Punyashlok Ahilyadevi Holkar Solapur University, Solapur

NAAC Re Accredited – 2022 'B^{++}' Grade (CGPA 2.96)

Name of the Faculty: Science & Technology

(As per National Education Policy 2020)

Syllabus: Geography

Name of the Course: B. A. III (Semester V & VI)

(Syllabus to be implemented from June 2026)

B. A. III (Geography) Semester V & VI

Syllabus Structure (June 2026)

Level	Semester	Discipline	Paper	Title of the paper	Lecture per week	Total Marks	Credit
5.5	V	Major	DSC – VII (T)	Regional planning and Development	4	100	4
			DSC - VIII (P)	Map Making & Map Interpretation (Practical -I)	8	100	4
		Major Elective	DSE-I (T)	Population Geography	4	100	4
			or				
			DSE-II (T)	Political Geography	4	100	4
		Minor	Minor – V (T)	Resource Geography	4	100	4
		VSC	VSC - III (P)	Cartographic Techniques in Geography	4	50	2
		IKS (Subject Specific)	IKS (T)	Ancient Indian Geographical Thought	2	50	2
		Filed Project	FP – II (P)	Field Project in Geography - II	4	50	2
	VI	Major	DSC - IX (T)	Evolution of Geographical Thought	4	100	4
			DSC- X (P)	Advance Tools, Techniques in Geography (Practical - II)	8	100	4
		Major Elective	DSE-III (T)	Social Geography	4	100	4
			or				
			DSE-IV (T)	Applied Geography	4	100	4
		Minor	Minor – VI (T)	Agriculture Geography	4	100	4
		VSC	VSC – IV (P)	Surveying	4	50	2
		OJT	OIT (P)	On Job Training in Geography	8	100	4

1 Credits of Theory = 1 Hours of teaching per week,

1 Credits of Practical = 2 Hours per week

DSC- Discipline Specific Course

DSE- Discipline Specific Elective

VSC- Vocational Skill Course

Punyshlok Ahilyadevi Holkar Solapur University, Solapur

Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-V (Geography)

Title of the Paper: Regional Planning and Development

Paper Code: DSC – VII (T) Total Lectures- 60

Course Credit: 4 Total Marks- 100

Course Preamble:

The paper "Regional Planning and Development" provides an understanding of the concepts, principles, and approaches related to regional geography and planning. It introduces students to the idea of regions, regionalization, and their significance in geographical studies and development planning. The course explains the characteristics, types, and demarcation of regions for effective regional analysis. It also focuses on the concept and types of regional planning and the selection of planning regions in India. The paper includes important regional planning models such as the Growth Pole Model of Perroux and the Central Place Theory of Walter Christaller. Students will learn about balanced regional development and spatial organization through these theories and models. The course further highlights various indicators used to measure economic, social, environmental, and human development. Overall, the paper develops analytical, planning, and decision-making skills related to regional development and geographical studies.

Course Objectives:

1) To understand the concept of region, regionalization, and their importance in geographical studies.

2) To explain the principles, types, and significance of regional planning and planning regions in India.

3) To study important models and theories related to regional planning and development.

4) To analyze various indicators used for measuring economic, social, environmental, and human development.

Course Outcomes:

1) Students will be able to explain the concept, characteristics, and types of regions and regionalization.

2) Students will understand the process and importance of regional planning and planning regions in India.

3) Students will be able to interpret major regional planning models and theories for spatial analysis.

4) Students will acquire the ability to measure and evaluate regional development using different development indicators.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
I	**Region and Regionalization** 1.1 Concept of Region and Regionalization 1.2 Characteristics of Region 1.3 Types of Regions 1.4 Demarcation of Region	15	01
II	**Regional Planning** 2.1 Concept of Regional Planning 2.2 Types of Regional Planning 2.3 Choice of a Region for Planning 2.4 Planning Regions of India	15	01
III	**Models for Regional Planning** 3.1 Growth Pole Model of Perroux 3.2 Centre Place Theory of Walter Christaller	15	01
IV	**Measuring of Development** 4.1 Indicators of Economic Development 4.2 Indicators of Social Development 4.3 Indicators of Environmental Development 4.4 Human Development index	15	01

References:

1. Singh R. L.: India – A Regional Geography, Silver Jubilee Publication, Varanshi (1971)
2. Sengupta P. and Other: Economic Regionalization of India: Problem and Approaches (1965)
3. Mishra R. P.: Regional Development Planning in India, Vikas Publishing House Pvt Ltd, New Delhi (1974)
4. Chand Mahesh and Puri Vinay Kumar: Regional Planning in India, allied Publishers Private limited New Delhi, 1983.
5. Negi B. S.: Regional Geography of India, Kedar Nath Ram Nath, Meerut (1990)
6. Kalpana Rajaram: Geography, Spectrum Books Pvt. Ltd, New Delhi, 2007.
7. Surender Singh: Geography, TATA Mcgraw Hill book Company, New Delhi (2007)
8. सवदी ए. बी. आणि कोळेकर पी. एस. : भूगोलाची मुलतत्वे (खंड दुसरा), निराली प्रकाशन, पुणे (2009)
9. बापू राऊत आणि शिवाजी मस्के: प्रादेशिक नियोजन आणि विकास, निराली प्रकाशन, पुणे (2022)
10. संजय गुप्ता: भूगोल, रमेश पब्लिशिंग हाऊस, नई दिल्ली.

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Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-V (Geography)

Title of the Paper: Map Making & Map Interpretation (Practical -I)

Paper Code: DSC- VIII (P) Total Lectures- 120

Course Credit: 4 Total Marks- 100

Course Preamble:

Map Making and Map Interpretation is an important practical branch of Geography that provides knowledge about maps, scales, projections, relief representation, and topographical interpretation. The course helps students to understand the principles and techniques of map construction and spatial representation. It develops practical skills in the use of scales, projections, contour analysis, and preparation of relief profiles. The syllabus also introduces the interpretation of Survey of India Toposheets and Indian Daily Weather Maps. Students gain knowledge about weather instruments and their applications in climatological studies. Overall, the course enhances cartographic, analytical, and interpretative abilities essential for geographical studies and research.

Course Objectives:

1) To introduce students to the fundamental concepts of maps, scales, and map projections used in geographical studies.

2) To develop practical skills in the construction and interpretation of graphical scales, map projections, and relief profiles.

3) To train students in the interpretation of Survey of India topographical maps with reference to physical and cultural features.

4) To provide knowledge about weather instruments and the interpretation of Indian Daily Weather Maps for understanding atmospheric conditions and weather patterns.

Course Outcomes:

1) Students will be able to understand and apply the concepts of maps, map scales, and map projections in geographical analysis.

2) Students will be able to construct graphical scales, map projections, and relief profiles using appropriate cartographic techniques.

3) Students will be able to interpret Survey of India topographical maps with respect to physical and cultural landscapes.

4) Students will be able to identify weather instruments and interpret Indian Daily Weather Maps for analyzing weather conditions and atmospheric phenomena.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
I	**Introduction to Map and Map Scales**		

	1.1 Map- I. Map – Definition and Elements of map II. Classification of Maps: Based on Scale and Purpose **1.2 Map Scale**: I. Meaning and Definition of Map Scale II. Methods of Representation of scale - Verbal, Numerical and Graphical III. Conversion of Scale IV. Construction of Graphical Scale –i) Simple (Plane Scale) ii) Time and Distance Scale iii) Diagonal Scale	30	01
II	**Map Projection** **2.1 Definition, Classification of Projections:** I. Based on Method of Construction: perspective and non-perspective II. Based on Developable Surface used: Conical, Cylindrical, Zenithal, and Conventional. III. Based on Position of Tangent Surfaces: Polar, Equatorial (normal), Oblique. IV. Based on Position of view point or light: Gnomonic, Stereographic, Orthographic **2.2 Graphical Construction of the following Projections with Properties and Use:** I. Zenithal Polar Gnomonic Projection II. Zenithal Polar Equal Area Projection III. Simple Conical Projection with one standard Parallel IV. Simple Conical Projection with two standard Parallel V. Cylindrical equal area projection VI. Mercator's Projection and Reference to Universal Transverse Mercator (UTM) Projection	30	01
III	**Relief Profile Analysis** **3.1 Slope and Gradient** I. Types of Slopes: Gentle, Steep, Even, Uneven, Convex, Concave, Terraced. II. Methods of Relief Representation **Qualitative**: - Hachures, Hill shading, Layer Tint **Quantitative**: - Contours, Form lines, Spot Heights, Bench Marks, Triangulation Mark III. Expression of Slopes: a) Gradient b) Degree c) Per Cent	15	0.5

	d) Mills IV. Representation of Relief by Contours: Hill, Mountain, Ridge, Cliff, Saddle, Plateaue, Col or Pass, Gorge, 'V' Shaped Valley, Waterfall, 'U' Shaped Valley, Cirque, Sea cliff. **3.2 Profiles-** Simple profile and longitudinal profile		
IV	**Topographical Maps** I. Development of Survey of India II. Indexing of S.O.I. Topographical Maps III. Signs, Symbols and Colors used in SOI Toposheet IV. Interpretation of S.O.I.'s Topographical Map (Mountain, Plateau and Plain) a) Marginal Information b) Physical environment: Relief, Drainage and Vegetation c) Cultural environment: Settlements, Transportation and Communication, Irrigation. d) Land Use	15	0.5
V	**Weather Instruments and IMD Maps** **I. Study of weather Instruments** with reference to Principle, Mechanism, and Function a) Thermograph b) Barograph c) Dry and Wet Bulb Thermometer d) Wind vane e) Cup Anemometer f) Rain Gauge. **II.** Sign and Symbols used in Indian Daily Weather Maps. **III. Isobaric Patterns**: Cyclone, Anticyclone, Col, Wedge, Trough and Secondary Depression. **IV. Interpretation of Indian Daily Weather Maps** (Rainy, Winter and Summer) Marginal Information, Atmospheric Pressure, Winds, Clouds, Rainfall, other weather phenomena's, Sea Condition, Temperature departure from normal.	30	01

Note:

1. Use of stencils, log tables, computer and calculator is allowed.

2. Journal should be completed and duly certified by practical in-charge and Head of the Department.

3. Examiners should set jointly the question paper for each batch.

4. Each batch should not more than 12 students

References:

1. Bygoot, J: An Introduction to Mapwork and Practical Geography, University Tutorial, London 1964.

2. Khan MD. Zulfequar Ahmad: Text Book of Practical Geography, Concept Publishing

Company, New Delhi, 1998

3. Mishra, R.P. and Ramesh A.: Fundamentals of Cartography, Concept Publishing Company, New Delhi, 2000

4. Monkhouse F.J. and Wilkison, H.R.: Maps and Diagrams, Mathuen. London, 1971.

5. Negi., Dr. Balbir Singh: Practical Geography, KedarNath Ram Nath, Meerut, Delhi.

6. Raisz, E.: Principals of Cartography, McGraw Hill Book Com., Inc, New York, 1962.

7. Robinson, A.H. and Sale, S.D.: Elements of Cartography, John Witey and Sons, Inc, New York, 1969.

8. Saha, Pijushkanti and BasuPartha: Advanced Practical Geography – A Laboratory

9. Sarkar, Ashis: Practical Geography: A systematic Approach, Orient Longman limited, Calcutta, 1997.

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Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-V (Geography)

Title of the Paper: Population Geography

Paper Code: DSE – I (T) Total Lectures- 60

Course Credit: 4 Total Marks- 100

Course Preamble:

Population Geography is an important branch of Human Geography that studies the distribution, growth, composition, and dynamics of population across the world. The course provides knowledge about the nature, scope, significance, and sources of population data such as Census and statistical reports. It helps students to understand the patterns and factors affecting population distribution and growth. The syllabus explains important theories of population growth including Malthus Theory and Demographic Transition Theory. It also focuses on fertility, mortality, and migration as major components of population dynamics. Students gain understanding about population composition in terms of age-sex structure, literacy, and rural-urban characteristics. The course further highlights contemporary population issues such as HIV/AIDS and Covid-19 to understand present demographic challenges.

Course Objectives:

1) To introduce students to the fundamental concepts, nature, scope, and significance of Population Geography.

2) To develop understanding about population growth, distribution, and major theories of population growth at the global level.

3) To analyze the components of population dynamics such as fertility, mortality, and migration along with their causes and effects.

4) To examine population composition and contemporary population issues such as urbanization, literacy, HIV/AIDS, and Covid-19 and Population Policy like USA and India.

Course Outcomes:

1) Students will be able to understand the concepts, nature, scope, and significance of Population Geography and sources of population data.

2) Students will be able to analyze population growth, distribution patterns, and theories of population growth at the world level.

3) Students will be able to explain the components of population dynamics such as fertility, mortality, and migration along with their causes and effects.

4) Students will be able to interpret population composition and contemporary population issues related to literacy, urbanization, HIV/AIDS, and Covid-19 and Population Policy like USA and India.

Contents of the Course

Unit No.	Details	No. of Lectures	No. of Credits
1	**Introduction to Population Geography** 1.1 Definition of population geography 1.2 Nature and Scope of population Geography 1.3 Significance of population Geography 1.4 Sources of population data (Census, Statistical abstract, NSS)	15	01
2	**Population Growth and Distribution** 2.1 Growth of World population 2.2 Factors affecting the distribution of population 2.3 Population distribution of the world 2.4 Theories of population Growth: Malthus Theory and Demographic Transition Theory	15	01
3	**Population Dynamics** 3.1 Concept of population Dynamics 3.2 Fertility: Causes, Effects and Measures 3.3 Mortality: Causes, Effects and Measures 3.4 Migration: Types, causes and effects, Major international migration of the world after World War II	15	01
4	**Population Composition and Policies** 4.1 Age-Sex Composition: Causes, Effects, Measures and Characteristics 4.2 Rural and Urban Composition: Causes, Effects, Measures and Characteristics 4.3 Contemporary Issues: HIV/ AIDS, Covid 19 4.4 Population Policy - USA and India	15	01

References:

1. Barrett H. R., 1995: Population Geography, Oliver and Boyd.
2. Bhende A. and Kanitkar T., 2000: Principles of Population Studies, Himalaya Publishing House.
3. Chandna R. C. and Sidhu M. S., 1980: An Introduction to Population Geography, Kalyani Publishers.
4. Clarke J. I., 1965: Population Geography, Pergamon Press, Oxford.
5. Jones, H. R., 2000: Population Geography, 3rd ed. Paul Chapman, London.
6. Lutz W., Warren C. S. and Scherbov S., 2004: The End of the World Population Growth in the 21st Century, Earthscan

7. Newbold K. B., 2009: Population Geography: Tools and Issues, Rowman and Littlefield Publishers.
8. Pacione M., 1986: Population Geography: Progress and Prospect, Taylor and Francis.
9. Wilson M. G. A., 1968: Population Geography, Nelson.
10. Chandna, R C (2006), Jansankhya Bhugol, Kalyani Publishers, Delhi
11. Trewartha, G T (1969), A Geography of Population: world patterns, John Wiley, New York
12. विठ्ठल घारपुरे : लोकसंख्या भूगोल, पिंपळापूरे अँड कं. पब्लिशर्स, नागपूर (1999)
13. मस्के शिवाजी, राऊत बापू आणि दत्तात्रय हरवाळकर: लोकसंख्या भूगोल, निराली प्रकाशन, पुणे (2022)

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Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-V (Geography)

Title of the Paper: Political Geography

Paper Code: DSE - II (T) Total Lectures- 60

Course Credit: 4 Total Marks- 100

Course Preamble:

The paper Political Geography introduces students to the relationship between geography and political processes at regional, national, and global levels. The course explains the meaning, nature, scope, and historical development of political geography as an important branch of geography. It focuses on major political concepts such as state, nation, boundaries, frontiers, and geopolitics. The syllabus also examines the geographical elements that influence the strength and functioning of a state. Special emphasis is given to important geopolitical theories proposed by scholars such as Halford J. Mackinder and Nicholas J. Spykman. The course further discusses resource conflicts and issues related to displacement, rehabilitation, and compensation in major water and development projects. Case studies such as the Krishna River water dispute, Ganges water conflict, Sardar Sarovar Project, and Ujani Dam help students understand contemporary political and environmental issues. Overall, the paper develops analytical understanding of political organization, territorial issues, and resource management from a geographical perspective.

Course Objectives:

1) To understand the meaning, nature, scope, and historical development of political geography.

2) To explain the concepts of state, nation, boundaries, frontiers, and geopolitics along with the geographical elements of a state.

3) To study major theories in political geography such as the Sea Power theory, Heartland Theory and Rimland Theory.

4) To analyze resource conflicts, displacement issues, and rehabilitation problems related to major water and development projects in India.

Course Outcomes:

1) Students will be able to explain the basic concepts, nature, scope, and significance of political geography.

2) Students will be able to analyze the geographical elements and geopolitical concepts related to state and nation.

3) Students will be able to interpret major political geography theories such as Sea Power, the Heartland Theory and Rimland Theory.

4) Students will be able to evaluate resource conflicts, displacement issues, and rehabilitation policies related to major development projects in India.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
I	**Introduction of Political Geography** 1.1 Definition of Political Geography 1.2 Nature and Scope of Political Geography 1.3 Historical Development of Political Geography 1.4 Significance of Political Geography	15	01
II	**Concepts in Political Geography** 2.1 Concept of State, Nation, State- Nation, Frontiers and Boundaries 2.2 Elements of State: Location, Shape, Size, Topography, Climate, Vegetation, Resources, Population and Communication. 2.3 Concept of Geopolitics	15	01
III	**Theories in Political Geography** 3.1 Sea Power Theory of A. T. Mahan 3.2 The Heartland Theory of H. J. Mackinder 3.3 Rim Land Theory of N. J. Spykman	15	01
IV	**Resource Conflicts and Politics of Displacement** 4.1 Krishna Water Conflict (Inter State) 4.2 Ganga Water Conflict (International) 4.3 Issues of Relief, Compensation and Rehabilitation: Sardar Sarovar Projects 4.4 Issues of Relief, Compensation and Rehabilitation: Ujani Projects	15	01

References:

1. Kalpana Rajaram: Geography, Spectrum Books Pvt. Ltd, New Delhi, (2007).
2. Surender Singh: Geography, TATA Mcgraw Hill book Company, New Delhi (2007)
3. Adhikari Sudeepta: Political Geography, Rawat Publication, Jaipur (2017)
4. मगर जयकुमार: राजकीय भूगोल, विद्या प्रकाशन, नागपूर (1994)
5. उपाध्ये मु. कृ.: राजकीय भूगोल, पिंपळापुरे अंड कंपनी पब्लिकेशर्स, नागपूर (1985)
6. सवदी ए. बी. आणि कोळेकर पी. एस. : भूगोलाची मुलतत्वे (खंड दुसरा), निराली प्रकाशन, पुणे (2009)
7. घारपुरे विठ्ठल: राजकीय भूगोल, पिंपळापुरे अंड कंपनी पब्लिकेशर्स, नागपूर (2013)
8. राऊत बापू आणि मस्के शिवाजी : राजकीय भूगोल, निराली प्रकाशन, पुणे (2022)

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Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-V (Geography)

Title of the Paper: Resource Geography

Paper Code: Minor - V (T) Total Lectures- 60

Course Credit: 4 Total Marks- 100

Course Preamble:

The paper "Resource Geography" introduces students to the study of natural and human resources and their importance in regional and economic development. The course explains the meaning, nature, scope, and classification of resources from a geographical perspective. It focuses on the distribution, utilization, problems, and conservation of major natural resources such as soil, water, forests, and marine resources. Special attention is given to conventional and non-conventional energy resources including coal, petroleum, natural gas, wind, and solar energy. The syllabus also highlights the importance of sustainable resource development for environmental conservation and balanced growth. Students will understand the relationship between resource utilization and sustainable development. The course develops awareness regarding conservation and proper management of natural resources.

Course Objectives:

1) To understand the meaning, nature, scope, and classification of resources in Resource Geography.

2) To study the distribution, utilization, problems, and conservation of major natural resources such as soil, water and forest resources.

3) To explain the importance and utilization of conventional and non-conventional energy resources.

4) To develop understanding about sustainable resource development and human resource development for balanced environmental and economic growth.

Course Outcomes:

1) Students will be able to explain the concept, classification, nature, and scope of Resource Geography.

2) Students will be able to analyze the distribution, utilization, problems, and conservation of natural resources.

3) Students will be able to differentiate between conventional and non-conventional energy resources and evaluate their importance.

4) Students will be able to understand the principles of sustainable resource development and its role in environmental conservation and human development.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
I	**Introduction to Resource Geography** 1.1 Definition of Resource Geography 1.2 Nature and Scope of Resource Geography 1.3 Concept and Classification of Resources 1.4 Importance of Resource Geography	15	01
II	**Natural Resource** (Distribution, Utilization, Problems and Conservation) 2.1 Land Resource 2.2 Water Resource 2.3 Forest Resource	15	01
III	**Energy Resource** (Distribution, Utilization, Problems and Conservation) 3.1 Conventional Resource- Coal, Petroleum and natural gas 3.2 Non-Conventional Resource- Wind and Solar	15	01
IV	**Sustainable Resource development** 4.1 Concept of sustainable Resource Development. 4.2 Sustainable Natural Resource Development- Land, Water, Forest, Energy 4.3 Human Resource Development	15	01

References:

1. Cutter S. N., Renwich H. L. and Renwick W., 1991: Exploitation, Conservation, Preservation: A Geographical Perspective on Natural Resources Use, John Wiley and Sons, New York.

2. Gadgil M. and Guha R., 2005: The Use and Abuse of Nature: Incorporating This Fissured Land: An Ecological History of India and Ecology and Equity, Oxford University Press. USA.

3. Holechek J. L. C., Richard A., Fisher J. T. and Valdez R., 2003: Natural Resources: Ecology, Economics and Policy, Prentice Hall, New Jersey.

4. Jones G. and Hollier G., 1997: Resources, Society and Environmental Management,

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Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-V (Geography)

Title of the Paper: Cartographic Techniques in Geography (Practical)

Paper Code: VSC - III (P) Total Lectures- 60

Course Credit: 2 Total Marks- 50

Course Preamble:

Cartography is an essential branch of geography that deals with the preparation, interpretation, and representation of geographical information through maps and diagrams. This course introduces students to the basic concepts, history and significance of cartography in geographical studies. It provides knowledge about various cartographic and statistical techniques used for representing spatial and quantitative data. The paper emphasizes practical understanding of graphs, diagrams, thematic maps and other methods of data visualization. It helps students develop analytical and mapping skills necessary for geographical research and planning. The course also highlights the modern applications of cartographic techniques in physical, social and economic geography.

Course Objectives:

1) To introduce students to the fundamental concepts, history, importance, and applications of cartography in geographical studies.

2) To develop students' skills in representing and interpreting geographical and statistical data through various cartographic techniques such as graphs, diagrams, and thematic maps.

Course Outcomes:

1) Students will be able to understand the basic concepts, development, importance, and applications of cartography in geography.

2) Students will be able to prepare and interpret various cartographic representations such as graphs, diagrams, choropleth maps, dot maps, and isopleth maps for geographical data analysis.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
I	**Introduction to Cartography** 1.1 Meaning and Definition of Cartography 1.2 History and Development of Cartography 1.3 Importance of Cartography 1.4 Application of Cartographic Techniques in Geography.	30	01
II	**Representation of Statistical Data** 2.1. Graphs - Line Graph, Bar Graph, Climograph,	30	01

	Hythergraph and Ergograph (Crop Calender) 2.2 Diagrams - Pia Diagram, Proportional Square, Proportional Circle, Choropleth Map, Dot Map, Isopleth and Star Diagram		

Note:

1. Use of stencils, log tables, computer and calculator is allowed.
2. Journal should be completed and duly certified by practical in-charge and Head of the Department.
3. Examiners should set jointly the question paper for each batch.
4. Each batch should not more than 12 students

References:

1) Elements of Cartography – Arthur H. Robinson, 1995, McGraw-Hill Publication.
2) Map Work and Practical Geography – R. L. Singh, 2005, Central Book Depot, Allahabad.
3) Practical Geography – Gopal Singh, 2010, Vikas Publishing House Pvt. Ltd., New Delhi.
4) Geographical Information Systems and Cartography – M. Anji Reddy, 2008, B.S. Publications, Hyderabad.
5) Concepts and Techniques of Geographic Information Systems – C. P. Lo and Albert K. W. Yeung, 2007, Prentice Hall of India.
6) Fundamentals of Cartography – R. P. Misra, 1999, Concept Publishing Company, New Delhi.
7) Thematic Cartography and Geovisualization – Terry A. Slocum, 2009, Pearson Education.
8) Principles of Cartography – P. K. Mukherjee, 2003, Allied Publishers Pvt. Ltd.

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Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-V (Geography)

Title of the Paper: Ancient Indian Geographic Thought

Paper Code: IKS (T) Total Lectures- 30

Course Credit: 2 Total Marks- 50

Course Preamble:

The course on Indian Knowledge System (IKS) and Ancient Geography of India highlights the rich geographical knowledge embedded in ancient Indian traditions. It explains how ancient scholars understood the Earth, rivers, mountains, oceans, and regions in relation to human life and culture. The course emphasizes the holistic relationship between nature, society, and sustainability. It explores traditional knowledge related to environmental ethics, hydrology, climatology, and settlement patterns. Learners gain an understanding of India's intellectual and cultural heritage through ancient texts and geographical concepts. The integration of IKS encourages multidisciplinary learning by connecting archaeology, ecology, and modern geographic science. The course also promotes critical thinking, innovation, and a sense of cultural rootedness among students. Ultimately, it aims to connect ancient geographical wisdom with modern sustainability and spatial development goals.

Course Objectives:

1. To introduce learners to the foundational concepts with special reference to ancient geographical thought.
2. To Study the ancient Indian Geographers.

Learning Outcomes:

1. Understand the basic ancient Indian concepts in Geography.
2. Understand the Contribution of ancient Indian Geographer.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
1	**Ancient Indian Geographical Concepts** 1.1 Ancient Indian Major Eras 1.2 Geography, origin of the universe, Earth, Size of Earth, Eclipses, Atmosphere, weather and Season, Latitudes and longitude, Earthquake, Continents (Islands), Bharatvarsh	15	1
2	**Contribution of Ancient Indian Geographer** 1.Chanakya (Kautilya) 2. Aryabhat 3. Varahmihira 4. Yogeshwara 5. Susruta 6. Bhaskarcharya 7. Utpala 8. Vijaynandi 9. Brahmagupta 10. Kalidas	15	1

References:

1) History of Ancient Indian Geography – P. L. Bhargava, 1972, Upper India Publishing House, Lucknow.
2) Ancient Indian Geography – D. C. Sircar, 1990, Motilal Banarsidass Publishers, Delhi.
3) Aryabhatiya – Aryabhata, 499 CE, Motilal Banarsidass Publishers (modern edition).
4) Brihat Samhita – Varahamihira, 6th Century CE, Chaukhamba Sanskrit Series Office, Varanasi (modern edition).
5) Arthashastra – Chanakya, 4th Century BCE, Penguin Books India (modern edition).
6) A History of Indian Geography – R. L. Singh, 2008, Indian Geographical Society Publication.
7) Indian Geographical Thought – S. M. Ali, 1996, Rawat Publications, Jaipur.
8) Geography Through the Ages – J. N. Sarkar, 2001, Concept Publishing Company, New Delhi.
9) खतीब के.ए. आणि भांजे बी. एम.: भूगोलाचा विकास
10) मस्के शिवाजी आणि राऊत बापू (2022): भूगोलाचा विकास, निराली प्रकाशन, पुणे.

Punyshlok Ahilyadevi Holkar Solapur University, Solapur

Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-V (Geography)

Title of the Paper: Field Project in Geography - II

Paper Code: FP -II (P) Total Lectures- 60

Course Credit: 2 Total Marks- 50

Course Preamble

The paper Field Project in Geography - II is designed to develop practical knowledge and field-based research skills among students. The course helps students identify geographical problems related to physical, human, rural, urban, and environmental issues. It provides training in different stages of field work including pre-field work, actual field survey, and post-field analysis. The syllabus also focuses on methods of data collection, interpretation, analysis, and report writing. Overall, the paper develops research ability and practical understanding of geographical studies through field investigation.

Course Objectives:

1) To develop the ability to identify geographical problems and conduct systematic field work using appropriate methods of data collection.

2) To train students in the preparation of field project reports including data analysis, interpretation, conclusions, suggestions, and references.

Course Outcome:

1) Students will be able to conduct field surveys and collect geographical data using appropriate field work techniques and methods.

2) Students will be able to prepare and present a systematic field project report with proper analysis, interpretation, conclusion, and references.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
I	**Identify the Problem and Preparation of the Case Study** 1.1 Identify the Problem – Physical, Human, Rural, Urban, Environmental 1.2 Stages of field work - I. Pre Field Work II. Actual Field Work (Method of Data Collection) III. Post-Field Work 1.3 Preparation of Field work	30	01
II	**Field Report - Data Collection and Writing** 2.1 Collection of Data 2.2 Writing the Field Project – Title, Introduction, Choice of	30	01

	the Topic, Choice of the Study Region, Objectives, Sources of Data, Methodology, Interpretation and Analysis of data, Conclusion, Suggestion, References and Appendix		

Practical Record:

1. Each student will prepare an individual report based on primary and secondary data collected during fieldwork.
2. The duration of the field work should not exceed 10 days.
3. The word count of the report should be about more than 3000 excluding figures, tables, photographs, maps, references and appendices.
4. One copy of the report on A 4 size paper should be submitted in hard binding.

References:

1. Creswell J., 1994: Research Design: Qualitative and Quantitative Approaches Sage Publications.
2. Dikshit, R. D. 2003. The Art and Science of Geography: Integrated Readings. Prentice-Hallof India, New Delhi.
3. Evans M., 1988: “Participant Observation: The Researcher as Research Tool” in Qualitative Methods in Human Geography, eds. J. Eyles and D. Smith,Polity.
4. Mukherjee, Neela 1993. Participatory Rural Appraisal: Methodology and Application. Concept Publs. Co., New Delhi.
5. Mukherjee, Neela 2002. Participatory Learning and Action: with 100 Field Methods. Concept Publs. Co., New Delhi
6. Robinson A., 1998: "Thinking Straight and Writing That Way", in Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioural Sciences, eds. by F. Pryczak and R. Bruce Pryczak, Publishing: Los Angeles.
7. Special Issue on “Doing Fieldwork” The Geographical Review 91:1-2(2001)
8. Stoddard R. H., 1982: Field Techniques and Research Method.

Punyshlok Ahilyadevi Holkar Solapur University, Solapur

Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-VI (Geography)

Title of the Paper: Evolution of Geographical Thought

Paper Code: DSC – IX (T) Total Lectures- 60

Course Credit: 4 Total Marks- 100

Course Preamble:

The paper "Evolution of Geographical Thought" introduces students to the historical development of geographical ideas and concepts from ancient to modern times. The course highlights the contributions of Greek, Roman, and Arab geographers to the growth of geographical knowledge. It explains the major schools of geography developed in Germany, France, America, and Britain through the works of eminent geographers. The syllabus also examines important dichotomies in geography such as determinism versus possibilism and physical versus human geography. Special emphasis is given to the development of geography after World War II and the emergence of quantitative revolution in geography. The course helps students understand modern geographical perspectives such as behaviouralism, humanism, positivism, and radicalism. It develops critical understanding of the philosophical and methodological foundations of geography.

Course Objectives:

1) To understand the historical development of geographical ideas and the contributions of Greek, Roman, and Arab geographers.

2) To study the major schools of geography and the contributions of eminent geographers such as Alexander von Humboldt, Carl Ritter, Friedrich Ratzel, and Paul Vidal de la Blache.

3) To explain the important dichotomies in geography such as environmental determinism versus possibilism and physical versus human geography.

4) To analyze the development of modern geographical thought after World War II, including quantitative revolution and contemporary geographical perspectives.

Course Outcomes:

1) Students will be able to explain the historical development of geographical thought and the contributions of ancient geographers.

2) Students will be able to analyze the major schools of geography and the ideas of important geographers from different countries.

3) Students will be able to differentiate between major dichotomies in geography such as

determinism and possibilism, and physical and human geography.

4) Students will be able to evaluate modern developments in geography including quantitative revolution and contemporary geographical perspectives.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
I	**History of Geographical Idea** 1.1 Contribution of Greek Geographers 1.2 Contribution of Roman Geographers 1.3 Contribution of Arab Geographers	15	01
II	**Schools of Geography** 2.1 German School of Geography – Humboldt, Ritter & Ratzel 2.2 French School of Geography– Vidal -de-la- Blache 2.3 American School of Geography – Ellen Semple 2.4 British School of Geography –Mackinder	15	01
III	**Dichotomy in Geography** 3.1 Environmental Determinism Vs Possibilism 3.2 Physical Vs Human Geography 3.3 Systematic Vs Regional Geography	15	01
IV	**Development of Geography after World War II** 4.1 Quantitative revolution in Geography - concept, objectives and merits 4.2 Impact of Quantitative revolution in Geography. 4.3 Perspectives in Geography: Behaviouralism, Humanism, Systems, Approach, Radicalism and Positivism.	15	01

References:

1. History of Geographical Thought – R. D. Dikshit, 1997, Prentice Hall of India, New Delhi.
2. Evolution of Geographical Thought – Majid Husain, 2004, Rawat Publications, Jaipur.
3. Geographical Thought: A Contextual History of Ideas – Vincent Berdoulay, 1981, Progress Publishers.
4. Perspectives in Human Geography – R. J. Johnston, 1983, Edward Arnold Publishers,

London.

5. Geography and Geographers – Ron Johnston, 1991, Edward Arnold Publication, London.
6. Modern Geographical Thought – Peter Haggett, 1972, Harper and Row Publishers.
7. A History of Geographical Ideas – Geoffrey J. Martin and Preston E. James, 1993, John Wiley & Sons.
8. Fifty Years of Geography – G. J. Martin, 1975, Transaction Publishers.6. Harvey David (1980) - Explanation in Geography Edward – Arnold Landon
9. Husain Majid (1984) - Evolution of Geographical Thought Rawat Publication, Jaipur
10. प्रकाश सावंत: भौगोलिक विचारांची उत्क्रांती, फडके प्रकाशन, कोल्हापूर
11. के ए. खतीब:, भौगोलिक विचारांची उत्क्रांती, संजोग प्रकाशन, कोल्हापूर
12. मस्के शिवाजी आणि राऊत बापू (2022): भूगोलाचा विकास, निराली प्रकाशन, पुणे.

Punyshlok Ahilyadevi Holkar Solapur University, Solapur

Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-VI (Geography)

Title of the Paper: Advanced Tools and Techniques in Geography (Practical - II)

Paper Code: DSC - X (P) Total Lectures- 120

Course Credit: 4 Total Marks- 100

Course Preamble:

This course introduces modern geographical techniques such as Remote Sensing (RS), GIS, GPS, and Statistical Methods. It explains the principles, components, and applications of remote sensing with hands-on interpretation of aerial photographs and satellite imagery. Students learn the fundamentals of GIS, including spatial and non-spatial data handling, digitization, and thematic mapping. Practical use of GPS equips learners with field-based data collection and integration with digital mapping. The statistical component develops analytical skills through measures of central tendency, dispersion, correlation, and time-series analysis. A compulsory study tour provides experiential learning by observing and analyzing geographical features in real-world contexts.

Course Objectives:

1) To develop an understanding of the principles, components, and applications of Remote Sensing (RS), GIS, and GPS in geographical studies.

2) To provide hands-on training in spatial data collection, interpretation, digitization, and map preparation using modern geospatial technologies.

3) To equip students with statistical methods and techniques for effective analysis, interpretation, and presentation of geographical data.

4) To enhance field-based learning through a study tour and GPS survey, enabling students to apply theoretical knowledge to real-world geographical contexts

Course Outcomes:

1) Understand and apply Remote Sensing techniques to identify and analyze physical and cultural features from aerial photographs and satellite imagery.

2) Develop practical skills in GIS and GPS, including data collection, georeferencing, digitization, map preparation, and spatial analysis for land use, urban growth, and environmental monitoring.

3) Apply statistical methods such as measures of central tendency, dispersion, correlation, and time-series analysis to interpret and present geographical data effectively.

4) Demonstrate field-based geographical skills through study tours and GPS exercises, integrating theoretical knowledge with real-world observations and reporting.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
1	**Remote Sensing** 1.1 Definition, Components and Development of Remote Sensing 1.2 Principles of Remote Sensing: EMR, Sensors and Platforms 1.3 Application of Remote Sensing in Geography 1.4 Aerial photographs and Satellite imagery: Definition and types 1.5 Identification of Physical and cultural features from Aerial Photographs or Satellite Imagery	30	01
2	**Geographical Information System (GIS) and Global Positioning System (GPS)** 2.1 Geographical Information System (GIS): Definition and components 2.2 GIS Data Structure: Types (spatial and non-spatial), Raster and Vector data Georeferencing, Digitization, Map Layout Preparation, Application of GIS in Geography: Land use or Land Cover, Urban Sprawl Analysis, Forests Monitoring, Q GIS Software 2.3 Global Positioning System (GPS): Definition and components, Application of GPS in Geography 2.4 Field work through GPS: Determining latitude, longitude and altitude, Exercise with Google earth Program.	30	01
3	**Statistical methods and techniques** 3.1 Nature and Importance of Statistics in Geography 3.2 Measures of Central Tendency – Mean, Median and Mode 3.3 Measures of Dispersion – Range, Mean deviation, Standard deviation and Quartile Deviation 3.4 Correlation Analysis - Karl Pearson's Correlation Coefficient	30	01

	and Spearman's Rank Correlation 3.5 Analysis of Time Series - Semi-average Method and Moving average method		
4	**Study Tour** Maximum 15 days at Geographical Interest in India and preparation of Excursion report	30	01
	Journal and Viva Voce		

Note:

1. Use of stencils, log tables, computer and calculator is allowed.
2. Journal should be completed and duly certified by practical in-charge and Head of the Department.
3. Examiners should set jointly the question paper for each batch.
4. Each batch should not more than 12 students
5. Each department should have at least 2 computers, 1 printer, 1 scanner, 10 pairs of Aerial Photographs, 5 Pocket Stereoscopes, 2 Mirror Stereoscopes and 5 Remote Sensing Images.

Reference:

1. Bygoot, J: An Introduction to Mapwork and Practical Geography, University Tutorial, London 1964.
2. Khan MD. Zulfequar Ahmad: Text Book of Practical Geography, Concept Publishing Company, New Delhi, 1998
3. Mishra, R.P. and Ramesh A.: Fundamentals of Cartography, Concept Publishing Company, New Delhi, 2000
4. Monkhouse F.J. and Wilkison, H.R.: Maps and Diagrams, Mathuen. London, 1971.
5. Negi., Dr. Balbir Singh: Practical Geography, KedarNath Ram Nath, Meerut, Delhi.
6. Raisz, E.: Principals of Cartography, McGraw Hill Book Com., Inc, New York, 1962.

Punyshlok Ahilyadevi Holkar Solapur University, Solapur

Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-VI (Geography)

Title of the Paper: Social Geography

Paper Code: DSE – III (T) Total Lectures- 60

Course Credit: 4 Total Marks- 100

Course Preamble:

The paper "Social Geography" introduces students to the relationship between society and geographical space. The course explains the nature, scope, branches, and importance of social geography in understanding human society. It focuses on the peopling process of India through technological, occupational, and migrational changes. The syllabus also examines the spatial distribution of tribes, races, and religions across the world. Special emphasis is given to social welfare, wellbeing, and social problems such as slums, communal conflicts, and crime. Overall, the paper develops understanding of social structures and regional social issues from a geographical perspective.

Course Objectives:

1) To understand the meaning, nature, scope, branches, and importance of social geography.

2) To explain the peopling process of India and the role of technological, occupational, and migrational changes in society.

3) To study the spatial distribution and characteristics of tribes, races, and religions in different parts of the world.

4) To analyze social welfare, wellbeing, and major social problems such as slums, communal conflicts, and crime from a geographical perspective.

Course Outcomes:

1) Students will be able to explain the concepts, nature, scope, and importance of social geography.

2) Students will be able to analyze the peopling process of India and the impact of technological, occupational, and migrational changes on society.

3) Students will be able to interpret the spatial distribution and characteristics of tribes, races, and religions in the world.

4) Students will be able to evaluate issues related to social welfare, wellbeing, slums, communal conflicts, and crime from a geographical perspective.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
I	**Introduction of Social Geography** 1.1 Definition of Social Geography 1.2 Nature and Scope of Social Geography 1.3 Branches of Social Geography 1.4 Importance of Social Geography	15	01
II	**Peopling Process of India** 2.1 Concept of peopling process 2.2 Technological Changes 2.3 Occupational Changes 2.4 Migration	15	01
III	**Social Categories and their spatial distribution of World** 3.1 Tribes - Definition and concept of tribe, Major tribes- Maasai and Naga 3.2 Race – Definition, bases of racial classification, Classification of Human Race 3.3 Religious Groups in the World	15	01
IV	**Social Welfare, Wellbeing and Social Problems in India** 4.1 Concept of Social Welfare and Wellbeing 4.2 Components of Social Welfare and Wellbeing – Healthcare, Housing and Education 4.3 Social Problems- Slums, Communal Conflicts and Crime	15	01

References:

1. Ahmed A., 1999: Social Geography, Rawat Publications.
2. Casino V. J. D., Jr., 2009) Social Geography: A Critical Introduction, Wiley Blackwell.
3. Cater J. and Jones T., 2000: Social Geography: An Introduction to Contemporary Issues, Hodder Arnold.
4. Holt L., 2011: Geographies of Children, Youth and Families: An International Perspective, Taylor & Francis.

5. Panelli R., 2004: Social Geographies: From Difference to Action, Sage.
6. Rachel P., Burke M., Fuller D., Gough J., Macfarlane R. and Mowl G., 2001: Introducing Social Geographies, Oxford University Press.
7. Smith D. M., 1977: Human geography: A Welfare Approach, Edward Arnold, London.
8. Smith D. M., 1994: Geography and Social Justice, Blackwell, Oxford.
9. Smith S. J., Pain R., Marston S. A., Jones J. P., 2009: The SAGE Handbook of Social Geographies, Sage Publications.
10. Sopher, David (1980): An Exploration of India, Cornell University Press, Ithasa
11. Valentine G., 2001: Social Geographies: Space and Society, Prentice Hall.
12. घारपुरे विठ्ठल (1999): सामाजिक व सांस्कृतिक भूगोल, पिंपळापुरे अंड कं. पब्लिशर्स नागपूर (1999)
13. शिवाजी मस्के आणि बापू राऊत (2022): सामाजिक भूगोल, निराली प्रकाशन, पुणे

Punyshlok Ahilyadevi Holkar Solapur University, Solapur

Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-VI (Geography)

Title of the Paper: Applied Geography

Paper Code: DSE – IV (T) Total Lectures- 60

Course Credit: 4 Total Marks- 100

Course Preamble:

This course is designed to provide students with a foundational understanding of the core concepts of Applied Geography as outlined in the New Education Policy (NEP 2020). The course aims to teach students how to apply geographical principles, techniques, and methods to analyse and solve real-world issues, particularly those related to the physical environment, human resources, and the economy. It is intended to bridge the gap between theoretical knowledge and its practical application to prepare students for professional work and further academic research.

Course Objectives:

1) To understand the meaning, nature, scope, and importance of applied geography in solving environmental and human problems.

2) To study environmental degradation and pollution caused by natural processes and human activities.

3) To analyze environmental disasters such as floods, droughts, earthquakes, and landslides with special reference to India and understand environmental management practices.

4) To examine issues related to human resources, agriculture, industrialization, and their associated social, demographic, and economic problems.

Course Outcomes:

1) Students will be able to explain the concepts, nature, scope, and importance of applied geography.

2) Students will be able to analyze environmental degradation, pollution, and global environmental issues caused by natural and human activities.

3) Students will be able to evaluate environmental disasters and understand methods of environmental management with special reference to India.

4) Students will be able to assess human resource, agricultural, industrial, social, demographic, and economic issues from an applied geographical perspective.

Contents of the Course

Unit No.	Details	No. of Lectures	No. of Credits
1	**Introduction to Applied Geography** 1.1 Definition of Applied Geography 1.2 Nature of Applied Geography 1.3 Scope of Applied Geography 1.4 Importance of Applied Geography	15	01
2	**Issue related to physical environment: Environmental degradation** 2.1 Environmental degradation by soil erosion 2.2 Environmental degradation due to human action – Deforestation 2.3 Pollution: Air, Water & Noise Pollution causes, effects 2.4 Global environmental issues – Global warming, ozone layers depletion & Acid rain	15	01
3	**Issue related to physical environment: Environmental disaster** 3.1 Natural disaster- Floods, Droughts, Earth quakes & Land Slides with special reference to India. 3.2 Environmental management	15	01
4	**Issue related to Human resources** 4.1 Quality Vs Quantity 4.2 Social and Demographic issues, Issues related to Economy 4.3 Modern Agriculture & Associated Problem 4.4 Industrialization & Associated problem.	15	01

References:

1. Hartshorne, Richard (1959): Perspective on the Nature of Geography, Rand McNally & Co. New York.

2. Minshull, R. (1970): The Changing Nature of Geography, London.

3. Dickinson, R. E.: Makers of Modern Geography.

4. Taylor Griffith: Geography of 20th Century

5. Harvey, David (1980): Explanation in Geography, Edward – Arnold, London. 6. Johnston, R. J. &Claval, P. (Ed.) (1984): Geography Since the Second World War, Croom Helm, London.

7. Holt – Jensen, A. (1980): Geography: Its History and Concept, Longman London.

8. Singh Savindar : Environmental Geography

9. Chand &Puri : Regional Geography

10. Dhameja S. K.: Environmental Studies, New Delhi.

11. Lownsburg, R. J. & Aldrich, F. T. (1979): Introduction of Geographical Methods and Techniques, Charles Marrill, Columbus.

12. खतीब के . ए. व भांजे बी. एम: उपयोजित भूगोल, संजोग प्रकाशन, कोल्हापूर.

Punyshlok Ahilyadevi Holkar Solapur University, Solapur

Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-VI (Geography)

Title of the Paper: Agriculture Geography

Paper Code: Minor -VI (T) Total Lectures- 60

Course Credit: 4 Total Marks- 100

Course Preamble:

The paper "Agriculture Geography" introduces students to the geographical study of agriculture and agricultural systems. The course explains the meaning, nature, scope, and importance of agricultural geography. It focuses on the physical, economic, and social determinants influencing agricultural practices in different regions. The syllabus also examines various types of subsistence and commercial agriculture practiced across the world. Special emphasis is given to agricultural development through Green Revolution, biotechnology, and organic farming. Overall, the paper helps students understand agricultural problems and sustainable agricultural development in India

Course Objectives:

1) To understand the meaning, nature, scope, and importance of agricultural geography.

2) To study the physical, economic, and social determinants influencing agricultural activities and patterns.

3) To explain the different types of subsistence and commercial agriculture practiced in various regions of the world.

4) To analyze agricultural development, modern agricultural practices, and major agricultural problems in India.

Course Outcomes:

1) Students will be able to explain the concepts, nature, scope, and importance of agricultural geography.

2) Students will be able to analyze the physical, economic, and social factors affecting agricultural practices and patterns.

3) Students will be able to differentiate between various types of subsistence and commercial agriculture practiced in the world.

4) Students will be able to evaluate agricultural development, modern farming techniques, and agricultural problems in India.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
I	**Introduction to Agriculture Geography** 1.1 Definition of Agriculture Geography 1.2 Nature of Agriculture Geography 1.3 Scope of Agriculture Geography 1.4 Importance of Agriculture Geography	15	01
II	**Determinants of Agriculture** 2.1 Physical- Relief, Climate, Water Bodies and Soil 2.2 Economic - Capital, Transportation and Irrigation 2.3 Social – Land holding, Traditional methods and Govt. Polices	15	01
III	**Types of Agriculture** 3.1 Subsistence Agriculture - Primitive Subsistence Agriculture, Shifting Cultivation, Nomadic Herding, Intensive Agriculture 3.2 Commercial Agriculture - Commercial Grain Farming, Extensive Agriculture**,** Plantation Agriculture, Mixed Agriculture	15	01
IV	**Agricultural Development and Problems** 4.1 Green Revolution 4.2 Organic Farming 4.3 Sustainable Agriculture 4.4 Agricultural Problems in India	15	01

References:

1) Agricultural Geography – Jasbir Singh and S. S. Dhillon, 2004, Tata McGraw-Hill Publishing Company, New Delhi.
2) Principles of Agricultural Geography – M. Shafi, 2006, Pearson Education, New Delhi.
3) Agricultural Geography of India – R. L. Singh, 1998, National Geographical Society of India, Varanasi.
4) Geography of Agriculture – Mohammad Shafi, 2000, Concept Publishing Company, New Delhi.
5) Agricultural Problems of India – R. C. Tiwari, 2011, Pointer Publishers, Jaipur.
6) Organic Farming and Sustainable Agriculture – S. P. Palaniappan and K. Annadurai, 2007, Scientific Publishers, Jodhpur.
7) Agricultural Biotechnology – S. S. Purohit, 2005, Agrobios Publication, Jodhpur.

Punyshlok Ahilyadevi Holkar Solapur University, Solapur

Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-VI (Geography)

Title of the Paper: Surveying (Practical)

Paper Code: VSC –IV (P) Total Lectures- 60

Course Credit: 2 Total Marks- 50

Course Preamble:

The paper "Surveying" introduces students to the basic principles and practical methods of land surveying used in geography and related fields. The course explains the meaning, nature, importance, and types of surveying. It provides practical knowledge about the preparation of plans using plane table survey, chain and tape survey, prismatic compass survey, cross staff survey, and Abney level survey. The syllabus develops skills in measurement, field observation, and map preparation through different survey techniques. Overall, the paper enhances practical and technical understanding of surveying methods used in geographical studies.

Course Objectives:

1) To understand the meaning, nature, importance, principles, and types of surveying used in geographical studies.

2) To develop practical skills in the preparation of plans and field measurements using different survey methods and instruments.

Course Outcomes:

1) Students will be able to explain the concepts, principles, importance, and types of surveying.

2) Students will be able to conduct field surveys and prepare plans using plane table, chain and tape, prismatic compass, cross staff, and Abney level survey methods.

Contents of the course

Unit No.	Details	No. of Lectures	No. of Credits
I	**Introduction to Surveying** 1.1 Definition and Meaning of Survey 1.2 Nature of Surveying 1.3 Importance of Surveying 1.4 Types of survey 1.5 Principles of Surveying	30	01

II	**Preparation of Plans by Survey Methods** 2.1 Plane Table survey - Radial, Intersection, open traversed method 2.2 Chain and Tape Survey – Triangulation and open traversed method 2.3 Prismatic compass survey - Radial, Intersection, open traversed method 2.4 Correction of bearing 2.5 Cross staff surveying	30	01

References:

1) Surveying and Levelling – B. C. Punmia, 2016, Laxmi Publications, New Delhi.
2) Plane Surveying – S. K. Duggal, 2013, Tata McGraw-Hill Publishing Company, New Delhi.
3) Fundamentals of Surveying – S. V. Kulkarni, 2007, Pune Vidyarthi Griha Prakashan, Pune.
4) Practical Geography – Gopal Singh, 2010, Vikas Publishing House Pvt. Ltd., New Delhi.
5) Surveying Theory and Practice – James M. Anderson and Edward M. Mikhail, 1998, McGraw-Hill Publication.
6) Engineering Surveying – W. Schofield, 2001, Butterworth-Heinemann Publication.
7) Elements of Practical Geography – R. L. Singh, 2005, Kalyani Publishers, New Delhi.
8) A Textbook of Surveying – C. Venkatramaiah, 2012, Universities Press, Hyderabad.

Punyshlok Ahilyadevi Holkar Solapur University, Solapur

Structure of Syllabus (NEP 2020)

B. A. Part–III, Sem-VI (Geography)

Title of the Paper: On Job Training in Geography

Paper Code: OJT (P) Total Lectures- 120

Course Credit: 4 Total Marks- 100

Course Preamble:

On Job Training in Geography provides practical exposure and field-based learning opportunities to students in various geographical applications and professional activities. The course helps students to connect theoretical knowledge of geography with real-life work experiences in planning, surveying, environmental studies, GIS, and related sectors. It develops technical, analytical, communication, and problem-solving skills required for professional growth. The training enables students to understand workplace ethics, responsibilities, and organizational functioning. Overall, the course enhances employability and prepares students for careers in geographical and allied fields.

Course Objectives:

1) To provide practical training and field-based experience in the application of geographical knowledge and techniques in professional sectors.

2) To develop technical, analytical, communication, and workplace skills required for employment and career opportunities in geography and allied fields.

Course Outcomes:

1) Students will be able to apply geographical knowledge and practical skills in professional and field-based work environments.

2) Students will be able to develop technical, analytical, communication, and workplace competencies required for careers in geography and related fields.

Contents of the course

Unit No.	Details
I	**Introduction to On Job Training in Geography** 1.1 Meaning and Importance of On Job Training 1.2 Objectives and Scope of Training in Geography 1.3 Professional Ethics and Work Culture 1.4 Career Opportunities in Geography and Allied Fields
II	**Field Work and Practical Training**

	2.1 Internship / Training in Government Offices, NGOs, Industries, Research Institutes etc. 2.2 Preparation of Daily Work Record 2.3 Interaction with Experts and Officials 2.4 Practical Application of Geographical Knowledge

Note:

1) Duration: 120 hours

2) Students should complete on-job training in any government department, private organization, NGO, research institute, industry or geographical agency related to the subject area.

3) Students must maintain a daily work diary and obtain certification from the training supervisor.

4) Submission of training report and viva-voce examination is compulsory for course completion.

5) Internal assessment shall be based on attendance, work performance, field participation, and supervisor's evaluation.

6) The course shall emphasize experiential learning, skill development, and employability as recommended in National Education Policy 2020.

Pattern of Examination

	Credit	Total Marks	University Assessment (UA)	College Assessment / Internal Marks (CA)
Theory Paper	4	100	60	40
Practical Paper	4	100	60	40
Theory Paper	2	50	30	20
Practical Paper	2	50	30	20

Passing Criteria

For 4 credit (100 Marks)

UA = 24 out of 60

CA = 16 out of 40

For 2 credit (50 Marks)

UA = 12 out of 30

CA = 08 out of 20

College Assessment (CA) System

Choose any two of the following

Home Assignment / Class Test / Unit Test / Tutorial / Seminar / Presentation / Viva / Field visit / Educational visit / Project / Workshop Participation / Conference Participation