of Remote Sensing, ASP, Falls Church, VA, 1983.
- Avery, T.E., Interpretation of Aerial Photographs, Burges.
- Barrett, E.C. and L.F. Curtis, Fundamentals of Remote Sensing and Air Photo Interpretation, Macmillan, New York, 1992.
- Compbell, J., Principles of Remote Sensing, Longman, London, 1985.
- Hord, R.M., Digital Image Processing of Remotely Sensed Data, Academic, New York, 1989.
- Robert, G. Reeves et al, Manual of Remote Sensing, Vol. I and II.
- Smith, H.T.V., Aerial Photographs and their Applications, Appleton Century Crofts.
- Talbutt, A., Essentials of Aerial Surveying and Photo Interpretation
- चौनियाल, देवीदत्त, सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली के सिद्धांत, शारदा पुस्तक भवन, इलाहाबाद