

Savitribai Phule Pune University, Pune

T.Y.B.A

Gg. 301: Techniques of Spatial Analysis (S-4)

Effective from-June-2015

Workload: Six periods per week per batch (12 students for per Batch)

(Examination for the course will be conducted at the end of academic year).

Objectives:

1. To Introduce the Students with SOI Toposheets and to acquire the Knowledge of Toposheet Reading/Interpretation.
2. To familiarize the students with the weather instruments and their applications in Geographical phenomena.
3. To acquaint the students with IMD weather maps and to gain the knowledge of weather map Reading / interpretation.
4. To train the students in elementary statistics as an essential part of geography.
5. To awareness about GIS among the students.

Section - I

Unit No.	Topic	Learning Points	Periods
1	Toposheets	a. Introduction to Survey of India (SOI) toposheets, Marginal Information, Grid reference, Conventional signs and symbols b. Types of toposheet/Indexing of toposheets i. 1: 1000000/Million sheet ii. 1:250000/Degree sheet/Quarter inch sheet iii. 1:100000/Half inch sheet iv. 1:50000/One inch sheet v. 1:25000 vi. 1: 5000	15
2.	Methods of Relief Representation	1. Methods of Relief Representation a. Qualitative :- Hachures, Hill shading, Layer Tint b. Quantitative:- Contours, Form lines, Bench Marks, Spot Heights, Triangulation Mark, Relative Height (r) 2. Representation of Relief features by Contours a. Concave Slope, Convex Slope, Steep Slope, Gentle Slope, Terraced / Uniform b. Conical Hill, Spur, Plateau, Ridge, Saddle, Pass, Cliff & Waterfall 3. Profile a. Drawing and Description of Cross Profile of any Region from toposheet b. Drawing and Description of Longitudinal Profile of a Road or a River	15
3.	Toposheet Reading, Interpretation & data generation	1. Reading of at least three SOI toposheets one each for Plain, Plateau and Mountainous/hilly Region 2. One day field Excursion for Orientation of toposheet, Observation and Identification of Geographical Features and Preparation of a Brief Report	15

4.	Application of Remote Sensing Techniques in Geography	1. Introduction of Aerial Photographs & Satellite Image 2. Stereoscopic View of Aerial Photographs & Satellite Image and Identification of Geographical features 3. Use of Computer open source software for visualization of Aerial Photographs & Satellite Image	15
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Section - II

5.	Weather Maps & Reading	a. Introduction to Weather Maps b. Symbols in Daily Weather Report used by India Meteorological Department (IMD) c. Isobaric pattern Cyclones, Anti cyclones, V shaped Cyclones, V Shaped Anti Cyclones , Col a. Reading of Weather Map of Three Seasons i. Summer ii. Monsoon iii. Winter b. One day visit to nearby weather station of IMD	12
6.	Geographical Data & Measures of Central Tendency	a. Spatial and Temporal data b. Discrete and Continuous series c. Grouped and Ungrouped data d. Meaning and description of central tendencies- Mean, Mode, Median e. Calculation of Mean, Mode, Median for ungrouped and grouped data (two examples each)	12
7.	Measures of dispersion	a. Variance and Standard deviation for ungrouped and grouped data (two examples each)	06
8.	Correlation & Regression Testing of Hypothesis,	a. Correlation and regression i. Concept of bivariate correlation and regression ii. Meaning of coefficient of correlation iii. Calculation of Pearson's Product-Moment iv. Correlation Coefficient (Two examples) v. Calculation of Spearman Rank order vi. Coefficient (Two examples) b. Parametric and Non-parametric tests i. Chi-square test (One-sample case only) ii. Student's t-test (Comparison of sample means)	10
9	Field Excursion/ Village Survey Report	a. One short tour of two days duration and preparation of tour report OR One long tour of more than five days duration anywhere in the country and preparation of tour report OR Village survey and preparation of report	20

Suggested Reading:

1. Aher A.B., Chodhari A. P. & Bharambe S.N. Techniques of Spatial Analysis Prashant Publication Jalgaon 2015
2. David Unwin, Introductory Spatial Analysis, Methuen, London, 1981.
3. Gregory, S. Statistical Methods and the Geographer, Longman, London, 1978.
4. Hammond R and P.S. McCullagh Quantitative Techniques in Geography: An Introduction, Clarendon Press, Oxford, 1974.
5. John P.Cole and Cuchlaine A. M. King, Quantitative Geography, John Wiley, London, 1968.
6. Johnston R. J., Multivariate Statistical Analysis in Geography, Longman, London. 1973.
7. Koutsoyiannis, Theory of Econometrics, Mcmillan, London, 1973.
8. Maurice Yeats, An Introduction to Quantitative Analysis in Human Geography, McGraw Hill, New York, 1974.

9. Aronoff S. Geographic Information Systems: A Management Perspective, DDL Publication Ottawa. 1989.
10. Burrough P.A . Principles of Geographic information Systems for Land Resource Assessment Oxford University Press, New York.1986.
11. Fraser Taylor D.R. Geographic information Systems. Pergamon Press, Oxford.1991.
12. Maquire D. J. M.F. Goodchild and D. W. Rhind (eds.). Geographic information Systems:Principles and Application. Taylor & Francis, Washington. 1991.
13. Mark S Monmonier . Computer-assisted Cartography. Prentice-Hall, Englewood Cliff, New Jersey, 1982.
14. Peuquet D.J. and D.F. Marble, Introductory Reading in Geographic Information Systems. Taylor & Francis, Washington.1990.
15. Star J and J. Estes. Geographic Information Systems: An Introduction. Prentice- Hall, Englewood Cliff, New Jersey, 1994.
16. Peter Haggett, Andrew D. Cliff, & Allan Frey, Location Methods Vol. I and II, Edward Arnold, London, 1977.
17. Misra, R.P. and Ramesh, A. Fundamentals of Cartography, McMillan Co., New Delhi,1986.
18. Pal, S.K. Statistics for Geoscientists — Techniques and Applications, Concept, New Delhi,1998.
19. Robinson, A.H. et al.: Elements of Cartography, John Wiley & Sons, U.S.A.,1995.
20. Sarkar A.:K Practical Geography: A Systematic Approach, Oriental Longman, Calcutta, 1997.
21. Singh, R.L. and Dutt, P.K.: Elements of Practical Geography, Kalyani Publishers, New Delhi,1979
22. Choudhar A. H., Choudhari J. V. Practical Geography, K. S. Publication, Pune (2013).

Savitribai Phule Pune University, Pune
T.Y.B.A
Gg.: 310 Regional Geography of India (G-3)
June 2015

Objective : -

1. To acquaint the students with geography of our Nation.
2. To make the student aware of the magnitude of problems and Prospects at National level.
3. To help the students to understand the inter relationship between the subject and the society.
4. To help the students to understand the recent trends in regional studies.

SECTION - I

Sr. No.	Topic	Sup Topic	Learning Points	Periods
1	Introduction	Location , Extent and Geopolitical Significance	1. Historical Background 2. Location and Extent 3. Relationship with Neighboring Countries 4. Geopolitical Importance of Indian Ocean.	10
2	Physiography	Major Physiographic Regions and their Importance	1. The Northern Mountains 2. The North Indian Plains 3. The Peninsular Plateau 4. The Coastal low lands 5. The Islands	12
3	Drainage	Drainage System of India The Himalayan River System The Peninsular River System	1. The Indus , The Ganga , The Brahmaputra 2. East Flowing Rivers- Mahanadi, Godavari, Krishna, Kaveri. 3. West Flowing Rivers- Narmada, Tapi, Mahi 4. Rivers of the Sahyadri - Amba & Damanganga	12
4	Climate	Characteristics , Origin and Mechanism of Monsoon, Various Seasons	1. Characteristics of Indian Climate 2. Role of Various Controlling Factors on Climate of India 3. Monsoon: Origin and Mechanism 4. Various Seasons and Weather Associated with them	11

SECTION – II

5	Soils and Natural Vegetation	Types and Distribution	Types of Soils and its Distribution Soil Degradation and Conservation Types of Natural Vegetation and its Distribution	12
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			Deforestation and Conservation	
6	Minerals and Energy Resources	Mineral Resources Energy Resources	1.Mineral Resources & its distribution Iron ore, Manganese, Bauxite, Copper 2.Energy Resources- a)Major Conventional & its Distribution Coal, Mineral Oil, Natural Gas b)Non-conventional - Hydroelectricity, Solar energy, Wind energy, Biogas, Atomic energy	12
7	Agriculture	Significance and Recent Trends in Agriculture	1. Significance of Agriculture in Indian Economy 2. Green Revolution 3. White Revolution 4.Blue Revolution 5. Livestock Resources, 6.Tissue Culture & Horticulture 7. Poly House and Agriculture	11
8	Planning and Development	Regional Planning and development	1.Concept, Objectives, Need, Nature of Regional Planning 2.Experience of Regional Planning in India 3.Regional Development of Maharashtra	10

Suggested Readings:

1. Aher A.B , Chaodhari A. P & Chaodhari Archana. Regional Geography of India Prashant Publication Jalgaon 2015
2. Deshpande C.D: India-A Regional Interpretation Northern Book Centre, New Delhi.1992.
3. Farmer, B.H.: An Introduction to South Asia. Methuen, London, 1983.
4. Govt. of India: India - Reference Annual, 2001 Pub. Div, New Delhi, 2001.
5. Govt. of India: National Atlas of India, NATMO Publication, Calcutta..
6. Govt. of India: The Gazetteer of India. Vol I & III Publication Division, New Delhi, 1965.
7. Learmonth, A.T.A. et.al(ed.) : Man and Land of South Asia Concept, New Delhi.
8. Mitra, A.: Levels of Regional Development India Census of India, Vol I, Part I-A (i) and (ii) New Delhi, 1967.
9. Routray, J.K.: Geography of Regional Disparity Asian Institute of Technology, Bangkok, 1993.
10. Shafi, M: Geography of South Asia, McMillan & Co., Calcutta, 2000.
11. Singh, R.L.(ed.): India: A Regional Geography. National Geographical Society. India, Varanasi, 1971.
12. Spate, O.H.K. and Learmonth, A.T.A.; India and Pakistan - Land, People and Economy Methuen & Co., London, 1967.
13. P. G. Saptarshi, J. C. More, V. R. Ugale & A. H. Musmade :A Geographical Region of India : Diamond Publication (2009) (Marathi)
14. Patil S. G., Suryawanshi R. S., Pacharne S., Choudhar A. H. : Economic Geography, Atharav Prakashan, Pune. (2014) (Marathi).
15. Aher A. B. , Arekar R.: Commercial Geography, Atharav Prakashan, Pune. (2013) (Marathi).
16. Datt & Sunderm: Indian Economy (2014)

Savitribai Phule, Pune University, Pune
T.Y.B.A (General Geography) G-3
Gg. 310:HUMANGEOGRAPHY
From June 2015

Objectives:

1. This course is to acquaint the students with the nature of man-environment relationship and human capability.
2. To adopt and modify the environment under its varied conditions from primitive life style to the modern living;
3. To identify and understand environment and population in terms of their quality and spatial distribution pattern.
4. To comprehend the contemporary issues facing the global community.

Section – I

Sr. No.	Topic	Learning Points	Periods
1	Introduction to Human Geography	a) Meaning and Definition of Human Geography. b) Nature, Scope and Importance of Human Geography, approach of Human Geography & Branches of Human Geography	10
2	Development of Human Geography	a) Pre-historical Period. b) Medieval Period of Human Geography. c) Modern Period of Human Geography. d) Concepts of Determinism, Possibilism, Stop and Go Determinism	13
3	Human Evolution and Races	a) Stages of Human Evolution. b) Meaning and Definition of Human Race c) Bases of Human Race d) Griffith Taylor's Theory of Human Race e) Pure and Mixed Races	12
4	Form of Adaptation to the Environment	a) Human life in Cold Region - ESKIMO b) Human life in Tropics - PYGMY and BUSHMEN	10

Section – II

5	Study of Indian Tribes	Regional Distribution of Tribes in India a) Bhill b) Gond c) Naga d) Tribes in Maharashtra	11
6	Human Culture	a) World Languages & their distribution b) World's Major Religions & their distribution d) Distribution of Languages & Religions in India	12
7	Movement of Mankind	a) Meaning and Definition of Migration b) Type of Migration c) Causes & Effects of Migration d) Migration in Modern Period	11
8	Population & Resources	a) World Population Distribution b) Effects of Population Growth on Natural Resources c) Malthus Theory of Population Growth d) Population as a Resource	11

Suggested Readings:

1. Aher A. B , Pail V. J. Human Geography Prashant Publication Jalgaon 2015
2. Aher A. B , Markad D.M. Human Geography Payal Publication Pune 2015
3. Bergwan, Edward E: Human Geography; Culture, Connections and Landscape, Prentice-Hall, New Jersey.1995.
4. Carr, M.: Patterns, Process and change in Human Geography. MacMillan Education, London,1987.
5. Fellman, J.L.: Human Geography—Landscapes of Human Activities. Brown and Benchman Pub., U.S.A., 1997.
6. DeBlij H.J.: Human Geography, Culture, Society and Space John Wiley, New York,1996.
7. Johnston, R.J. (editor).: Dictionary of Human Geography Blackwell, Oxford, 1994:
8. Mc Bride, P.J.: Human Geography Systems, Patterns and Change, Nelson, U.K. and Canada,1996.
9. Michael, Can: New Patterns: Process and Change in Human Geography Nelson,1997
10. Rubenstein, J.H. and Bacon R.S.: The Cultural Landscape — an Introduction to Human Geography. Prenice Hall, India, New Delhi,1990.
11. Singh, K.N. :People of India, An introduction Seagull Books, 1992
12. Spate O.H.K. and Learmonth A.T.A. : India and Pakistan Methuen, London.1968.
13. U. V. Jagdale & P. G. Saptarshi: Human Geography (2007), Diamond Publication (Marathi)

SAVITRIBAI PHULE UNIVERSITY OF PUNE
T.Y.B.A. GEOGRAPHY
Gg-320 – AGRICULTURAL GEOGRAPHY (S-3)
From June – 2015

- Objectives:** 1. To Introduce students Agricultural activities and its relation with Geography.
2. To Familiarize the students with new modern technical methods and their applications in Agricultural activities.
3. To enable students to apply Previously knowledge in Problems and Prospects in agriculture

Section- I

Sr. No.	Topic	Units	Sub Units	Periods
1	Introduction of Agricultural Geography	A. Meaning ,Nature & Scope B. Approaches C. Importance D. Trends	Definition, Nature & Scope of Agricultural Geography Approaches 1. Regional approach 2. Systematic approach 3. Commodity approach 4. Recent approaches Importance of Agriculture in Indian Economy Recent Trends in Agriculture Geography	12
2	Determinates of Agriculture	A. Physical Factors B. Economic Factors C. Social Factor D. Technological Factors	1.Relief 2.Climate 3.Soil 1.Capital, 2.Transportation 3.Market, 4.Storage, 5. Export Import 1.Land holding, 2.Land fragmentation 3. Labour, 4.Traditional Methods 5. Farmers view towards agriculture 1. Irrigation 2.Mechanization 3.Manures, Fertilizers 4.Pesticides	15
3	Types of Agriculture	Characteristics of A. Subsistence Agriculture B. Commercial Farming	1.Shifting Cultivation 2.Dry land farming 3.Intensive Subsistent farming 1.Mixed farming 2.Horticulture / Truck farming 3. Community farming	10
4	Problems & Prospects of Agriculture	Problems and Prospects with Indian examples	1.Natural 2.Economical 3.Social 4.Political	08
Section II				
5	Role of irrigation in Agricultural Development	A. Need of Irrigation B. Types of Irrigation C. Methods of Irrigation	1.Importan of irrigation 1.Canals 2.Lake 3.Well 4.Borewell & Tube well 1.Flood irrigation 2.Ring &Basin 3.Drip irrigation 4.Sprinkler irrigation	12
6	Dry Land farming And Watershade Management	A. Concept & Need B. Methods of Watershed Management	1.Concept & Need, Dry Land Farming Management in India 2. Concept of Watershed Management Methods : 1. Continuous Contour Tranches (CCT) 2.Gabian Bunds, 3.Nala Bunding 4. Biological Bunds, 5. Kohlapur Type (K.T.) weir	15

			6. Vanrai Bunds, 7. Percolation Tanks 8. Farm Lake / Ponds, 9. Dams, 10. Barrages	
7	Allied Areas in Agriculture & Agriculture Development	Concept of Agricultural Development with new Techniques	1. Dairy farming 2. Poultry 3. Sheep and Goat farming 4. Nursery 5. Api Culture 6. Fish Farming 6. Poly houses 7. Tissue Culture 8. Food & Fruit Processing 9. Agro-Tourism	10
8	Sustainable Agricultural Development and Agriculture in India	A. Ecological Conservation B. Characteristics of Indian agriculture	1. Waste Land Management 2. Organic farming 3. Crop rotation 4. Group Plantation 5. Pest and Weed Management 6. Agro Forestry 1. Green Revolution in India-Problems Associated with Indian Agriculture 2. National Agricultural Policy 3. Various Schemes of Central and State Govt. for Agricultural Development and Farmers	08

Suggested Readings

1. Aher A. B., Salunkhe V. Agriculture Geography, Diamond Publication, Pune (2015)
2. Bayliss Smith, T.P. : The Ecology of Agricultural Systems. Cambridge University Press, London, 1987.
3. Berry, B.J.L. et. al. : The Geography of Economic Systems. Prentice Hall, New York, 1976.
4. Brown, L.R. : The Changing World Food Prospects - The Nineties and Beyond. World Watch Institute, Washington D.C., 1990.
5. Dyson, T. : Population and Food - Global Trends and Future Prospects. Routledge, London, 1996.
6. Gregor, H.P. : Geography of Agriculture. Prentice Hall, New York, 1970.
7. Grigg, D.B. : The Agricultural Systems of the World. Cambridge University Press, New York 1974.
8. Hartshorn, T.N. and Alexander, J.W. : Economic Geography. Prentice Hall, New Delhi, 1988
9. Mannion, A.M. : Agriculture and Environment Change. John Wiley, London, 1995.
10. Morgan W.B. and Norton, R.J.C. : Agricultural Geography. Methuen, London, 1971.
11. Morgan, W.B. : Agriculture in the Third World - A Spatial Analysis. Westview Press, Boulder, 1978.
12. Sauer, C.O. : Agricultural Origins and Dispersals. M.I.T. Press, Mass, U.S.A., 1969.
13. Singh, J. and Dhillon, S.S. : Agricultural Geography, Tata McGraw Hill Pub., New
14. Singh, J. and Dhillon, S.S. (1988), "Agricultural Geography", 2nd edition, Tata McGraw-Hill, New Delhi
15. Wigley, G.(1981), Tropical Agriculture: The Development of Production, 4th edition, Arnold, London
16. Saptarshi P.G., More J.C., Ugale V.R., Musmade A.H.(2009), "India A Geographical Analysis" Diamond, Pune.
17. Patil S. G., Suryawanshi R. S., Pacharne S., Choudhar A. H. : Economic Geography, Atharav Prakashan, Pune. (2014) (Marathi).

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T.Y.B.A

Gg-320: Population and Settlement Geography (S-3)

Effective from-June-2015

Objective:-

1. To provide an understanding of spatial and structural dimensions of population
2. To familiarizing the students with global and regional level problems.
3. To acquaint the students with the spatial, political and structural characteristics of human settlement under varied environmental conditions.

Section-A. Population Geography

Unit No.	Topic	Sub Topic	Learning Points	Periods
1	Introduction	Nature and Scope	Definitions, Nature and Scope of Population Geography	10
		Source of Population Data	Census, National Sample Survey, Sample Registration Survey, NFHS, DLHS Data, Demographic Surveys and other Sources	
2	Population Dynamics	Spatial Pattern of Distribution	1) Determinates of Distribution and Density of Population 2) Distribution of Population – World & Indian Scenario 3) Population Growth- Global & Indian Trend	10
		Composition of Population	Population Composition: Age and Sex, Rural-Urban & Economic	
3	Demographic Attributes	Human Migration	1. Migration-Classification, Determinants and Consequences of Migration. 2.Measures – Fertility, Morbidity and Mortality, Marital Status 3.Human Development Index 4. Illegal Migrations and its Impacts Migration and its Impacts on Smarts Cities and Smart Villages	14
		Theories of Population Growth	1) Demographic Transition Model [DTM] 2) Malthus: Population Theory	
4	Population Policies	Population Policies and Programmes	1.Population Policies in the Context of Growth, Structure, Distribution & Quality Life 2. Evolution of Family Welfare Programme in India 3.National Population Policies in India [After 1991]	11

Section-B- Settlement Geography

5	Introduction of Settlement Geography	Definition, Nature and Scope	Definition, Nature and Scope of Settlement Geography	12
		Characteristics	1) Characteristics of Settlement Geography 2) Branches of Settlement Geography	
6	Man-Environment Relationship	Factors Influencing the Growth and Distribution of Settlements.	1. Physical 2. Economic 3. Social 4. Political	10
7	Settlement	Site and Structure	Site, Situation, Type, Size, Spacing and Patterns	12

	Site and Structure		of Settlements	
8	Concepts of Settlement and Urbanization	Various Concepts with examples	1. Urbanization 2. Centrality 3. City Region 4. Urban Fringe 5. Rank-size Rule 6. Smart City Concept 7. Smart Village 8. C.B.D. 9. Hierarchy of Settlement	11

Suggested Readings

1. Beaujeu-Garnier, J. : Geography of Population (Translated by Beaver, S.H.) Longmans, London, 1966.
2. Census of India 2001 Series-I India Provisional Population Totals. Published by Registrar General & Census Commissioner, India, 2001.
3. Census of India, 1991 India : A State Profile Published by office of the Registrar General of India, Census Operations, New Delhi.
4. Chandna, R.C. : Geography of Population: Concepts, Determinants and Patterns, Kalyani Publishers, New Delhi, 2000.
5. Clark J.I: Population Geography, Permagon Press, New York, 1965.
6. Sundram K.V. & Nangia Sudesh, (editors): Population Geography, Heritage Publishers, Delhi, 1986.
7. Peters: G.L. and Larkim R.P: Population Geography: Problems, Concepts and Prospects Kendele-Hunt Iowa, 1979.
8. Srinivasan K. and M. Vlassoff Population Development nexus in India: challenges for the new millennium. Tata McGraw Hill Publishing Co. Ltd., New Delhi 2001.
9. Trewartha, G.T. : A Geography of Population : World Patterns, John Wiley & Sons, Inc., New York, 1969.
10. Trewartha, G.T. : The More Developed Realm: A Geography of its Population, Pergamon Press, Oxford, 1978.
11. Trewartha, G.T.: The Less Developed Realm - A Population Geography, McGraw-Hill, New York, 1972.
12. UNDP: Human Development Report, Oxford University Press 2001.
13. Zelinsky, W. : A Prologue to Population Geography, Prentice-Hall, Englewood Cliffs, 1966.
14. Carter H.: The Study of Urban Geography, Edward Arnold, London, 1972.
15. Chisholm, M.: Rural Settlement and Land Use, Hutchinson, London, 1970.
16. Clout, R.D. :Rural Geography, Pergamon Press, London, 1970.
17. Deshpande, C.D.: Shehre, Continental Prakashan, Pune, 1983 (Marathi).
18. Dickinson, R.E. City, Region and Regionalism, Kegan Paul, Trench, Trubner & Co., London, 1947.
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20. Money, D.C. : Patterns of Settlements, Evan Brothers, London, 1972.
21. Mukerji, R.K. : Man and His Habitation, Popular Books, Bombay, 1968.
22. Nangia S.: Delhi Metropolitan Region, Rajesh Publications, 1976.
23. Perpillou, A.: Human Geography, Longmans, London, 1966.
24. Singh, R.L.: Readings in Rural Settlement Geography, Banaras Hindu University, Department of Geography, Varanasi, 1972.