

SANT GADGE BABA AMRAVATI UNIVERSITY, AMRAVATI

Faculty of Humanities

(Syllabus for As Per National Education Policy-NEP-2020)

Three Years-Six Semesters Bachelor's Degree Programme

Degree of Bachelor Arts

(B.A.Semester-V & VI Level – 5.5)

Department Specific Core (DSC)

Subject- Geography (Major)

(DSC-Code- 622)

Board of Study – Geography

(Revised From- Academic Year-2026-2027)

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	V	622212	Major VII (T) Human Geography	2	30 Hrs.	2 Hrs.	External -30 Internal – 20 Total -50
Course Objectives:		1) To introduce the fundamental concepts, meaning, and definitions of Human Geography 2) To familiarize students with the major tribes of India such as Gond, Korku, Santhal, and Bhil, focusing on their geographical distribution, socio-cultural characteristics, and traditional practices. 3) To analyze the patterns of population growth and distribution in India and examine the various physical, economic, social, and political factors influencing these patterns. 4) To identify and critically analyze the major problems faced by Indian agriculture					
Course Outcomes:		1) Understand and explain the meaning, definition, nature, and scope of Human Geography 2) Analyze the socio-cultural aspects of major Indian tribes including Gond, Korku, Santhal, and Bhil, and understand their geographical distribution and traditional lifestyles. 3) Assess the patterns of population growth and distribution in India and examine the key factors influencing the distribution of population. 4) Classify the types of agriculture practiced in India and explain the various physical, climatic, and socio-economic factors affecting Indian agriculture.					
Unit System	Contents		Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
Unit I	Meaning and Definition of Human Geography, Nature and scope of Human Geography, Branches of Human Geography, Importance of Human Geography		8 Hrs.	8 Marks	Structured lectures supported by presentations to introduce core concepts such as Human Geography, its branches, and the importance of studying human-environment interactions. Use of case studies on Indian tribes (Gond, Korku, Santhal, Bhil) and specific regions to enhance understanding of tribal lifestyles Class discussions, debates, and question-answer sessions to encourage critical thinking on topics like population distribution, gender ratio, and literacy issues in India.		
Unit II	Indian Major Tribe: Gond, Korku, Santhal, Bhil		7 Hrs.	7 Marks			
Unit III	Population growth and distribution of India, Factors affecting on distribution of population, Composition of Indian population: Gender and Literacy		8 Hrs.	8 Marks			

Unit IV	Agriculture: Types of Agriculture, Factors affecting Indian Agriculture, Problems of Indian Agriculture	7 Hrs.	7 Marks	Incorporation of documentaries, videos, and interactive media to visualize tribal cultures, demographic changes, and agricultural activities.
References:	1. Bergman, Edward E: Human Geography; Culture, Connections and Landscape, Prentice-Hall, New Jersey.1995. 2. Carr, M.: Patterns, Process and change in Human Geography. MacMillan Education, London, 1987. 3. Fellman, J.L.: Human Geography—Landscapes of Human Activities. Brown and Benchmark Pub.,U.S.A., 1997. 4. D.S. Lal: Climatology, Sharda Pustak Bhavan, Allahabad, 2010. 5. Majid Hussin; Human Geography, Sixth Edition, Book Emporium, Guwahati, 2020 6. सवदी व कोळेकर; मानवी भूगोल,निराली प्रकाशन पुणे २०२०. 7. सवदी व कोळेकर; प्राकृतिक भूगोल. निराली प्रकाशन पुणे. २०२०. 8. दाते व दाते; प्राकृतिक भूविज्ञान अनिरुद्ध पब्लिकेशन हाऊस, पुणे२०२०. 9. आर. जी. जाधव; मानवी भूगोल. प्रारूप पब्लिकेशन, कोल्हापूर. २०१९. 10. मोरे व पगार; ; प्राकृतिक भूगोल. निराली प्रकाशन, पुणे.२०१९. 11. शिंदे ,चोरे, धुलगुडे व शिंदे ,मानव भूगोल फडके प्रकाशन कोल्हापूर, २०२३.			
Internal Assessment Theory (20Marks)	Internal assessment shall be carried out by the respective course teacher by choosing variety of assessment tools/ methods such as class test, record book, seminar, case study, field work mini project work quiz or any innovative method, which may be deemed to be appropriate for assessing the relevant course outcomes.			

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	V	622213	Major VII (P) Statistical Method	2	60 Hrs.	2 Hrs	External-25 Internal-25 Total -50
Course Objectives:		1)To introduce the fundamental concepts and importance of data collection, classification, and presentation in geographical and social research. 2) To familiarize students with the preparation of statistical series and frequency distributions, enabling them to organize and present data systematically. 3)To equip students with the knowledge and skills to calculate and interpret measures of central tendency including Mean, Median, and Mode for both grouped and ungrouped data.					
Course Outcomes:		1)Understand the basic concepts of data, its types, and the significance of data collection in geographical and statistical studies. 2)Organize collected data into statistical series and frequency distributions for systematic presentation and interpretation. 3)Calculate measures of central tendency (Mean, Median, Mode) for both grouped and ungrouped data accurately.					
Unit System		Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
A.		Introduction ,Collection of Data, Sample Study, Statistical Series, Frequency Distribution	28 Hrs.	7 Marks	1)Structured lectures to introduce theoretical concepts of data, data collection methods, sampling techniques, and measures of central tendency. 2)Step-by-step demonstration of how to create statistical series, frequency distributions, and how to calculate mean, median, and mode for both grouped and ungrouped data. 3)Use of real or simulated data sets for practice in data collection, sample studies, and data analysis. 4)Incorporation of statistical software (like Excel, SPSS, or calculators) to demonstrate data organization, frequency distribution, and statistical computations.		
B.		2) Measures of Central Tendency, Mean, Mode & Median (Group and ungroup Data)	32 Hrs.	8 Marks			
C.		Practical Record	-----	5 Marks			
D.		Viva Voce	-----	5 Marks			
References:		Reference Books: 1) Singh L.R. 2020: Fundamentals Of Practical Geography shrada Pustak Bhawan Allahbad 2) Singh R. I. And Datta : Elements of Practical Geography 3) Kannan Monika and Shilpi Yadav (2022): Practical Geography Rawat Publication Jaipur 4) शितोळे तुषार(2020): प्रात्यक्षिक भूगोल डायमंड पब्लिकेशन 5) Khullar D.R. (2022): Prayogatmak Bhugol Kalyani Publication 6) शर्मा जे.पी. (२०१९): प्रयोगात्मक भूगोल की रूपरेखा रस्तोगी पब्लिकेशन मेरठ Weblink to Equivalent MOOC on SWAYAM if relevant:					

	Weblink to Equivalent Virtual Lab if relevant: Any pertinent media (recorded lectures, YouTube, etc.) if relevant:
Internal Assessment Practical (25 Marks)	Internal assessment for practical work evaluates students' practical skills, fieldwork experience, record maintenance, and understanding of geographical techniques. It includes practical journal submission, field survey/report, viva-voce, and active participation in practical sessions. This assessment helps develop observational, analytical, and mapping skills.

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	V	622214	Major- VIII (T) Geography of India	4	60 Hrs.	3 Hrs.	External-60 Internal -40 Total- 100
Course Objectives:		1. To understand the location, extent, shape and significance of India. 2. To study the physical divisions and drainage system of India. 3. To learn about the climate of India and monsoon system. 4. To understand soils and natural vegetation and their distribution. 5. To gain knowledge about major crops and industrial regions of India.					
Course Outcomes:		1. Students will be able to describe the location, extent and geographical significance of India. 2. Students will understand and explain the major physical divisions and drainage system of India. 3. Students will analyse the climate of India, monsoon mechanism and rainfall distribution. 4. Students will identify different soils, natural vegetation and their distribution in India. 5. Students will gain knowledge about major crops and industrial regions and their economic importance.					
Unit System		Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
Unit I		General Introduction of India: Shape, size and extent of India ,Location and its significance, Natural and political boundaries of India, India as a land of diversity, Unity within diversity in India	10 Hrs.	10 Marks	Lecture Method with ICT support – Use of PPTs, maps, charts and videos for better conceptual understanding. Map-Based Learning – Identification and marking of physical divisions, rivers, climate regions and industries on maps. Group Discussion & Seminars – On topics like monsoon, population growth, urbanization and climate change. Field Visits / Excursion – Visit to nearby rivers, agricultural fields, industries or geographical sites for practical learning. Assignment and Project Work – Students prepare short projects on crops, soils, industries or population trends of India. .		
Unit II		Physical Divisions and Drainage System: Physical divisions of India:-Northern Mountains, Northern Plains, Peninsular Plateau, Coastal Plains, Islands, Drainage system of India:- Himalayan rivers, Peninsular rivers, Importance of rivers	10 Hrs.	10 Marks			
Unit III		Climate of India: Seasons of India, Origin and mechanism of monsoon ,Distribution of rainfall in India, Western disturbances ,Climate change and its impact on India	10 Hrs.	10 Marks			
Unit IV		Soils and Natural Vegetation: Classification and Distribution of Indian soils, Natural vegetation of India. Types and distribution of forests, Conservation of forests	10 Hrs.	10 Marks			
Unit V		Major crops of India: Rice, Wheat, Cotton, Sugarcane, Tea	10 Hrs.	10 Marks			

Unit VI	Agricultural Revolutions and Industrial regions: Green Revolution Blue Revolution White Revolution Major industrial regions of India	10 Hrs.	10 Marks	
References:	References: 1) Deshpande C. D.: India A Regional Interpretation, northern Bok Centre, New Delhi 1992. 2) Sing R. L. Regional Geography National Geography Society India Varanasi 1995. 3) Wadia D. N. Geology of India Macmillan & Co. Calcutta. 4) Khullar D. R.- India - A Comprehensive Geography, Kalyani Publishers 2011. 5) अहिराव, अलीशहा, धापते, धरात भारताचा भूगोल निराली प्रकाशन पुणे. 6) सारंग सुभाषचंद्र: भारताचा भूगोल विद्या प्रकाशन नागपूर. 7) घारपुरे विठ्ठल: भारत भौगोलीक विप्लेषण पिंपळापुरे प्रकाशन नागपुर 8) घारपुरे विठ्ठल: भारताचा भूगोल पिंपळापुरे प्रकाशन नागपुर 9) घारपुरे विठ्ठल : भारताचा भूगोल पिंपळापुरे प्रकाशन नागपुर 10) चातुर्भुज मामोरीया: प्रत्यक्षिक भूगोल सुमेरु प्रकाशन डोंबिवली पूव १९९८			
Internal Assessment Theory (40 Marks)	Internal assessment shall be carried out by the respective course teacher by choosing variety of assessment tools/ methods such as class test, record book, seminar, case study, field work mini project work quiz or any innovative method, which may be deemed to be appropriate for assessing the relevant course outcomes.			

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	V	622215	Major IX(T) Elective (A) Economic Geography	2	30 Hrs.	2 Hrs	External -30 Internal- 20 Total- 50
Course Objectives:		1) Students with a comprehensive understanding of how economic activities are distributed across space and how geographical factors influence economic development and patterns. 2) Develop critical thinking skills by evaluating theories and models of economic geography. 3) Understand the role of physical geography, resources, and environment in shaping economic systems. 4) Explore the socio-economic disparities between regions and the geographic factors behind them.					
Course Outcomes:		1) Explain the fundamental concepts of economic geography and their relevance to spatial economic patterns. 2) Analyze the spatial distribution of various economic activities such as agriculture, manufacturing, and services. 3) Interpret economic data using maps and spatial tools, including GIS, to identify regional trends and disparities. 4) Compare economic systems and development levels across countries and regions, identifying key causes of inequality.					
Unit System	Contents			Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies	
Unit I	Economic Geography Meaning: Definition, Nature and Scope of Economic Geography, Significance of Economic Geography			7 Hrs	7 Marks	- To introduce core concepts, models, and historical developments in economic geography. - Use of quizzes, map interpretation exercises, presentations, and reflective essays to assess understanding and encourage metacognition. - Economic Geography enhances student engagement, deepens conceptual understanding, and develops skills in spatial analysis, critical thinking, and research.	
Unit II	Occupational Structure: Meaning and types :Primary, Secondary, Tertiary, Importance of Occupational Structure			8 Hrs	8 Marks		
Unit III	Minerals Resources of India: Distribution & Conservation of Minerals: Iron, Copper, Bauxite, Manganese			7 Hrs	7 Marks		
Unit IV	Power Resources of India: Major types of power resources : Coal, Petroleum, Natural Gas, Nuclear Energy, Water Power, Solar and Tidal Energy			8 Hrs	8 Marks		

References :	Reference Books: 1) Alexander J.W.(1976): Economic Geography, Princess Hall of India, New Delhi. 2) Berry B.J. (1976): Geography Economic System,Princess Hall, New Delhi 3) Chatterjee S.P. (1984): Economic Geography of Asia, Allied book Agency, Kolkata 4) Dasgupta (1972): Economic and Commercial Geography, Mukharjee& Company Pvt. Ltd., Kolkata 5) Garnier D. J. (1989): A Geography of Marketing. Longman, London. 6) SinghKashinath (2012): Economic Geography, PrayagPustakbhavan, Allahabad 7) मोहम्मद हरून (2003): आर्थिक भूगोल के मूलतत्व, वसुंधरा प्रकाशन, गोरखपुर. 8) अहिरराव अलिझाड (1997) आर्थिक भूगोल, निराली प्रकाशन, पुणे 9) प्रभावती प.दे.(1994): आर्थिक भूगोल, निराली प्रकाशन, पुणे. 10) डॉ. देसाई डॉ. भालेराव, भारतीय अर्थव्यवस्था, निराली प्रकाशन, पुणे. 11) डॉ. मामोरीया चतुर्भुज (1998): मानव एवं आर्थिक भूगोल, साहित्य भवन, आग्रा. 12) सवदी ए. बी. (२०२३): आर्थिक भूगोल, अथर्व पब्लिकेशन, जळगाव.
Internal Assessment Theory (20 Marks)	Internal assessment shall be carried out by the respective course teacher by choosing variety of assessment tools/ methods such as class test, record book, seminar, Assignment, case study, field work, mini project work, quiz or any innovative method which may be deemed to be appropriate for assessing the relevant course outcomes.

Level	Semester	Course Code	Course Name	Credit	Teaching Hours	Exam Duration	Max Marks
5.5	V	622216	Major IX (P) Elective (A) Scales and Map Measurement	2	60 Hrs.	2Hrs	External -25 Internal- 25 Total- 50
Course Objectives:		1. To understand the concept, importance, and types of scales used in cartography. 2. To develop skills in the construction of simple and diagonal scales. 3. To learn the application of scales for measuring geographical distances on maps. 4. To enhance accuracy and precision in map interpretation and representation.					
Course Outcomes:		1. Students will explain the basic concepts and types of scales. 2. Students will construct simple and diagonal scales accurately. 3. Students will measure and interpret map distances using different scales. 4. Students will apply scale techniques in practical cartographic work.					
Unit System		Contents		Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies	
A		Basics of Scale and Construction of Scale: 1. Meaning, Definition and Importance of Scale 2. Importance and Uses of Scale in Geography 3. Types of Scales: Statement Scale, Representative Fraction (R.F.) and Graphic Scale 4. Conversion of Scale from one form to another 5. Principles of Scale Construction 6. Calculation of Representative Fraction (R.F.) 7. Construction of Scales for Map Measurement		28 Hrs.	7 Marks	1. Lecture Method 2. Demonstration Method 3. Practical/Hands-on Exercises 4. Problem-Solving Method 5. ICT-Based Teaching and Learning 6. Assignment and Map Work Activities	
B		Simple Scale and Diagonal Scale: 1. Meaning and Characteristics of Simple Scale 2. Construction and Use of Simple Scale 3. Measurement of Distances using Simple Scale		32 Hrs.	8 Marks		

	4. Meaning and Characteristics of Diagonal Scale 5. Construction and Use of Diagonal Scale 6. Practical Exercises on Distance Measurement using Simple and Diagonal Scales			
C	Practical Record	-----	5 Marks	
D	Viva Voce	-----	5 Marks	
References:	Reference Books: 1) Singh L.R. 2020: Fundamentals Of Practical Geography shrada Pustak Bhawan Allahbad 2) Singh R. I. And Datta : Elements of Practical Geography 3) Kannan Monika and Shilpi Yadav (2022): Practical Geography Rawat Publication Jaipur 4) शिंतोळे तुषार(2020): प्रात्यक्षिक भूगोल डायमंड पब्लिकेशन 5) Khullar D.R. (2022): Prayogatmak Bhugol Kalyani Publication 6) शर्मा जे.पी. (२०१९): प्रयोगात्मक भूगोल की रूपरेखा रस्तोगी पब्लिकेशन मेरठ 7) चातुर्भुज मामोरीया: प्रात्यक्षिक भूगोल सुमेरु प्रकाशन डोंबिवली पूव १९९८			
Internal Assessment Practical (25 Marks)	Internal assessment for practical work evaluates students' practical skills, fieldwork experience, record maintenance, and understanding of geographical techniques. It includes practical journal submission, field survey/report, viva-voce, and active participation in practical sessions. This assessment helps develop observational, analytical, and mapping skills.			

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	V	622217	Major IX (T): Elective (B) Political Geography	2	30 Hrs.	2Hrs	External-30 Internal-20 Total-50
Course Objectives:		1) To introduce students to the basic concepts, scope, and development of political geography as a subfield of human geography. 2) To examine how spatial structures influence political processes, and how politics affect geographical boundaries and spaces. 3) To critically engage with classical and modern geopolitical theories (e.g., Heartland Theory, Rimland Theory) and their contemporary relevance. 4) To explore the nature, types, and implications of political boundaries, border conflicts, and territorial claims.					
Course Outcomes:		1) Demonstrate a clear understanding of key concepts such as state, nation, boundaries and geopolitics. 2) Evaluate how geographical factors influence political decisions, power structures, and territorial organization. 3) Integrate perspectives from geography, political science, history, and international relations to critically examine political events and spatial patterns. 4) Create and interpret maps to visually represent political territories, boundaries, and distributions of power.					
Unit System		Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
Unit I		Definition, Nature, scope and Significance of Political Geography, Approach to the study of Political Geography	7 Hrs.	7 Marks	- Students’ critical thinking, engagement, and ability to apply geographic concepts to real-world political issues. - Students investigate a recent border dispute and present findings. - Analyze causes and consequences of a geopolitical event using maps and theory. - Draw and analyze the shifting boundaries of colonial empires or modern nation-states.		
Unit II		Theme in Political Geography, State, Nation, Nation building, frontiers and boundary	8 Hrs.	8 Marks			
Unit III		Federalism and other forms governance, the changing pattern of old powers, perspective, corporative concepts	7 Hrs.	7 Marks			
Unit IV		Electoral studies in Political Geography, Geography of voting, geographic influence on voting pattern	8 Hrs.	8 Marks			
References:		Reference Books: 1) Adhikari S. (1997): Political Geography, Rawat Publication, Jaipur. 2) Dixit R.D. (1994): Political Geography, Tata Megra Hill Publication, New Delhi 3) Taylor Peter (1984): Political Geography, Longman, Londaon 4) B.L. Sukhwai: Political Geography in India, Chaitanya Publishing House 5) Ramachandra Guha: India: A Political Geography, Oxford University Press					

	6) Majid Hussain: Geography of India, Megra Hill Publication, New Delhi 7) Anil Kumar De & Amita De: India: Political Geography. Spectrum Books 8) विठ्ठल धारपुरे (2004): राजकीय भूगोल, पिंपळापुरे प्रकाशन नागपूर. 9) डॉ. सिंग सुनिता (1988): राजनैतिक भूगोल, के. के. पब्लिकेशन, दिल्ली Weblink to Equivalent MOOC on SWAYAM if relevant: Weblink to Equivalent Virtual Lab if relevant:
Internal Assessment Theory (20 Marks)	Internal assessment shall be carried out by the respective course teacher by choosing variety of assessment tools/ methods such as class test, record book, seminar, Assignment, case study, field work, mini project work, quiz or any innovative method which may be deemed to be appropriate for assessing the relevant course outcomes.

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	V	622218	Major IX (P): Elective (B) Thematic Cartography	2	60 Hrs.	2Hrs	External -25 Internal- 25 Total- 50
Course Objectives:		1. To understand the classification, types, and principles of map design in cartography. 2. To develop skills in presenting geographical data through diagrammatic and thematic mapping techniques. 3. To analyze the properties, uses, and limitations of different thematic maps and cartographic overlays. 4. To prepare, interpret, and evaluate thematic maps for geographical analysis and decision-making.					
Course Outcomes:		After completing the course, students will be able to: - Classify various types of maps and apply principles of effective map design. - Construct and interpret line, bar, and circle diagrams for geographical data presentation. - Prepare and analyze thematic maps using choropleth, dot, proportional circle, and isopleth techniques. - Apply cartographic overlay methods and interpret spatial patterns represented through thematic maps.					
Unit System	Contents			Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies	
A	1. Maps: Classification and Types; Principles of Map Design. 2. Diagrammatic Data Presentation: Line, Bar and Circle.			28 Hrs.	7 Marks	1. Lectures with visual demonstrations. 2. Practical exercises in map drawing and thematic mapping. 3. Computer-based cartography using GIS and MS Excel. 4. Field data	
B	1. Thematic Mapping Techniques: Properties, Uses and Limitations; Choropleth, Dot, Proportional Circles; Point Data – Isopleths. 2. Cartographic Overlays: Point, Line and Areal Data. 3. Thematic Maps : Preparation and Interpretation.			32 Hrs.	8 Marks		

C	Practical Record	-----	5 Marks	collection and map preparation activities.
D	Viva Voce	-----	5 Marks	5. Case studies on thematic map interpretation.
References :	1. Cuff J. D. and Mattson M. T., 1982: Thematic Maps: Their Design and Production, Methuen Young Books 2. Dent B. D., Torguson J. S., and Holder T. W., 2008: Cartography: Thematic Map Design (6 th Edition), Mcgraw-Hill Higher Education 3. Gupta K. K. and Tyagi V. C., 1992: Working with Maps, Survey of India, DST, New Delhi. 4. Kraak M.-J. and Ormeling F., 2003: Cartography: Visualization of Geo-Spatial Data, Prentice-Hall. 5. Mishra R. P. and Ramesh A., 1989: Fundamentals of Cartography, Concept, New Delhi. 6. Sharma J. P., 2010: Prayogic Bhugol, Rastogi Publishers, Meerut. 7. Singh R. L. and Singh R. P. B., 1999: Elements of Practical Geography, Kalyani Publishers. 8. Slocum T. A., McMaster R. B. and Kessler F. C., 2008: Thematic Cartography and Geovisualization (3rd Edition), Prentice Hall. 9. Tyner J. A., 2010: Principles of Map Design, The Guilford Press. 10. Sarkar, A. (2015) Practical geography: A systematic approach. Orient Black Swan Private Ltd., New Delhi 11. Singh, L R & Singh R (1977): Manchitra or Pryaogatamek Bhugol , Central Book, Depot, Allahabad			
Internal Assessment Practical (25 Marks)	Internal assessment for practical work evaluates students' practical skills, fieldwork experience, record maintenance, and understanding of geographical techniques. It includes practical journal submission, field survey/report, viva-voce, and active participation in practical sessions. This assessment helps develop observational, analytical, and mapping skills.			

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	V	622274	Vocational Skill Course (VSEC) Dumpy Level Surveying	2	60 Hrs.	2 Hrs	External-30 Internal-20 Total-50
Course Objectives:		1. To understand the principles and methods of levelling. 2. To learn the operation and adjustment of the Dumpy Level. 3. To develop skills in recording and reducing levelling data. 4. To apply levelling techniques in field surveys. 5. To prepare and interpret levelling profiles and gradients. 6. To understand the practical applications of levelling in geographical studies.					
Course Outcomes:		1. Students will understand the concepts and techniques of levelling. 2. Students will operate a Dumpy Level efficiently in the field. 3. Students will calculate Reduced Levels using standard methods. 4. Students will prepare level books and survey records accurately. 5. Students will analyze and interpret levelling data. 6. Students will conduct basic field surveys independently.					
		Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
Unit I		Introduction to Dumpy Level Surveying: • Meaning, Definition and Importance of Levelling • Principles of Levelling • Components and Functions of Dumpy Level • Temporary and Permanent Adjustments of Dumpy Level • Care and Maintenance of Instrument	16 Hrs	8 Marks	• Interactive classroom teaching. • Demonstration of surveying instruments. • Field-based practical exercises. • Group survey projects and discussions. • Preparation of survey reports and presentations.		
Unit II		Methods of Levelling • Simple Levelling • Differential Levelling • Fly Levelling • Check Levelling • Profile (Longitudinal) Levelling • Cross-Section	14 Hrs	7 Marks			

	Levelling			
Unit III	Reduction and Computation of Levels • Level Book and Field Notes • Terms Used in Levelling: B.S., F.S., I.S., H.I., R.L. • Rise and Fall Method • Height of Instrument (H.I.) Method	16 Hrs	8 Marks	
Unit IV	Practical Applications of Dumpy Level Surveying • Longitudinal and Cross-Section Survey • Determination of Gradients • Preparation of Levelling Profiles • Contouring from Levelling Data • Field Survey, Data Collection and Report Writing	14 Hrs	7 Marks	
References:	1. Singh L.R. 2020: Fundamentals Of Practical Geography shrada Pustak Bhawan Allahbad 2. Singh R. I. And Datta : Elements of Practical Geography 3. Kannan Monika and Shilpi Yadav (2022): Practical Geography Rawat Publication Jaipur 4. शिंतोळे तुषार(2020): प्रात्यक्षिक भूगोल डायमंड पब्लिकेशन 5. Khullar D.R. (2022): Prayogatmak Bhugol Kalyani Publication 6. शर्मा जे.पी. (२०१९): प्रयोगात्मक भूगोल की रूपरेखा रस्तोगी पब्लिकेशन मेरठ 7. चतुर्भुज मामोरीया : मानचित्र एवम प्रायोगिक भूगोल साहित्य भवन पब्लिकेशन मेरठ.२०१५ 8. डॉ.मगर प्राकृतिक भूगोल भाग १,२,व ३ 9. रामलोचनसिंग व दत्ता पी.के.प्रयोगात्मक भूगोल 10. डॉ.व्ही.टी.घारपुरे व प्रा.व्ही. के. पवार:प्रात्यक्षिक भूगोल (नकाशाशास्त्रीय पद्धती) Weblink to Equivalent MOOC on SWAYAM if relevant: Weblink to Equivalent Virtual Lab if relevant: Any pertinent media (recorded lectures, YouTube, etc.) if relevant:			

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	VI	622219	Major X(T) Settlement Geography	2	30 Hrs.	2 Hrs	External-30 Internal -20 Total -50
Course Objectives:		1. To introduce the basic concept, nature and scope of settlement geography. 2. To understand the origin, development and patterns of rural and urban settlements. 3. To study the structure, functions and hierarchy of settlements at different levels. 4. To analyse the problems and growth trends of urban and rural settlements, especially in India.					
Course Outcomes:		1. Students will understand the basic concepts, scope and importance of settlement geography. 2. Students will identify and explain the characteristics and patterns of rural and urban settlements. 3. Students will understand settlement hierarchy, urban structure and basic concepts of central place theory. 4. Students will analyze rural and urban settlement problems and the impact of urbanization.					
Unit System		Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
Unit I		Introduction to Settlement Geography: Meaning and Definition ,Nature and scope of Settlement Geography, Importance of settlement studies, Factors influencing settlement development (physical & human)	8 Hrs.	8 Marks	Lecture Method: Explanation of basic concepts, theories, and models of settlement Geography. Interactive Discussion: Classroom discussions on rural and urban settlement patterns and problems. Map and Diagram Work: Use of maps, sketches, and diagrams		

Unit II	Rural Settlements: Meaning and characteristics of rural settlements, Types of rural settlements (nucleated, dispersed, linear, etc.) ,Site and situation of rural settlements ,Rural house types and pattern of settlements.	7 Hrs.	7 Marks	to understand settlement distribution and urban structure. Field Visit / Survey Method: Observation of nearby rural and urban settlements for practical understanding. ICT Tools: Use of PowerPoint presentations, videos, and digital maps for better visualization of settlement patterns.
Unit III	Urban Settlements: Meaning and characteristics of urban settlements, Growth of towns and cities ,Types of urban settlements ,Functions of urban settlements (industrial, commercial, administrative, etc.)	8 Hrs.	8 Marks	
Unit IV	Settlement Hierarchy & Urban Issues:- Settlement hierarchy (hamlet, village, town, city, metropolis),Central Place Theory (basic concept) ,Rank-size rule and primate city concept ,Urban problems: slums, congestion, pollution , Urbanization process in India	7 Hrs.	7 Marks	
References:	1. Dr. Vijay B. Kharate (2016): ‘Pattern of Rural settlement’, Nabh Prakashan, Amravati 2. Dr. Vijay B. Kharate (2019): ‘Rural settlement Geography’, Nabh Prakashan, Amravati 3. टिंबोळे, हरीशचंद्र एस. – लोकसंख्या व वसाहत भूगोल (Population and Settlement Geography), निराली प्रकाशन, पुणे. 4. सवदी, ए. बी. – जगाचा भूगोल : प्राकृतिक व आर्थिक, निराली प्रकाशन, पुणे. 5. सिंह, आर. वाय. – वसाहत भूगोल (Settlement Geography) 6. सिन्हा, व्ही. एन. पी., वर्मा उषा व सहाय अनुराधा – वसाहत भूगोलाचा परिचय (Introduction to Settlement Geography). 7. लाल, डी. एस. – वसाहत भूगोल (Settlement Geography), शारदा पुस्तक भवन. 8. घोष, सुमिता – वसाहत भूगोलाचा परिचय (Introduction to Settlement Geography).) 9. नांगिया, सुदेश – Settlement Geography, in <i>Geography in India</i>. 10. कृष्णानंद, डॉ. – Simplified Settlement Geography.			

Internal Assessment Theory (20Marks)	Internal assessment shall be carried out by the respective course teacher by choosing variety of assessment tools/ methods such as class test, record book, seminar, case study, field work mini project work quiz or any innovative method, which may be deemed to be appropriate for assessing the relevant course outcomes.
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Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	VI	622220	Major X (P) : Map Projection and Study Tour	2	60 Hrs.	2 Hrs	External-25 Internal-25 Total -50
Course Objectives:		- To understand the concept, principles, and importance of map projections in geographical studies. - To acquire practical knowledge of constructing and interpreting Zenithal Equidistant Projection (Polar Case). - To develop skills in drawing and analyzing Zenithal Equal Area Projection (Polar Case). - To understand the characteristics, uses, and limitations of Simple Cylindrical Projection. - To gain practical experience in the construction and application of Cylindrical Equal Area Projection. - To develop fieldwork skills through Study Tour or Socio-Economic Survey and prepare geographical reports based on collected data.					
Course Outcomes:		After successful completion of the course, students will be able to: - Explain the concept, principles, and significance of different map projections. - Construct and interpret Zenithal Equidistant and Zenithal Equal Area projections accurately. - Draw and analyze Simple Cylindrical and Cylindrical Equal Area projections. - Select appropriate map projections for different geographical purposes. - Collect, organize, and analyze field data through a study tour or socio-economic survey. - Prepare and present geographical reports based on field observations and survey findings.					
Unit System		Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
A.		Map Projection I) Zenithal equi-distant projection: Polar case II) Zenithal equal, area projection: Polar case III) Simple Cylindrical projection IV) Cylindrical Equal- area projection	32 Hrs.	8 Marks	Lecture Method – Explanation of concepts, principles, and uses of map projections. Demonstration Method – Demonstration of construction techniques for different map projections.		
B.		Study Tour or Socio-Economic Survey	28 Hrs.	7 Marks	Practical/Hands-on Learning – Drawing and interpretation of map projections through laboratory work. Field-Based Learning – Study tour or socio-economic survey for collection of geographical data.		
C.		Practical Record	-----	5 Marks	Project and Report Writing – Preparation and presentation of survey reports		
D.		Viva Voce	-----	5 Marks			

				based on field observations and analysis.
Reference:	Reference Books: 1)Sing R. L. : Elements of Practical Geography ManavBooks 2)चतुर्भुज मामोरीया : मानचित्र एवम प्रायोगिक भूगोल साहित्य भवन पब्लिकेशन मेरठ.२०१५ 3) डॉ.मगर प्राकृतिक भूगोल भाग १,२,व ३ 4)रामलोचनसिंग व दत्ता पी.के.प्रयोगात्मक भूगोल 5)डॉ.व्ही.टी.घारपुरे व प्रा.व्ही. के. पवार:प्रात्यक्षिक भूगोल (नकाशाशास्त्रीय पद्धती) Weblink to Equivalent MOOC on SWAYAM if relevant: Weblink to Equivalent Virtual Lab if relevant: Any pertinent media (recorded lectures, YouTube, etc.) if relevant:			
Internal Assessment Practical (25 Marks)	Internal assessment for practical work evaluates students' practical skills, fieldwork experience, record maintenance, and understanding of geographical techniques. It includes practical journal submission, field survey/report, viva-voce, and active participation in practical sessions. This assessment helps develop observational, analytical, and mapping skills.			

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	VI	622221	Major XI (T): Geography of Maharashtra	4	60 Hrs.	3 Hrs.	External-60 Internal- 40 Total -100
Course Objectives:		1. Understand the geographical location, extent, administrative divisions, and regional characteristics of Maharashtra. 2. Explain the physical divisions, drainage system, climate, soils, and natural vegetation of Maharashtra. 3. Analyse the distribution and utilization of natural resources, minerals, and energy resources in Maharashtra. 4. Evaluate the agricultural patterns, industries, transportation, and economic development of the state. 5. Interpret population distribution, urbanization, and regional development issues in Maharashtra. 6. Develop map-reading, cartographic, and geographical analysis skills related to Maharashtra.					
Course Outcomes:		1. Students will aware of the magnitude of problems and prospects in Maharashtra 2. Students will understand the inter relationship between the subject and the society. 3. Students will gain a comprehensive understanding of Maharashtra. 4. Students will be able to identify and describe the physical divisions of Maharashtra. 5. Students will analyze the distribution of rainfall across different regions of Maharashtra. 6. Students will identify various soil types found in Maharashtra.					
Unit System	Contents			Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies	
Unit I	Maharashtra in the context of India Physical division of Maharashtra, Drainage System of Maharashtra ,			10 Hrs	10 Marks	1. Lecture Method – Teaching basic concepts of Maharashtra Geography. 2. Map Work – Preparation and interpretation of thematic maps. 3. ICT-Based Learning – Use of GIS, digital maps, and multimedia tools. 4. Project Work – Projects on agriculture, industries, population, and tourism. 5. Field Visits – Educational tours to geographical and	
Unit II	Climate: Distribution of rainfall, Soil Types, Vegetation			10 Hrs.	10 Marks		
Unit III	Major Crops in Maharashtra: Wheat, Rice, Jawar, Cotton & Sugarcane.			10 Hrs.	10 Marks		
Unit IV	Maharashtra Minerals : Manganese, Bauxite and iron ore, Power Resource : Coal, Hydro-electricity, Major Industries : Cotton Industry & Sugarcane Industry.			10 Hrs	10 Marks		
Unit V	Population: Distribution of Population and Density, Migration. Literacy			10 Hrs	10 Marks		
Unit VI	Maharashtra Tourism: Geographical			10 Hrs	10 Marks		

	Tourist Places : Chikhaldara, Mahabalashwar, Lonar, Ajanata & Ellora Reserve Forest: Melghat, Tadoba Tigar Project			environmental sites. 6. Group Discussion & Seminar – Presentations and discussions on regional issues and development.
References:	1) Arunachalam B. : Geography of Maharashtra. 2) Deshpande C.D. : Geography of Maharashtra, Northern Book Centre, New Delhi. 3) Sawadi&Keche : Maharashtra. 4) Deshpande : Economy of Maharashtra. 5) Dixshit K. R. : Maharashtra in Maps. DidderJaymala :Geography of Maharashtra, Rawat publication. 2002 7) Censes Atlas : Govt. of Maharashtra. 8) Sing R. L. : Elements of Practical Geography, Manav Books. 2015 9) फुले सुरेश :महाराष्ट्राचा भूगोल औरंगपुरा, औरंगाबाद .२००९ 10) केचे पांडुरंग : महाराष्ट्राचा भूगोल. 11) पाटील टी. पी. :महाराष्ट्राचा भूगोल. 12) सवदी ए. बी. : महाराष्ट्राचा भूगोल निराली प्रकाशन, पुणे. 13) सावंत प्रकाश : महाराष्ट्राचा भूगोल फडके प्रकाशन २००२ 14) धारपुरे विठ्ठल : महाराष्ट्राचा भूगोल पिंपळापुरे ,प्रकाशन, नागपूर २०१८. 15) मगर जयकुमार : महाराष्ट्राचा भूगोल, नागपूर.१९९० 16) पाटील व्ही.जे. : महाराष्ट्राचा भूगोल भूगोल, प्रशांत प्रकाशन २०१० 17) कार्लेकर श्रीकांत व सागळे शैलजा : महाराष्ट्राचा भूगोल, डायमंड प्रकाशन पुणे २००९ 18) डॉ. विजय टोम्पे व डॉ. सचिन भोम्बे (२०२६): महाराष्ट्राचा भूगोल, ज्ञानपथ प्रकाशन, अमरावती			
Internal Assessment (40 Marks)	Internal assessment shall be carried out by the respective course teacher by choosing variety of assessment tools/ methods such as class test, record book, seminar, case study, field work mini project work quiz or any innovative method, which may be deemed to be appropriate for assessing the relevant course outcomes.			

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	VI	622222	Major XII (T) Elective (A): Population Geography	2	30 Hrs.	2Hrs	External-30 Internal-20 Total-50
Course Objectives:		1. Understand the Scope and Nature of Population Geography To introduce students to the fundamental concepts, scope, and importance of population geography as a subfield of human geography. 2. Analyze Population Distribution and Density To study spatial patterns of population distribution and density at global, regional, and local scales, and understand the factors influencing them. 3. Examine Population Dynamics To explore key demographic processes such as birth, death, migration, and population growth, and how they vary across different geographic regions. 4. Interpret Population Structure and Composition To assess the population structure in terms of age					
Course Outcomes:		1) Understand and explain key concepts of population geography such as population distribution, density, growth, and demographic transition. 2) Evaluate spatial patterns of age, sex, occupation, and other demographic characteristics at global, regional, and local scales. 3) Analyze the factors influencing fertility, mortality, and migration, and how these contribute to population change. 4) Critically assess population policies of different countries, particularly India, and their effectiveness in addressing demographic challenges.					
Unit System		Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
Unit I		Nature and Scope of Population Geography: Definition, nature, and scope of Population Geography Sources of population data: Census, Vital Registration, Sample Surveys	7 Hrs	7 Marks	- Students explore critical demographic questions such as causes of population explosion, regional disparities in fertility, or implications of migration. - Teaching through analysis of real demographic datasets like Census of India, - Group discussions, presentations, and peer review on population issues. - Interactive session analyzing global population change with animated graphs.		
Unit II		Population Distribution and Density Factors affecting population distribution: physical, economic, social, and political Patterns of population distribution at global and national levels, Population density	8 Hrs	8 Marks			
Unit III		Population Growth and Theories: Population growth in India Theories of population	7 Hrs	7 Marks			

	growth: Malthusian Theory, Demographic Transition Theory			
Unit IV	Population Composition in India Age and sex structure ,Literacy, Rural-Urban composition ,Occupational structure, ,Dependency ratio in India	8 Hrs	8 Marks	
References:	Reference Books: 1) . लांडगे,अनिल (2020): Population Geography, Amazon Kindle Direct Publishing. 2) वाणी, बी. के. (2020) : Population Geography, Atharva Publications. 3) शिंदे देवानंद, (2018): लोकसंख्या व आर्थिक भूगोल, प्रकाशक: मुंबई विद्यापीठ. 4) मौर्य एसडी., (2023): जनसंख्या भूगोल, शारदापुस्तक भवन इलाहाबाद 5) मामोरिया चतुर्भुज., (2022): जनसंख्या भूगोल, SBPD publication 6) विठ्ठल धारपुरे (2018): लोकसंख्या भूगोल, पिंपळापुरे प्रकाशन 7) Majid Hussain (2007) : population Geography, Rawat publication 8) Chandna R.C. (2017) "Geography of Population: Concepts, Determinants and Patterns" published by Kalyani Publishers			
Internal Assessment Theory (20 Marks)	Internal assessment shall be carried out by the respective course teacher by choosing variety of assessment tools/ methods such as class test, record book,seminar, Assignment, case study, field work,mini project work, quiz or any innovative method which may be deemed to be appropriate for assessing the relevant course outcomes.			

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	VI	622223	Major XII (P) Elective (A): Comparative Scale	2	60 Hrs.	2Hrs	External -25 Internal- 25 Total- 50
Course Objectives:		1. To understand the concept and significance of comparative scales. 2. To learn the principles of comparative scale construction. 3. To develop skills in converting different units of measurement. 4. To apply comparative scales for geographical distance representation.					
Course Outcomes:		1. Students will explain the concept and importance of comparative scales. 2. Students will construct comparative scales accurately. 3. Students will convert distances between different units of measurement. 4. Students will use comparative scales for map interpretation and analysis.					
Unit System		Contents		Work load Allotted	Weightage of Marks Allotted		Incorporation of Pedagogies
A		Basics of Comparative Scale and Its Importance: 1. Meaning and Definition of Comparative Scale 2. Concept of Comparative Scale 3. Importance and Uses of Comparative Scale 4. Principles of Comparative Scale Construction 5. Relationship between Different Units of Measurement 6. Applications of Comparative Scale in Geography		28 Hrs.	7 Marks		1. Lecture Method 2. Demonstration Method 3. Practical/Hands-on Exercises 4. Problem-Solving Method 5. ICT-Based Teaching and

B	Comparative Scale: 1. Meaning and Characteristics of Comparative Scale 2. Requirements for Construction of Comparative Scale 3. Conversion of Different Units (Kilometers, Miles, etc.) 4.Construction of Comparative Scale 5.Reading and Interpretation of Comparative Scale 6.Practical Exercises on Comparative Scale	32 Hrs.	8 Marks	Learning 6. Assignment and Map Work Activities
C	Practical Record	-----	5 Marks	
D	Viva Voce	-----	5 Marks	
References :	Reference Books: 1) Singh L.R. 2020: Fundamentals Of Practical Geography shrada Pustak Bhawan Allahbad 2) Singh R. I. And Datta : Elements of Practical Geography 3) Kannan Monika and Shilpi Yadav (2022): Practical Geography Rawat Publication Jaipur 4) शिंतोळे तुषार(2020): प्रात्यक्षिक भूगोल डायमंड पब्लिकेशन 5) Khullar D.R. (2022): Prayogatmak Bhugol Kalyani Publication 6) शर्मा जे.पी. (२०१९): प्रयोगात्मक भूगोल की रूपरेखा रस्तोगी पब्लिकेशन मेरठ 7) चातुर्भुज मामोरीया: प्रात्यक्षिक भूगोल सुमेरु प्रकाशन डोंबिवली पूव १९९८			
Internal Assessment Practical (25 Marks)	Internal assessment for practical work evaluates students' practical skills, fieldwork experience, record maintenance, and understanding of geographical techniques. It includes practical journal submission, field survey/report, viva-voce, and active participation in practical sessions. This assessment helps develop observational, analytical, and mapping skills.			

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	VI	622224	Major XII (T) Elective (B): Environmental Geography	2	30 Hrs.	2 Hrs.	External-30 Internal- 20 Total -50
Course Objectives:		1. To understand the concept, nature, scope, need, and importance of Environmental Geography. 2. To examine the relationship between humans and the environment and the role of natural and man-made environmental factors. 3. To study natural resources, their importance, classification, and sustainable utilization. 4. To understand ecosystem structure, functions, biodiversity, and issues related to biodiversity conservation. 5. To analyze environmental pollution, its causes, effects, and various control measures. 6. To evaluate sustainable development concepts, environmental issues, and environmental movements in India with special reference to Maharashtra.					
Course Outcomes:		1. Explain the basic concepts, nature, scope, and importance of Environmental Geography. 2. Analyze the interaction between human beings and the environment. 3. Identify different types of natural resources and understand their significance for sustainable development. 4. Describe ecosystem functions, biodiversity patterns, and the need for biodiversity conservation. 5. Assess various forms of environmental pollution and suggest appropriate control measures. 6. Evaluate major environmental issues, sustainable development strategies, and environmental movements in India and Maharashtra.					
Unit System	Contents		Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
Unit I	Environmental Geography : Definition, Nature & Scope of Environmental Geography, Need & Importance of Environmental Geography, Factors of Environment : Natural and Manmade , Man-Environment Relationship		7 Hrs.	7 Marks	Lectures and Interactive Discussions for explaining environmental concepts and issues Case Study Method for analyzing environmental problems and sustainable development practices. Field Visits and Environmental Surveys to observe local environmental conditions		
Unit II	Natural Resources: Definition of Natural Resources, importance of Resources, Types of Resources: Renewable and non-renewable		8 Hrs.	8 Marks			
Unit III	Ecosystem & Biodiversity : Ecosystem: Meaning, Components and function, types of ecosystem:		7 Hrs.	7 Marks			

	Forest, Grassland, Desert fresh water and Marine Biodiversity : Concept and Importance of Biodiversity, Types & Hotspot of Biodiversity, Crises of Biodiversity,			Project-Based Learning on pollution control, biodiversity, and resource conservation. ICT-Based Teaching using maps, videos, presentations, and online environmental resources.
Unit IV	Environmental Pollution: concept of pollution, Types of Pollution: Air, Water, Noise and Solid waste, Causes and Effects of Pollution , Control and solution of the all Pollution	8 Hrs.	8 Marks	
7References:	Reference Books: 1. Savindra Singh (2020). <i>Environmental Geography</i>. Prayag Pustak Bhawan, Allahabad. 2. Cunningham, W.P. & Cunningham, M.A. (2021). <i>Principles of Environmental Science</i>. McGraw-Hill Education. 3. Miller, G.T. & Spoolman, S.E. (2020). <i>Living in the Environment</i>. Cengage Learning. 4. Odum, E.P. & Barrett, G.W. (2017). <i>Fundamentals of Ecology</i>. Cengage Learning. 5. Saxena, H.M. (2019). <i>Environmental Geography</i>. Rawat Publications, Jaipur. 6. Singh, R.B. (2018). <i>Environmental Geography</i>. Heritage Publishers, New Delhi. 7. सिंह, सविन्द्र (2020). <i>पर्यावरण भूगोल</i>. प्रयाग पुस्तक भवन, इलाहाबाद। 8. यादव, चन्द्रशेखर (2018). <i>पर्यावरण भूगोल</i>. शारदा पुस्तक भवन, इलाहाबाद। 9. सिंह, जगदीश (2019). <i>पर्यावरण अध्ययन एवं पर्यावरण भूगोल</i>. राधा पब्लिकेशन्स, नई दिल्ली। 10. शर्मा, पी.डी. (2020). <i>पर्यावरण एवं पारिस्थितिकी</i>. रस्तोगी पब्लिकेशन्स, मेरठ। 11. शिंदे, एस.डी. (2020). <i>पर्यावरण भूगोल</i>. फडके प्रकाशन, कोल्हापूर. 12. माने, बी.एस. (2019). <i>पर्यावरण भूगोल</i>. विद्या प्रकाशन, नागपूर. 13. पाटील, ए.बी. (2018). <i>पर्यावरण आणि परिसंस्था</i>. प्रशांत पब्लिकेशन्स, जळगाव. 14. जाधव, तुकाराम (2021). <i>पर्यावरण अध्ययन</i>. निराली प्रकाशन, पुणे.			
Internal Assessment	Internal assessment shall be carried out by the respective course teacher by choosing variety of assessment tools/ methods such as class test, record			

Theory (20 Marks)	book,seminar, Assignment, case study, field work,mini project work, quiz or any innovative method which may be deemed to be appropriate for assessing the relevant course outcomes.
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Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	VI	622225	Major XII (P) Elective (B) Field Work and Research Methodology	2	60 Hrs.	2 Hrs	External-25 Internal-25 Total -50
Course Objectives:		1. To introduce the concepts, significance, and ethical considerations of fieldwork in geographical studies. 2. To develop skills in identifying and defining appropriate field study areas in physical, human, rural, urban, and environmental geography. 3. To familiarize students with various field techniques, tools, and methods of primary data collection. 4. To train students in the organization, analysis, interpretation, and presentation of field-based geographical data. 5. To enable students to prepare scientific and systematic field reports.					
Course Outcomes:		After completing the course, students will be able to: 1. Explain the role, value, and ethical principles of fieldwork in geographical research. 2. Select suitable field study areas and apply appropriate field survey techniques for data collection. 3. Use questionnaires, interviews, observations, and field instruments effectively for geographical investigations. 4. Collect, analyze, interpret, and present physical and socio-economic data in a systematic manner. 5. Prepare comprehensive field reports following standard geographical research methodologies.					
Unit System		Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
A.		1 Field Work In Geographical Studies : Role, Value, Data and Ethics of Field-Work 2. Defining the Field and Identifying the Case Study: Rural / Urban / Physical / Human /Environmental.	32 Hrs.	8 Marks	1. Lecture-cum-Discussion Method 2. Field Visits and On-site Surveys 3. Demonstration of Field Instruments and Survey Techniques		
B.		1. Field Techniques : Merits, Demerits and Selection of the Appropriate Technique; Observation Questionnaires (Open/ Closed / Structured / Non-Structured); Interview with Special Focus on Focused Group Discussions; Space Survey	28 Hrs.	7 Marks	4. Group Discussions and Focus Group Activities 5. Project-Based Learning and Report Writing 6. Case Study Analysis and Presentation		

	2. Use of Field Tools: Collection of Material for Physical and Socio- Economic Surveys. 3. Designing the Field Report : Aims and Objectives, Methodology, Analysis, Interpretation and Writing the Report.			7. Experiential Learning through Rural/Urban Fieldwork 8. ICT-Based Data Analysis and Mapping Exercises 9. Student Seminars and Survey Presentations
C.	Practical Record	-----	5 Marks	
D.	Viva Voce	-----	5 Marks	
Reference:	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-Hall of 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 Pubs. Co., New Delhi. 5. Mukherjee, Neela 2002. Participatory Learning and Action: with 100 Field Methods. Concept Pubs. 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 Methods in Geography, Kendall/Hunt. 9. Wolcott, H. 1995. The Art of Fieldwork. Alta Mira Press, Walnut Creek, CA			
Internal Assessment Practical (25 Marks)	Internal assessment for practical work evaluates students' practical skills, fieldwork experience, record maintenance, and understanding of geographical techniques. It includes practical journal submission, field survey/report, viva-voce, and active participation in practical sessions. This assessment helps develop observational, analytical, and mapping skills.			

Level	Semester	Course Code	Course Name	Credits	Teaching Hours	Exam Duration	Max Marks
5.5	VI	622275	Vocational Skill Course (VSEC) Introduction of GIS	2	60 Hrs.	2 Hrs.	Theory-30 Internal 20 Total 50
Course Objectives:		1. To understand the basic concept, meaning, and importance of GIS (Geographical Information System). 2. To introduce students to the components and functions of GIS. 3. To develop understanding about spatial and non-spatial data used in GIS. 4. To study different GIS techniques and methods of data analysis. 5. To understand the practical applications of GIS in geography, agriculture, urban planning, and disaster management.					
Course Outcomes:		1. Understand the basic concepts, components, and importance of GIS. 2. Identify different types of spatial and non-spatial data used in GIS. 3. Explain basic GIS techniques and functions for data management and analysis. 4. Describe the applications of GIS in geography, urban planning, agriculture, environment, and disaster management. 5. Develop basic knowledge of map interpretation and geographic data handling.					
Unit		Contents	Workload Allotted	Weightage of Marks Allotted	Incorporation of Pedagogies		
Unit I		Introduction to GIS: 1. Meaning and Definition of GIS 2. Nature and Scope of GIS 3. Components of GIS – Hardware, Software, Data, People and Methods 4. Importance and Applications of GIS	16 Hrs.	8 Marks	Lecture Method – To explain basic concepts, definitions, and theoretical aspects of GIS. Interactive Learning – Classroom discussions, question-answer sessions, and doubt clearing. ICT-Based Teaching – Use of PowerPoint presentations, videos, and GIS software demonstrations. Practical Demonstration – Showing maps, satellite images, and basic GIS tools for better understanding. Assignment and Project Work – Simple map-based or data-based assignments to develop analytical skills. Field-Based Learning (if possible) – Observation of geographic features and collection of basic spatial data.		
Unit II		Spatial Data in GIS: 1. Meaning of Spatial Data 2. Types of Data – Spatial and Non-Spatial Data 3. Raster and Vector Data Model 4. Sources of Geographic Data – Maps, Satellite	14 Hrs.	7 Marks			

	Images, GPS			
Unit III	GIS Techniques and Functions: 1. Data Input and Data Management 2. Data Storage and Retrieval 3. Map Overlay Technique 4. Data Analysis and Interpretation in GIS	16 Hrs.	8 Marks	
Unit IV	Applications of GIS: 1. GIS in Geography 2. GIS in Urban and Regional Planning 3. GIS in Agriculture and Environment 4. GIS in Disaster Management and Resource Planning	14 Hrs.	7 Marks	
References:	1. Burrough, P.A. – Principles of Geographical Information Systems 2. Kang-Tsung Chang – Introduction to Geographic Information Systems 3. Anji Reddy – Remote Sensing and GIS 4. Mishra, R.P. – Fundamentals of Cartography and GIS			
Internal Assessment Vocational Skill Course (20 Marks)	Internal assessment is designed to evaluate the continuous performance of students in vocational skill courses. It focuses on practical knowledge, skill development, project work, assignments, and active participation in training activities. The assessment helps students acquire professional competencies, technical skills, and employability attributes required in the workplace.			