Tuljaram Chaturchand College, Baramati

Autonomous College

Two Year Degree Program in Geography

(Faculty of Science & Technology)

Revised Syllabi for

M.A. / M.Sc. (Geography) Part-I

For Tuljaram Chaturchand College, Baramati

Choice Based Credit System Syllabus

To be implemented from Academic Year 2022-2023

Title of the Course: M.A./M.Sc. (Geography)

Preamble

Introduction:

Tuljaram Chaturchand College has decided to change the syllabi of various faculties from June,2019. Taking into consideration the rapid changes in science and technology and new approaches in different areas of Geography and related subjects, Board of Studies in Geography after a thorough discussion with the teachers of Geography from different colleges affiliated to the Tuljaram Chaturchand College, Baramati - Pune has prepared the syllabus of M.Sc./M. A. Semester - I and Geography course under the Choice Based Credit System (CBCS). The model curriculum as developed by U.G.C. is used as a guideline for the present syllabi.

Aims and Objectives of the new curriculum:

i) To maintain updated curriculum.

ii) To take care of fast development in the knowledge of Geography.

iii) To enhance the quality and standards of Geography Education.

iv) To provide a broad common frame work, for exchange, mobility and free dialogue across the Indian Geography and associated community.

v) To create and aptitude for Geography in those students who show a promise for higher studies and creative work in Geography.

vi) To create confidence in others, for equipping themselves with that part of Geography which is needed for various branches of Sciences or Humanities in which they have aptitude for higher studies and original work.

Tuljaram Chaturchand College, Baramati

Autonomous College

Board of Studies in Geography

From 2022-23 To 2024-25

Sr. No.	Name	Designation
1.	**Dr. Asaram S. Jadhav**	Chairman
2.	**Dr. Arun S. Magar**	Member
3.	**Mr. Vinayak D. Chavan**	Member
4.	**Ms. Nayan D. Zagade**	Member
5.	**Ms. Aarti M. Borade**	Member
6.	**Dr. Santosh Lagad**	Vice-Chancellor Nominee
7.	**Dr. Pravin Kokane**	Expert from other University
8.	**Dr. T. P. Shinde**	Expert from other University
9.	**Dr. Babaji Maskare**	Industry Expert
10.	**Mr. Ganesh Ghanawat**	Meritorious Alumni
11.	**Ms. Akshata Raje**	Student
12.	**Mr. Vaibhav Harihar**	Student

M.Sc. GEOGRAPHY PROGRAMME CREDIT DISTRIBUTION PATTERN (108)

Class	Semester	Core Course	Elective Course			Ability Enhancement Compulsory Courses (AECC)		Total Credit
			Discipline Specific Elective	Dissertation Project	Generic Elective Course	Ability Enhancement Compulsory Courses	Skill Enhancement Courses	
M.Sc. I	I	i) PAGG111 Principles of Geomorphology ii) PAGG112 Principles of Climatology iii) PAGG113 Principles of Economic Geography iv) PAGG114 Principles of Population and Settlement Geography	-	-	HR – I 2 Credit CS – I 2 Credit	Communication Skill 2 Credit	i) PAGG115 Practical in Physical Geography ii) Practical in Human Geography	30
	II	4 papers 4 x 4= 16 Credits	-	-	CS – II 2 Credit	-	2 Practicals = 8 Credits	26
M.Sc. II	III	3 papers 3 x 4= 12 Credits	Paper (A) 4 Credit *OR* Paper (B) 4 Credits	-	-	-	2 Practicals = 8 Credits Subject Related Skill Dev. Course 2 Credit	26
	IV	3 papers 3 x 4= 12 Credits	Paper (A) 4 Credit *OR* Paper (B) 4 Credits	1 Project = 4 Credits	-	-	1 Practical = 4 Credits Subject Related Skill Dev. Course 2 Credit	26
Total Credits		**56**	**8**	**4**	**6**	**2**	**32**	**108**

Structure of the Syllabus:

Semester – I

Sr. No.	Course Code	Core Compulsory Theory Paper (CCTP)	Choice Based Optional Paper (CBOP)	Core Compulsory Practical Paper (CCPP)	Credit
1	PAGG111	Principles of Geomorphology	-	-	04
2	PAGG112	Principles of Climatology	-	-	04
3	PAGG113	Principles of Economic Geography	-	-	04
4	PAGG114	Principles of Population and Settlement Geography	-	-	04
5	PAGG115	-	-	Practical in Physical Geography	04
6	PAGG116	-	-	Practical in Human Geography	04
				Total Credits	**24**

Mandatory 12 additional/ add-on credits for Post Graduate Programmes

Note:

1. 6 credits from Group - 1 are compulsory

2. Choose minimum 6 credits from Group - 2 to Group - 7

Group-1	Human Rights Awareness Course (Semester-I):		02 credit
	Cyber Security Awareness Course (Semester-I)		02 credit
	Cyber Security Awareness Course (Semester-II)		02 credit
Group-2 Skill Component Courses	1. Subject Related Certificate Course (Sem. II) 2. Subject Related skill development courses (Sem. III) 3. Subject Related skill development courses (Sem. IV)		02 credits 02 credits 02 credits
Group-3	(a)	Representation in Sports at University Level	02 credits
	(b)	Representation in Sports at State Level / National level	02 credits
	(c)	Representation in Sports at International (overseas) Level	04 credits
Group-4	(a)	Selection in AVISHKAR at University Level	02 credits
Group-5	(a)	Research paper publication at National level	02 credits
	(b)	Research paper publication at International (overseas) level	02 credits
Group-6	(a)	Participation in Summer School/ Internship programme / Short term course (not less than 2 weeks duration)	02 credits
Group-7	(a)	Participation in cultural and co curricular activities/ extracurricular activities/competitions at University level / State Level	02 credit
	(b)	Participation in cultural and cocurricular activities / extracurricular activities/ competitions at International (overseas) level	02 credits

Note : 1) One Credit = 15 Lectures.

2) The Project should be initiated at on the onset of III Semester and submitted during IV Semester.

3) FY/SY --> 4 Lectures per week.

4) Theory paper be covered with 70% actual teaching (3 actual lectures per week) and 30% Component (1 lecture per week) of self-study should be further evaluated through Group Discussion / Seminar / Open Book Test / MCQ / Essay writing / Assignment etc.

Semester – II

Sr. No.	Course Code	Core Compulsory Theory Paper (CCTP)	Choice Based Optional Paper (CBOP)	Theory / Practical	Credit	Core Compulsory Practical Paper (CCPP)	Credit
1	PAGG121	Geoinformatics - I					04
	One of the following according to specialization from CCTP						
2	PAGG122 (A)	Synoptic Climatology	-	-	04	-	04
	PAGG122 (B)	Population Geography	-	-	04	-	
	One of the following according to specialization from CCTP						
3	PAGG123 (A)	Monsoon Climatology	-	-	04	-	04
	PAGG123 (B)	Geography of Rural Settlements	-	-	04	-	
	Optional Paper (CBOP) (1 Theory + 1 Practical)						
4	PAGG124			Geography of Disaster Management	04		08
	PAGG125			Practical in Surveying	04		
	Core Compulsory Practical Paper (CCPP)						
5	PAGG126					Practical of Statistical Techniques for Geography	04
		Total Credits of Semester - II					**24**

Semester – III

Course Code	Core Compulsory Theory Paper (CCTP)	Choice Based Optional Paper (CBOP)	Theory / Practical	Credit	Core Compulsory Practical Paper (CCPP)	Credit
PAGG231	Geoinformatics-II	-	-	04	-	04
PAGG232	Geographical Thoughts	-	-	04	-	04
One of the following according to specialization from CCTP						
PAGG233 (A)	Agro Meteorology	-	-	04	-	04
PAGG233 (B)	Urban Geography	-	-	04	-	
Choice Based Optional Paper (CBOP) (1Theory + 1Practical)						
PAGG234			Practical in GIS	04	-	08
PAGG234			Watershed Management	04	-	
One of the following according to specialization from CCPP						
PAGG235 (A)					Practical in Climatology	04
PAGG235 (B)					Practical in Population and Settlement Geography	
Total Credits of Semester -III						**24**

Semester – IV

	Core Compulsory Theory Paper (CCTP)	Choice Based Optional Paper (CBOP)	Theory / Practical	Credit	Core Compulsory Practical Paper (CCPP)	Credit
PAGG241	Geography of India	-	-	-	-	04
PAGG242	Oceanography	-	-	-	-	04
PAGG243	Research Methodology	-	-	-	-	04
Choice Based Optional Paper (CBOP) (1Theory + 1Practical)						
PAGG244			Geography of Soils	04		04
PAGG245			Practical in Remote Sensing	04		
Core Compulsory Practical Paper (CCPP)						
PAGG246					Dissertation / Research Project	04
Total Credits of Semester - IV						**24**

Semester I

Course: PAGE111: Principles of Geomorphology

No. of Credits: 04 **No. of Periods: 60**

Unit 1: Introduction to Geomorphology **06**

1.1 Definitions, Nature and Scope of Geomorphology

1.2 History of Geomorphology

1.3 Basic concepts in Geomorphology

1.4 Branches of Geomorphology

1.5 Hierarchy of spatial and temporal scales in Geomorphology

1.6 Geologic time scale

Unit 2: Geomorphology and Tectonics **12**

2.1 Internal structure of the Earth: Layers based on physical and chemical properties

2.2 Seismic waves and types

2.3 Wegener's Continental Drift Theory

2.4 Theory of Plate Tectonics and associated landforms

2.5 Holmes Convectional Current Theory

2.6 Gravity and Isostasy

2.7 Paleomagnetism

2.8 Folds: Types and landforms

2.9 Faults: Types and landforms

Unit 3: Weathering and Mass Movement Processes **08**

3.1 Weathering: Types and related landforms

3.2 Mass Movement: Types of mass movement

Unit 4: Hill slopes **06**

4.1 Hill slope processes and forms

4.2 Models of hill slope evolution

Unit 5: Fluvial Processes and Landforms **10**

5.1 Genetic classification of streams

5.2 Playfair's law

5.3 River and stream, drainage basin and drainage network patterns

5.4 River processes: erosion, transportation and deposition

5.5 Fluvial landforms: erosional and depositional

5.6 Davisian Cycle of Erosion

Unit 6: Glacial Processes and Landforms **06**

6.1 Glacial system: Types of glaciers

6.2 Glacial processes: erosion, transportation and deposition

6.3 Glacial landforms: erosional and depositional

Unit 7: Coastal Processes and Landforms **06**

7.1 Sea waves, currents and tides

7.2 Coastal processes: erosion, transportation and deposition

7.3 Coastal landforms: erosional and depositional

Unit 8: Aeolian Processes and Landforms **06**

8.1 Aeolian environment

8.2 Wind processes: erosion, transportation and deposition

8.3 Aeolian landforms: erosional and depositional

8.4 Work of water in desert and landform

Reference Books:

- **Bloom, A.L. (2012**): Geomorphology- A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, New Delhi
- **Chorley, R.J., Schumm, S. A. and Sugden, D. E. (1984):** Geomorphology, Methuen, London.
- **Gregory, K.J. and Goudie, A.S. (2014):** The SAGE Handbook of Geomorphology, SAGE, London.
- **Christiansen E.H. and Hamblin, W.K. (2008):** The Earths dynamic systems Macmillan, New York and Collier Macmillan London.
- **Holmes, (1944):** Principles of Physical Geology, Thomas Nelson and Sons Ltd, London.
- **Huggett, R.J. (2008):** Fundamentals of Geomorphology, Routledge, London and New York.
- **Goudie A.S. (2004):** Encyclopedia of Geomorphology, Routledge, London and New York.
- **Kale, V.S. (2014):** Landscapes and Landforms of India, Springer, London/New York.
- **Kale, V.S. and Gupta, A. (2010):** Introduction to Geomorphology, Universities Press, Hyderabad
- **Migon, P. (2010):** Geomorphological Landscapes of the World, Springer, London/New York.
- **Ollier, C.D. (1981):** Tectonics and Landforms, Longman, London.
- **Singh, S. (2011):** Geomorphology, PrayagPustakBhawan, Allahabad.
- **Siddhartha, K. (2001):** The Earth's dynamic surface, Kisalaya, Delhi.
- **Spark, B.W. (1972):** Geomorphology, Longman, New York.
- **Steers, A. (1958):** The Unstable Earth, Methuen, London.
- **Strahler, A.H. and Strahler, A.N. (1992):** Modern Physical Geography, John Wiley, New York.

Course: PAGE112: Principles of Climatology

No. of Credits: 04 **No. of Periods: 60**

Unit 1: Introduction to Climatology **06**

1.1 Meteorology and Climatology

1.2 Nature and Scope of Climatology

1.3 Development of Climatology

1.4 Tropical Climatology

Unit 2: Earth's Atmosphere **08**

2.1 Evolution

2.2 Structure and composition of atmosphere

2.3 Development of Climatology

2.4 The ozone layer depletion

2.5 Aurora - types Gravity and Isostasy

Unit 3: Insolation **10**

3.1 Solar and terrestrial radiation

3.2 Electromagnetic spectrum

3.3 Factors affecting insolation

3.4 Latitudinal and seasonal variation

3.5 Effect of atmosphere

3.6 Greenhouse effect

3.7 Heat budget

3.8 Mechanisms of heat transfer

Unit 4: Temperature **06**

4.1 Heat and temperature

4.2 Temperature measurements and controls

4.3 Lapse rate

4.4 Temperature inversion

4.5 Types of inversion

Unit 5: Atmospheric Pressure and Winds **12**

5.1 Pressure measurement and distribution

5.2 Factors affecting distribution of pressure

5.3 Wind observation and measurement

5.4 Factors affecting wind

5.5 Geostrophic wind and Gradient wind

5.6 Models of general circulation of the atmosphere

5.7 Eddy theory

5.8 Local winds

5.9 Jet stream

5.10 Cyclones and Anticyclones

Unit 6: Atmospheric Moisture **06**

6.1 Atmospheric moisture

6.2 Hydrologic cycle

6.3 Evaporation and condensation

6.4 Forms of condensation

6.5 Precipitation

6.6 Types of precipitation

6.7 Measurement of humidity

Unit 7: Atmospheric Stability **06**

7.1 Lapse Rate: normal, environmental, dry adiabatic lapse rate and wet adiabatic lapse rate

7.2 Stable and unstable air

7.3 Absolute stability

7.4 Absolute instability

7.5 Conditional instability

Unit 8: Air Masses and Fronts **06**

8.1 Introduction to air masses and fronts

8.2 Types of air masses

8.3 Types of fronts

Reference Books:

- **Critchfield, H.J. (Rep. 2010):** General Climatology. Prentice Hall, New Delhi.
- **Lal, D.S. (1998):** 'Climatology', Chaitanya Publishing House, Allahabad.
- **Lutgens, Frederic K. &Tarbuck, Edward J. (2010):** 'The Atmosphere: An Introduction to Meteorology', Pearson Prentice Hall, New Jersey.
- **Oliver, John E. &Hidore, John J. (2003):** Climatology: An Atmospheric Science, Pearson Education, Delhi
- **Savindra Singh (2005):** Climatology, Prayag Pustak Bhawan, Allahabad.
- Trewartha: Introduction to Weather and Climate.
- **More, Pagar, Thorat (2014):** (Marathi), Elements of Climatology & Oceanography, Atharv Publication, Pune

Course: PAGE113: Principles of Economic Geography

No. of Credits: 04 **No. of Periods: 60**

Unit 1: Introduction to Economic Geography **06**

1.1 Definition, nature and scope

1.2 Approaches :traditional and modern

1.3 Recent trends in Economic Geography

Unit 2: Economic Activities **10**

2.1 Definition and classification of economic activities

2.2 Factors of location of economic activities: physical, social, economic and technical

2.3 Location of economic activities: Weber's and Von Thunen's model

Unit 3: Resources **08**

3.1 Definition and classification of resources

3.2 Significance of natural and human resources in economic development

3.3 Importance of non-conventional energy resources for sustainable development

Unit 4: Economic Development **08**

4.1 Definition and concept of economic growth and development

4.2 Measures of economic growth and development

4.3 Classification of countries on the basis of economic development

4.4 Rostow's and Myrdal's model

Unit 5: Transport and Communication **06**

5.1 means and modes of transport

5.2 Geographical factors and transportation

5.3 Various means of communication

5.4 Role of transport and communication on economy

Unit 6: Trade **06**

6.1 Definition and types of trade

6.2 Factors affecting on international trade

6.3 Problems and prospects of international trade with reference to India

6.4 E-commerce

Unit 7: Economic Development in India **06**

7.1 Pre-and post-independence economic development in India

7.2 Green revolution in India

7.3 Need of new green revolution in India

7.4 Regional disparities in India

7.5 Impact of globalization and privatization on economic development

Unit 8: Contemporary Issues **10**

8.1 Regional disparities in Maharashtra

8.2 Role of IT industry on economic development in Maharashtra

8.3 A case study of one local agro-based industry: Economic analysis, problems and prospects (Sugar factory/ winery/ agro-tourist center etc.)

Reference Books:

- **Alexander, J.W. (1977):** Economic Geography, Prentice Hall of India Pvt. Ltd., New.
- **Chorley, R.J. and Haggett, P. (1970):** Socio Economic Models in Geography, Concept publishing Company Pvt. Ltd., New Delhi.
- **Garnier, B.J. and Delobez, A. (1979):** Geography of Marketing, Longman.
- Hartshorne, T.A. and Alexander, J.W. (2010): Economic Geography, PHI Learning, New Delhi
- **KananChatterjee (2015):** Basics of Economic Geography.
- **Knox, P., Agnew, J. and McCarthy, L. (2008):** The Geography of the World Economy, Hodder Arnold, London.
- **Lloyd, P. and Dicken, B. (1972):** Location in Space: A Theoretical Approach to Economic Geography, Harper and Row, New York Methuen.
- **Mitra, A. (2002):** Resource Studies, Sreedhar publishers, Kolkata.
- **Patil, S.G., Suryawanshi, R.S., Pacharne, S. and Choudhar, A.H. (2014):** Economic Geography, AtharavPrakashan, Pune.
- **Ray, P.K. (1997):** Economic Geography, New Central Book Agency (P) Ltd., Calcutta.
- **Saptarshi, P.G., More, J.C. Ugale, V.R. and Musmade, A.H. (2009**): India A Geographical Analysis Diamond, Pune.
- **Saxena, H.M. (2013):** Economic Geography, Rawat publication, Jaipur.
- **Siddhartha, K. (2000):** Economic Geography: Theories, Process and Patterns, Kisalaya Publications, New Delhi
- **Smith, D.M. (1971):** Industrial Location: An Economic Geographical Analysis, John Wiley and Sons, New York
- **Pagar, Thorat& More (2015):** Agriculture Geography, (Marathi), Atharv Publication, Pune
- **More J. (2014):** Geography & Agriculture For MPSC Examination, (Marathi), Atharv Publication, Pune

Course: PAGE114: Principles of Population and Settlement Geography

No. of Credits: 04 **No. of Periods: 60**

Unit 1: Introduction to Population and Settlement Geography **08**

1.1 Definition, Nature and scope of Population Geography

1.2 Development of Population Geography as discipline

1.3 Approaches to the study of population Geography

1.4 Definition, subject matter and scope of Settlement Geography

1.5 Development of Settlement Geography

1.6 Approaches: genetic, spatial and ecological

Unit 2: Population Distribution **08**

2.1 Population distribution and factors affecting distribution of population

2.2 Density : definition and types

2.3 Factors affecting density of population

2.4 Population density in India

2.5 Urbanization: definition and stages

2.6 Trend and level of urbanization in India

Unit 3: Population Growth and trend **08**

3.1 Concept of population growth

3.2 Component of population growth (Fertility, Mortality, and Migration)

3.3 Malthus Theory

3.4 Demographic Transition theory

3.5 Population growth and trend in India

3.6 Migration: concept, types and impact on migration , migrant and migration, immigration and emigration

Unit 4: Population Structure and Characteristics **06**

4.1 Age and sex structure

4.2 Concept of aging of populations,

4.3 Dependency ratio

4.4 Sex Ratio: definition and affecting factors of sex ratio

4.5 Sex ration in India

4.6 Population Composition: religious, linguistics, ethnic, marital and educational

4.7 Literacy: definition and measures of literacy

4.8 Literacy in India

Unit 5: Fertility and Mortality **06**

5.1 Concepts: fertility, fecundity, sterility, cohort

5.2 Crude birth rate, Total fertility rate

5.3 Concept of baby boom

5.4 Concepts: mortality and morbidity

5.5 Death rate and its measures

5.6 Level and trends of mortality in India

Unit 6: Human Settlement **08**

6.1 Classification: urban and rural

6.2 Rural-urban dichotomy

6.3 Site and situation aspect in settlement

6.4 Types: compact, semi-compact, hamleted and dispersed

6.5 Patterns of settlement

Unit 7: Rural Settlements **08**

7.1 Definition, classification of villages

7.2 Size and spacing of villages

7.3 Nearest neighbor analysis

7.4 Concepts of dispersion and nucleation

7.5 Factors affecting dispersion and nucleation

Unit 8: Urban Settlements **08**

8.1 Concept: urban place, urban agglomeration, urban sprawl

8.2 Urban settlement hierarchy

8.3 Urban-rural fringe

8.4 Rank-size rule

8.5 Central Business District (CBD)

Reference Books:

- **Bhende, A. and Kanitkar, T. (2011):** Principles of Population Studies, Himalaya Publishing House, Bombay.
- **Beaujeu, G. J. (1966):** Geography of Population, Longman Group Ltd.
- **Chandna, R.C. (Rep.2010):** Geography of Population, Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi.
- **Clark, J. I. (1973):** Population Geography, Pergamon Press Ltd., Oxford.
- **Clark, J.I. (1984):** Geography and Population: Approaches and Applications, Pergamon Press Ltd., Oxford.

- **Hudson, (1970):** Geography of Settlement, Macdonald & Evans Ltd., London.
- **Khullar, D. R. (2011):** India A Comprehensive Geography, Kalyani Publication, New Delhi.
- **Michel Chisholm (1973):** Studies in Human Geography, London.
- **Mishra, R.S.(1975):** Economics of Growth and Development, Somaiya Publication Pvt. Ltd.
- **Singh R.Y. (Rep. 2010):** Geography of Settlements, Rawat Publication.
- **MusmadeArjun, SonawaneAmit and Jyotiram More**, (2015) Population & Settlement Geography (Marathi) -Diamond Publication Pune.

Course: PAGE115: Practical in Physical Geography

No. of Credits: 04 **No. of Periods: 60**

A. Geomorphology

Unit 1: Drainage Network **02**

1.1 Stream ordering and Bifurcation ratio

1.1.1 Strahler's method

1.1.2 Horton's method

Unit 2: Drainage Basin Relief Analysis **03**

2.1 Relief analysis (for a 3 to 5 order drainage basin; based on grid method)

2.1.1 Absolute relief map

2.1.2 Relative relief map

2.1.3 Hypsometric analysis

2.1.4 Basin cross profiles

2.1.5 Block diagram (multiple section)

B Climatology

Unit 3: Climatic Element Diagrams **03**

3.1 Climatograph

3.2 Climograph

3.3 Simple wind rose

3.4 Hythergraph

3.5 Water Budget

Unit 4: Climatic Classification **02**

4.1 Koppen's classification

Reference Books:

- **AsisSarkar (2015):** Practical Geography, A Systematic Approach, Orient Black Swan

Course: PAGE116: Practical in Physical Geography

No. of Credits: 04 **No. of Periods: 60**

A. Economic Geography

Unit 1: Crop Combination and Crop Diversification **02**

1.1 Weaver's method

1.2 Jasbir Singh

Unit 2: Measures of Network Structure **01**

2.1 Ratio measure

2.2 Alpha, beta, gamma, etc.

2.3 Associated number, cyclomatric number

B. Population and Settlement Geography

Unit 3: Population Indices and Projection **02**

3.1 Age-sex pyramid

3.2 Infant mortality rate

3.3 Population growth rate

3.4 Population projection

Unit 4: Measures of Nucleation and Dispersion **03**

4.1 Rank size rule

4.2 Nearest neighbor analysis

4.3 Calculation of centrality

Unit 5: Field Visit and Report Writing **02**

5.1 One day study tour or long tour of geographical interest places anywhere in the country and excursion report

Reference Books:

- **Carter, H. (1977):** The study of Urban Geography, Edward Arnold, London.
- **Hans, R. (1978):** Fundamentals of Demography, Surjeet, Delhi.
- **Hudson F.S. (1976):** Geography of Settlements, Estover, Macdonald& Evans, England.
- **Liendsor, J.M. (1997):** Techniques in Human Geography, Routledge.
- **Lloyd, P. and Dicken, B. (1972):** Location in Space - A theoretical approach to economic geography, Harper and Row, New York.
- **Michael, E. and Hurse, E.(1974):** Transportation Geography, McGraw-Hill, New York.
- **Pollard, A.H. and FarhatYusu, (1974):** Demographic Techniques, Rushcutters Bay, N.S.W., Pergamon Press, Australia.
- **Singh, J. and Dhillon, (1984):** Agricultural Geography, Tata McGraw-Hill Publishing Company Limited, New Delhi.

- **Yeats, M.H. (1974):** An Introduction to Quantitative Analysis in Human Geography, McGraw-Hill, New York