



HSNC Board's
Smt. Chandibai Himathmal Mansukhani College
(Autonomous)



(Affiliated to the University of Mumbai)

University College Code : 217-JD Office : T14

Principal : Dr. Manju Lalwani Pathak

Ref No: CHM (A) AC/C/01/2025

Date: 18th June 2025

CIRCULAR

The immediate attention of all concerned is invited to this office Circular No. CHM (A) AC 05/2025 dated 19th May, 2025 regarding the Choice Based and Credit Based Syllabus (CBCS) for all subjects of F.Y.B.A & T.Y.B.A. in Geography SEM - I & SEM – V respectively.

It is hereby communicated that the recommendations of the syllabus made by the Ad-hoc Board of Studies in Geography coordinated by the Dean, Faculty of Social Sciences in the meeting of Academic Council held on 23rd May, 2025 vide item No. 4.5, have been accepted and subsequently passed.

In accordance, therewith, the syllabus as per the CBCS has been brought into force with effect from the academic year 2025 – 2026 and accordingly the same is attached for reference and is available on the College's website www.chmcollege.in

Ulhasnagar - 421 003

18th June, 2025

Dr. Manju Lalwani Pathak

Principal & Chairperson, Academic Council

Copy forwarded for information to:-

- 1) The Dean, Faculty of Humanities.
- 2) The Chairperson, Ad-hoc Board of Studies.
- 3) The Controller of Examination.
- 4) The Registrar



Smt. Chandibai Himathmal Mansukhani College, Ulhasnagar
(Autonomous)
Affiliated to the University of Mumbai

Bachelor of Arts
(Geography)
(Aided Course)

Semester – V

Choice Based and Credit Based Syllabus
with effect from the
Academic Year 2025-2026

PREAMBLE

In today's rapidly changing world, where environmental challenges intersect with human development needs, the study of Geography offers a unique lens to understand our planet and its diverse systems. This Third-Year Bachelor of Arts Programme in Geography bridges the theoretical foundations with practical applications, equipping students with the knowledge and skills to navigate contemporary global and local issues. The curriculum explores the dynamic processes shaping Earth's physical features, developing a deep understanding of landforms, natural hazards, and environmental systems. Simultaneously, it examines the complex relationship between humans and their settlements, particularly focusing on rural landscapes and development patterns relevant to the Indian context. The programme also emphasises the practical aspects of planning and development, offering insights into sustainable approaches to managing spaces and resources. Through this holistic geographical education, students develop critical thinking, spatial analysis, and problem-solving abilities, skills highly valued across diverse sectors. Arts graduates in Geography find opportunities in environmental management, urban and rural planning, disaster management, geospatial technologies, climate change adaptation, tourism, and education. The programme's integrated approach helps students understand the interconnection between physical landscapes and human activities, preparing them to contribute meaningfully to sustainable development initiatives. The curriculum balances classroom learning with field-based investigations and practical applications, ensuring students gain both theoretical knowledge and hands-on experience. This programme will appropriately position our graduates to address the complex challenges facing our world today and contribute to building resilient communities for tomorrow.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: Understand how the environment works and how human beings interact with it to build settlements, use resources, and plan development.

PSO2: Gain practical knowledge and skills by the ability to read, interpret, and prepare maps, use tools like GPS and GIS, conduct surveys, and apply basic statistical methods to study geographical patterns.

PSO3: Analyse geographical problems using geographical thinking and solutions.

PSO4: Apply knowledge in real life and career, such as teaching, administration, planning, environment-related jobs, rural and urban development, and map-based data analysis.

PSO5: Think globally and act locally by developing awareness of global challenges like climate change and sustainability, and understanding how to apply this knowledge to improve conditions in their region or community.

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**Third Year B.A.
(Geography)**

Semester - V

Title: Introduction to Geomorphology

Paper IV - 4 Credits

**With effect from
Academic Year 2025-2026**

Title: Introduction to Geomorphology

Course Code: CHM(A)UAGEO-501

Sr. No.	Heading	Particulars
1	Description of the Course	This syllabus introduces the fundamentals of Geomorphology, including the Earth's interior, continental drift theory, and plate tectonics. It covers the types and characteristics of rocks and minerals, focusing on igneous, sedimentary, and metamorphic rocks. Students will study endogenic processes like folds, faults, earthquakes, and volcanoes, along with their causes, effects, and distribution. The course also explores exogenic processes, including weathering, erosion, and mass wasting. It covers fluvial, marine, and glacial landforms, with specific examples from India, helping students understand Earth's dynamic surface changes.
2	Vertical	--
3	Type Teaching Method	Theory + Practicum Lecture/discussion/presentation/diagrams/case study/etc.
4	Credit	4 Credits
5	Lectures allotted	60 Lectures
6	Marks allotted	100 Marks
7	Course Objectives: 1. To familiarise students with the foundational principles, scope and theories of geomorphology. 2. To enable students to differentiate, classify and interpret the characteristics of rocks and minerals. 3. To develop an in-depth understanding of endogenic processes and their role in landform evolution. 4. To examine and evaluate exogenic processes and their impact on surface features. 5. To interpret and analyse major fluvial, marine and glacial landforms, with illustrative examples from India.	

8	Learning Outcomes: Student will be able to LO1: Understand and articulate the definition, nature, scope and key theories of geomorphology. LO2: Classify and characterise igneous, sedimentary and metamorphic rocks, and distinguish them from minerals. LO3: Analyse endogenic processes and explain their spatial distribution. LO4: Evaluate the mechanisms and effects of exogenic processes LO5: Apply geomorphic concepts to identify, describe and interpret key fluvial, marine, and glacial landforms in the Indian context.
9	Syllabus UNIT I: Fundamentals of Geomorphology • Geomorphology: Definition, Nature and Scope • Earth's Interior Structure and Composition • Wegener's Continental Drift Theory • Plate Tectonic Theory UNIT II: Rocks and Minerals • Rocks and Minerals: Meaning, Types, Differences • Igneous Rocks: Characteristics and Classification • Sedimentary Rocks: Characteristics and Classification • Metamorphic Rocks: Characteristics and Classification UNIT III: Endogenic Processes • Meaning of Endogenic Processes - Folds: Meaning and Types • Faults: Meaning and Types • Earthquake: Causes, Effects, and Distribution • Volcanoes: Causes, Effects, and Distribution UNIT IV: Exogenic Processes - I • Meaning of Exogenic Processes – Concepts of Weathering, Erosion, Mass Wasting • Types of Weathering: Physical, Chemical, and Biological • Fluvial Landforms: Erosional with examples from India • Fluvial Landforms: Depositional with examples from India UNIT V: Exogenic Processes – II • Marine Landforms: Erosional with examples from India • Marine Landforms: Depositional with examples from India • Glacial Landforms: Erosional with examples from India • Glacial Landforms: Depositional with examples from India

10	Scheme of Examination and Assessment Pattern Paper – 100 Marks External Examination: Semester End External - 100 marks Time: 3:00 hours Format of Question Paper Attempt all questions. <table><tr><th>Question No</th><th>Nature of Questions</th><th>Marks</th></tr><tr><td>1 (A) OR (B)</td><td>Theory based on Unit I</td><td>20</td></tr><tr><td>2 (A) OR (B)</td><td>Theory based on Unit II</td><td>20</td></tr><tr><td>3 (A) OR (B)</td><td>Theory based on Unit III</td><td>20</td></tr><tr><td>4 (A) OR (B)</td><td>Theory based on Unit IV</td><td>20</td></tr><tr><td>5 (A) OR (B)</td><td>Theory based on Unit V</td><td>20</td></tr><tr><td colspan="2"></td><td>Total 100</td></tr></table>	Question No	Nature of Questions	Marks	1 (A) OR (B)	Theory based on Unit I	20	2 (A) OR (B)	Theory based on Unit II	20	3 (A) OR (B)	Theory based on Unit III	20	4 (A) OR (B)	Theory based on Unit IV	20	5 (A) OR (B)	Theory based on Unit V	20			Total 100
Question No	Nature of Questions	Marks																				
1 (A) OR (B)	Theory based on Unit I	20																				
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5 (A) OR (B)	Theory based on Unit V	20																				
		Total 100																				
11	REFERENCES: 1. Dayal, P. (1995). <i>A textbook of geomorphology</i>. Shukla Book Dept. 2. Hussain, M. (2001). <i>Fundamentals of physical geography</i>. Rawat Publications. 3. Kale, V. S., & Gupta, A. (2018). <i>Introduction to geomorphology</i>. Universities Press. 4. Kamble, A., & Karmarkar, D. (2018). <i>Geomorphology</i>. IDOL Publications. 5. Lal, D. S. (2009). <i>Physical geography</i>. Sharda Pustak Bhavan. 6. Negi, B. S. (1993). <i>Physical geography</i>. S. J. Publication. 7. Qazi, S. A. (2009). <i>Principles of physical geography</i>. A.P.H. Publication. 8. Singh, S. (2015). <i>Physical geography</i>. Pravalika Publication. 9. Strahler, A. N. (1968). <i>The earth sciences</i>. Harper & Row. 10. Thornberry, W. D. (1969). <i>Principles of geomorphology</i>. Wiley Eastern Limited.																					

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**Third Year B.A.
(Geography)**

Semester - V

Title: Geography of Rural Settlements

Paper V - 4 Credits

**With effect from
Academic Year 2025-2026**

Title: Geography of Rural Settlements**Course Code: CHM(A)UAGEO-502A**

Sr. No.	Heading	Particulars
1	Description of the Course	This syllabus provides a comprehensive study of rural settlements, starting with the concept, nature, and scope of settlement geography. It covers factors influencing the evolution and siting of rural settlements, as well as basic types such as farmstead, hamlet, and village. Students will explore classifications of rural settlements based on patterns and functions, including compact, semi-compact, and dispersed types. The course also focuses on rural settlements in India, including distribution, density, house types, and regional variations. It concludes with the importance of rural settlement planning and integrated rural development programs.
2	Vertical	--
3	Type Teaching Method	Theory + Practicum Lecture/discussion/presentation/diagrams/map-based learning/case study/etc.
4	Credit	4 Credits
5	Lectures allotted	60 Lectures
6	Marks allotted	100 Marks
7	Course Objectives: 1. To introduce students to the fundamental concepts, scope, factors and basic types of rural settlements. 2. To enable students to classify and differentiate rural settlement forms by pattern, structure and function. 3. To examine the distribution, density, housing types and building materials of rural settlements across India. 4. To analyse the morphology, regional variations, emerging problems and rural-urban fringe dynamics of Indian villages. 5. To explore the principles, approaches and programmes for effective rural land-use planning and development in India.	

8	Learning Outcomes: Student will be able to LO1: Understand the meaning, nature and scope of settlement geography, the factors influencing rural settlement evolution, siting considerations and basic settlement types. LO2: Classify compact, semi-compact and dispersed rural settlements, and distinguish settlement types by pattern and function. LO3: Analyse spatial distribution and density patterns of rural settlements in India, and identify characteristic housing forms and construction materials. LO4: Evaluate rural settlement morphology, regional pattern variations, key socio-environmental problems and issues at the rural-urban fringe. LO5: Apply principles of changing rural land use, various planning approaches, IRDP concepts and area-based planning methods to practical scenarios.
9	Syllabus UNIT I: Fundamentals of Rural Settlements • Concept of Settlement – Settlement Geography: Meaning, Nature and Scope • Factors Affecting the Evolution of Rural Settlements • Siting Factors of Rural Settlements • Basic Types of Rural Settlements: Farmstead, Hamlet, Village UNIT II: Classification of Rural Settlements • Compact Rural Settlements: Meaning and Factors • Semi-Compact and Hamletted Rural Settlements: Meaning and Factors • Dispersed Rural Settlements: Meaning and Factors • Types of Rural Settlements Based on Patterns and Functions UNIT III: Rural Settlements in India – I • Distribution of Rural Settlements in India • Density of Rural Settlements in India • Housetypes of Rural Settlements in India • Building Materials Used in Rural Settlements in India UNIT IV: Rural Settlements in India – II • Morphology of Rural Settlements in India • Regional Variations in Rural Settlement Patterns in India • Problems of Rural Settlements in India • Rural-Urban Fringe: Concept, Features, and Issues UNIT V: Rural Settlement Planning • Changing Rural Landuse and Need for Rural Planning • Meaning and Approaches to Rural Planning in India • Integrated Rural Development Programme (IRDP): Concept, Importance, and Programmes • Area-based Rural Planning: Watershed & Drought-prone Areas

10	Scheme of Examination and Assessment Pattern Paper – 100 Marks External Examination: Semester End External - 100 marks Time: 3:00 hours Format of Question Paper Attempt all questions. <table><tr><th>Question No</th><th>Nature of Questions</th><th>Marks</th></tr><tr><td>1 (A) OR (B)</td><td>Theory based on Unit I</td><td>20</td></tr><tr><td>2 (A) OR (B)</td><td>Theory based on Unit II</td><td>20</td></tr><tr><td>3 (A) OR (B)</td><td>Theory based on Unit III</td><td>20</td></tr><tr><td>4 (A) OR (B)</td><td>Theory based on Unit IV</td><td>20</td></tr><tr><td>5 (A) OR (B)</td><td>Theory based on Unit V</td><td>20</td></tr><tr><td colspan="2"></td><td>Total 100</td></tr></table>	Question No	Nature of Questions	Marks	1 (A) OR (B)	Theory based on Unit I	20	2 (A) OR (B)	Theory based on Unit II	20	3 (A) OR (B)	Theory based on Unit III	20	4 (A) OR (B)	Theory based on Unit IV	20	5 (A) OR (B)	Theory based on Unit V	20			Total 100
Question No	Nature of Questions	Marks																				
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3 (A) OR (B)	Theory based on Unit III	20																				
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5 (A) OR (B)	Theory based on Unit V	20																				
		Total 100																				
11	REFERENCES: 1. Khullar, D. R. (2023). <i>India: A comprehensive geography</i>. Kalyani Publishers. 2. Mandal, R. B. (2001). <i>Introduction to settlement geography</i>. Concept Publications. 3. Maurya, S. D. (2018). <i>Settlement geography</i>. Sharda Pustak Bhavan. 4. Sahu, B. K. (2003). <i>Rural development in India</i>. Anmol Publishers. 5. Singh, R. Y. (2005). <i>The geography of settlement</i>. Rawat Publications. 6. Sinha, V. N. P., Verma, U., & Sahay, A. (2017). <i>Introduction to settlement geography</i>. Rajesh Publications. 7. Tiwari, R. C. (2016). <i>Geography of India</i>. Pravalika Publications. 8. Tiwari, R. C. (2020). <i>Settlement geography</i>. Pravalika Publications.																					

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**Third Year B.A.
(Geography)**

Semester - V

**Title: Tools and Techniques in Geography for
Spatial Analysis – I (Practical)**

Paper VI - 4 Credits

**With effect from
Academic Year 2025-2026**

Title: Tools and Techniques in Geography for Spatial Analysis – I (Practical)

Course Code: CHM(A)UAGEO-503

Sr. No.	Heading	Particulars
1	Description of the Course	This syllabus covers key aspects of map interpretation and creation, starting with an understanding of map projections—zenithal polar, cylindrical, and conical types. It then delves into topographical maps, focusing on contour, colours, symbols, and grid references, along with the role of the Survey of India. Students will explore thematic maps and their preparation using various cartographic techniques. The course also covers weather maps and instruments, including those used by the Indian Meteorological Department (IMD). Finally, students will learn to use Google Earth for location identification, map-making, and elevation profiling.
2	Vertical	--
3	Type Teaching Method	Theory + Practicum Lecture/discussion/constructions/diagrams/map-based learning/web-based & mobile-app based learning/case study/etc.
4	Credit	4 Credits
5	Lectures allotted	45 Lectures
6	Marks allotted	100 Marks
7	Course Objectives: 1. To introduce fundamental concepts and practical techniques in map projection selection and construction, including zenithal, cylindrical and conical projections. 2. To develop skills in reading, interpreting and extracting topographical information from Survey of India maps, including contour interpretation, grid referencing, symbols and colours. 3. To enable students to employ cartographic and statistical methods for creating and interpreting thematic maps, such as choropleth and located-circle maps. 4. To familiarise students with key meteorological instruments, IMD weather-map symbols and the interpretation of weather charts. 5. To equip students with hands-on proficiency in Google Earth for spatial data visualisation.	

8	Learning Outcomes: Student will be able to LO1: Understand different map projection concepts and construct zenithal, cylindrical and conical projections. LO2: Apply contour reading, four- and six-figure grid references, and Survey of India symbols to accurately interpret topographical maps. LO3: Create and interpret thematic maps using cartographic/statistical techniques, including choropleth and located-circle mapping. LO4: Analyse data from meteorological instruments, decode IMD weather symbols, and read weather maps effectively. LO5: Utilise Google Earth tools to identify latitudes, longitudes and elevations; add placemarks, paths and polygons; and produce simple thematic maps.
9	Syllabus UNIT I: Map Projections • Map Projection: Concept, Types, and Choice • Concept and Construction of Zenithal Polar Projections: Equal Area and Equidistant • Concept and Construction of Cylindrical Projections: Equal Area and Equidistant • Concept and Construction of Conical Projections: One-Standard Parallel and Two-Standard Parallel UNIT II: Topographical Maps • Concepts of Contour and Topographical Map – Role of the Survey of India (SoI) • Use of Colours, Signs and Symbols – Four-Figure and Six-Figure Grid References • Reading of SoI Topographical Maps: Physiography, Drainage, Vegetation • Reading of SoI Topographical Maps: Settlements and Transport UNIT III: Thematic Maps • Concept and Features of Thematic Maps – Role of the National Atlas and Thematic Mapping Organisation (NATMO) • Cartographic and Statistical Techniques in Thematic Mapping • Preparation of Choropleth, Isopleth, and Dot Maps • Reading of Thematic Maps UNIT IV: Weather Maps and Instruments • Concept of Weather – Role of Indian Meteorological Department (IMD) • Weather Instruments: Thermometer, Barometer, Wind Vane, Anemometer, Rain Gauge • Signs and Symbols in IMD Weather Maps • Reading Weather Maps UNIT V: Using Google Earth • Location Identification: Latitudes, Longitudes, Elevation • Adding Placemarks, Paths, and Polygons • Creating Elevation Profiles • Making Simple Maps with Google Earth

10	Scheme of Examination and Assessment Pattern Paper – 100 Marks External Examination: Semester End External - 100 marks Time: 4:00 hours (Practicals) Format of Question Paper Attempt all questions. <table><tr><th>Question No</th><th>Nature of Questions</th><th>Marks</th></tr><tr><td>Q.1</td><td>Practical based on Unit I</td><td>16</td></tr><tr><td>Q.2</td><td>Practical based on Unit II</td><td>16</td></tr><tr><td>Q.3</td><td>Practical based on Unit III</td><td>16</td></tr><tr><td>Q.4</td><td>Practical based on Unit IV</td><td>16</td></tr><tr><td>Q.5</td><td>Practical based on Unit V</td><td>16</td></tr><tr><td>Q.6</td><td>Practical Journal and Viva</td><td>20</td></tr><tr><td colspan="2"></td><td>Total 100</td></tr></table>	Question No	Nature of Questions	Marks	Q.1	Practical based on Unit I	16	Q.2	Practical based on Unit II	16	Q.3	Practical based on Unit III	16	Q.4	Practical based on Unit IV	16	Q.5	Practical based on Unit V	16	Q.6	Practical Journal and Viva	20			Total 100
Question No	Nature of Questions	Marks																							
Q.1	Practical based on Unit I	16																							
Q.2	Practical based on Unit II	16																							
Q.3	Practical based on Unit III	16																							
Q.4	Practical based on Unit IV	16																							
Q.5	Practical based on Unit V	16																							
Q.6	Practical Journal and Viva	20																							
		Total 100																							
11	REFERENCES: 1. Monkhouse, F. J., & Wilkinson, H. R. (1971). <i>Maps and diagrams</i>. Methuen & Co. Ltd. 2. Robinson, A. H. (1995). <i>Elements of cartography</i>. John Wiley & Sons. 3. Rogerson, P. (2001). <i>Statistical methods for geography</i>. Sage Publishers. 4. Sarkar, A. (2013). <i>Quantitative geography</i>. Orient Black Swan. 5. Sarkar, A. (2015). <i>Practical geography</i>. Orient Black Swan. 6. Singh, R. L., & Singh, P. B. (2005). <i>Elements of practical geography</i>. Kalyani Publishers. 7. Stoddard, R. F. (n.d.). <i>Techniques and research methods in geography</i>. Retrieved from http://digitalcommons.unl.edu/geographyfacpub/26																								

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**Third Year B.A.
(Geography)**

Semester - V

Title: Population Geography

Paper VII - 4 Credits

**With effect from
Academic Year 2025-2026**

Title: Population Geography
Course Code: CHM(A)UAGEO-504

Sr. No.	Heading	Particulars
1	Description of the Course	This syllabus introduces students to the field of Population Geography, covering its meaning, scope, and importance. It explores the key determinants of population change—fertility, mortality, and migration—along with the growth, distribution, and density of world populations. Students will study major theories like Malthus's, Marx's, and the Demographic Transition Theory, along with the concepts of over-population, under-population, and optimum population. The course also focuses on migration, its causes, effects, and recent trends, particularly in India. Finally, it examines India's population trends, composition, and contemporary challenges like urbanization and environmental impacts.
2	Vertical	--
3	Type Teaching Method	Theory + Practicum Lecture/discussion/diagrams/map-based learning/census-based learning/case study/etc.
4	Credit	4 Credits
5	Lectures allotted	60 Lectures
6	Marks allotted	100 Marks
7	Course Objectives: 1. To introduce students to the meaning, nature, scope, importance, approaches and basic data sources of population geography. 2. To examine the determinants of population change and to analyse factors affecting growth, population distribution, global population distribution and density patterns. 3. To understand theories of population growth and population-resource ratio 4. To explore migration processes through classification, push-pull factors, impacts on origin and destination areas, and recent international migration trends in India. 5. To study India's population growth trends, spatial distribution, density, demographic composition and contemporary issues of population growth.	

8	Learning Outcomes: Student will be able to LO1: Understand the meaning, scope, importance, approaches and primary sources of data in population geography. LO2: Analyse the determinants of population change and evaluate factors influencing world population growth, distribution and density. LO3: Understand theoretical explanations of population growth and the relationship between population and resources. LO4: Evaluate types of migration, identify key push-pull factors, assess migration's impacts on source and destination regions, and discuss recent trends in India. LO5: Interpret India's population growth trajectories, examine spatial patterns of distribution and density, and analyse demographic composition, and contemporary issues of population growth.
9	Syllabus UNIT I: Introduction to Population Geography • Population Geography: Meaning, Nature, Scope • Importance of Population Geography • Approaches to the Study of Population Geography • Basic sources of population data UNIT II: Population Dynamics • Determinants of Population Change: Fertility, Mortality, Migration • Growth of World Population • Factors Affecting Population Distribution • Distribution and Density of World Population UNIT III: Theories of Population Growth • Thomas Malthus's Theory • Karl Marx's Thoughts • Demographic Transition Theory • Population-Resource Ratio: Over-population, Under-population, and Optimum Population UNIT IV: Migration • Migration: Meaning and Classification • Causes of Migration: Push and Pull Factors • Consequences of Migration on Source and Destination Areas • Recent Trends of International Migration in India UNIT V: Population Geography of India • Trends of Population Growth in India • Distribution and Density of Population in India • Population Composition of India: Age, Sex, Occupation • Contemporary Issues of Population Growth in India: Urbanisation and Environmental Impacts

10	Scheme of Examination and Assessment Pattern Paper – 100 Marks External Examination: Semester End External - 100 marks Time: 3:00 hours Format of Question Paper Attempt all questions. <table><tr><th>Question No</th><th>Nature of Questions</th><th>Marks</th></tr><tr><td>1 (A) OR (B)</td><td>Theory based on Unit I</td><td>20</td></tr><tr><td>2 (A) OR (B)</td><td>Theory based on Unit II</td><td>20</td></tr><tr><td>3 (A) OR (B)</td><td>Theory based on Unit III</td><td>20</td></tr><tr><td>4 (A) OR (B)</td><td>Theory based on Unit IV</td><td>20</td></tr><tr><td>5 (A) OR (B)</td><td>Theory based on Unit V</td><td>20</td></tr><tr><td colspan="2"></td><td>Total 100</td></tr></table>	Question No	Nature of Questions	Marks	1 (A) OR (B)	Theory based on Unit I	20	2 (A) OR (B)	Theory based on Unit II	20	3 (A) OR (B)	Theory based on Unit III	20	4 (A) OR (B)	Theory based on Unit IV	20	5 (A) OR (B)	Theory based on Unit V	20			Total 100
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3 (A) OR (B)	Theory based on Unit III	20																				
4 (A) OR (B)	Theory based on Unit IV	20																				
5 (A) OR (B)	Theory based on Unit V	20																				
		Total 100																				
11	REFERENCES: 1. Chandna, R. C. (2014). <i>Geography of population: Concepts, determinants, and patterns</i>. Kalyani Publishers. 2. Datt, G., & Mahajan, A. (2016). <i>Datt and Sundaram's Indian economy</i>. S. Chand Publishing. 3. Dreze, J., & Sen, A. (n.d.). <i>Indian economic development and social opportunity</i>. Oxford University Press. 4. Gautam, A. (2010). <i>Advanced economic geography</i>. Sharda Pustak Bhawan. 5. Bhende, A., & Kanitkar, T. (2000). <i>Principles of population studies</i>. Himalaya Publishing House.																					

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**Third Year B.A.
(Geography)**

Semester - V

Title: Geography of Resources

Paper VIII - 4 Credits

**With effect from
Academic Year 2025-2026**

Title: Geography of Resources
Course Code: CHM(A)UAGEO-505A

Sr. No.	Heading	Particulars
1	Description of the Course	This syllabus explores the geography of resources, starting with an introduction to its meaning, scope, and importance. It covers the classification of resources and the factors influencing their utilization. The course dives into natural resources, focusing on soil, forest, water, and energy resources, examining their importance, distribution, problems, and conservation strategies. It also highlights human resources, their development, and the Human Development Index. Lastly, the syllabus emphasizes sustainable development, exploring its concepts, goals, and the sustainable use of both natural and human resources for a balanced future.
2	Vertical	--
3	Type Teaching Method	Theory + Practicum Lecture/discussion/diagrams/map-based learning/web-based learning/case study/etc.
4	Credit	4 Credits
5	Lectures allotted	60 Lectures
6	Marks allotted	100 Marks
7	Course Objectives: 1. To introduce the meaning, nature, scope and significance of resource geography, including resource classification and the factors that govern resource utilisation. 2. To examine soil and forest resources, exploring their distribution, importance, associated problems and conservation strategies. 3. To analyse water and energy resources in terms of their global and regional distribution, significance, challenges and conservation measures. 4. To explore the concept of human resources, the determinants of human development, the Human Development Index framework and India's performance. 5. To understand sustainable development principles, the sustainable use of natural and human resources, and the linkage with the Sustainable Development Goals.	

8	Learning Outcomes: Student will be able to LO1: Understand the scope, classification and utilisation factors of natural and human resources within geographic contexts. LO2: Analyse the distribution patterns, major issues and conservation approaches for soil and forest resources. LO3: Evaluate water and energy resource availability, identify key problems and propose appropriate conservation strategies. LO4: Assess human resource development through factors influencing it, interpret HDI components and critically evaluate India's human development status. LO5: Apply sustainable development concepts to resource management and align resource planning with relevant Sustainable Development Goals.
9	Syllabus UNIT I: Introduction to Geography of Resources • Geography of Resources: Meaning, Nature and Scope • Significance of Studying the Geography of Resources • Meaning and Classification of Resources • Factors Determining Resource Utilisation UNIT II: Natural Resources – I • Soil Resources: Importance and Distribution • Soil Resources: Problems and Conservation • Forest Resources: Importance and Distribution • Forest Resources: Problems and Conservation UNIT III: Natural Resources – II • Water Resources: Importance and Distribution • Water Resources: Problems and Conservation • Energy Resources: Importance and Distribution • Energy Resources: Problems and Conservation UNIT IV: Human Resources • Humans as a Resource – Importance • Factors Determining Human Resource Development • Human Development Index: Concept, Components and World Patterns • Human Development in India UNIT V: Sustainable Development • Sustainable Development: Concept, Components, and Need • Sustainable Use of Natural Resources • Sustainable Development Goals and Natural Resources • Sustainable Development Goals and Human Resources

10	Scheme of Examination and Assessment Pattern Paper – 100 Marks External Examination: Semester End External - 100 marks Time: 3:00 hours Format of Question Paper Attempt all questions. <table><tr><th>Question No</th><th>Nature of Questions</th><th>Marks</th></tr><tr><td>1 (A) OR (B)</td><td>Theory based on Unit I</td><td>20</td></tr><tr><td>2 (A) OR (B)</td><td>Theory based on Unit II</td><td>20</td></tr><tr><td>3 (A) OR (B)</td><td>Theory based on Unit III</td><td>20</td></tr><tr><td>4 (A) OR (B)</td><td>Theory based on Unit IV</td><td>20</td></tr><tr><td>5 (A) OR (B)</td><td>Theory based on Unit V</td><td>20</td></tr><tr><td colspan="2"></td><td>Total 100</td></tr></table>	Question No	Nature of Questions	Marks	1 (A) OR (B)	Theory based on Unit I	20	2 (A) OR (B)	Theory based on Unit II	20	3 (A) OR (B)	Theory based on Unit III	20	4 (A) OR (B)	Theory based on Unit IV	20	5 (A) OR (B)	Theory based on Unit V	20			Total 100
Question No	Nature of Questions	Marks																				
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2 (A) OR (B)	Theory based on Unit II	20																				
3 (A) OR (B)	Theory based on Unit III	20																				
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11	REFERENCES: 1. Gautam, A. (2010). <i>Environmental geography</i>. Sharda Pustak Bhawan. 2. Gautam, A. (2022). <i>Geography of resources: Exploration, conservation and management</i>. Sharda Pustak Bhawan. 3. Husain, M. (2003). <i>Resources geography</i>. Anmol Publications Pvt. Ltd. 4. Khullar, D. R. (2023). <i>India: A comprehensive geography</i>. Kalyani Publishers. 5. Maurya, S. D. (2022). <i>Resource geography</i>. Pravalika Publications. 6. Singh, S. (2015). <i>Environmental geography</i>. Prayag Pustak Company. 7. Singh, V. (2012). <i>The human footprint on environment: Issues in India</i>. Macmillan Publishers India Pvt. Ltd. 8. Tiwari, R. C. (2016). <i>Geography of India</i>. Pravalika Publications. 9. Verma, C. L. (2014). <i>Economic and resource geography</i>. Forward Books.																					

**Smt. Chandibai Himathmal Mansukhani College
(Autonomous)**

**Third Year B.A.
(Geography)**

Semester - V

Title: Geospatial Technology (Practicals)

Paper IX - 4 Credits

**With effect from
Academic Year 2025-2026**

Title: Geospatial Technology (Practicals)

Course Code: CHM(A)UAGEO-506

Sr. No.	Heading	Particulars
1	Description of the Course	This syllabus introduces key geospatial technologies, starting with remote sensing, including its concept, processes, and applications in geography. It covers electromagnetic radiation, platforms, sensors, and the interpretation of satellite imagery. Students will also explore Digital Elevation Models (DEM), aerial photographs, and drone mapping techniques using tools like Bhuvan and Bhoonidhi. The course then delves into GPS and its applications, followed by an introduction to Geographic Information Systems (GIS). Students will learn GIS components, data models, spatial analysis, and map creation, including geo-referencing and thematic map preparation.
2	Vertical	--
3	Type Teaching Method	Theory + Practicum Lecture/discussion/diagrams/map-based learning/web-based and mobile app-based learning/software learning/case study/etc.
4	Credit	4 Credits
5	Lectures allotted	45 Lectures
6	Marks allotted	100 Marks
7	Course Objectives: 1. To introduce students to the fundamental concepts, components and applications of geospatial technology and remote sensing, including EMR principles, sensor platforms and basic image interpretation. 2. To develop practical skills in generating and visualising DEMs, interpreting aerial photographs, understanding drone mapping, and using national remote-sensing portals like Bhuvan and Bhoonidhi. 3. To familiarise students with GNSS/GPS concepts, system segments, device types and field applications, including hands-on use of mobile GPS applications. 4. To impart foundational knowledge of GIS 5. To train students in advanced GIS workflows: importing and georeferencing scanned images, digitising spatial features, linking attribute data, creating thematic maps and designing/exporting map layouts.	

8	Learning Outcomes: Student will be able to LO1: Understand the principles of geospatial technology and remote sensing, interpret EMR interactions, and perform basic visual interpretation of satellite imagery. LO2: Apply DEM generation and 3D terrain visualisation, interpret aerial photographs accurately, explain drone mapping, and utilise Bhuvan and Bhoonidhi platforms for image access. LO3: Demonstrate GPS/GNSS operation by selecting appropriate receivers, acquiring spatial coordinates and using mobile GPS apps for data collection. LO4: Analyse spatial data within a GIS environment by differentiating raster and vector models, executing GIS workflows and conducting basic geospatial analyses. LO5: Execute advanced GIS tasks including georeferencing raster images, digitising point/line/polygon features, linking attribute tables, producing thematic maps and exporting professional map layouts.
9	Syllabus UNIT I: Remote Sensing – I • Geospatial Technology: Concept, Components and Importance • Remote Sensing: Concept, Process and Geographical Applications • Electromagnetic Radiation - Interaction of EMR with Atmosphere and Target - Platforms, Sensors and Resolution • Open Sources for Downloading Satellite Imagery - Visual Image Interpretation of Satellite Imagery UNIT II: Remote Sensing – II • Digital Elevation Model (DEM): Concept and 3-Dimensional View • Aerial Photographs: Concept, Process and Types • Interpretation of Aerial Photographs • Drone Mapping - Using Bhuvan and Bhoonidhi Websites UNIT III: Global Positioning System (GPS) • Global Navigation Satellite System (GNSS) • GPS: Concept, Segments, and Types • Applications of GNSS • Using Mobile GPS Applications UNIT IV: Geographical Information System (GIS) – I • GIS: Concept, Components, and Functional Requirements • GIS Data Models: Raster and Vector - Applications of GIS • Process of GIS • Geospatial Data Analysis UNIT V: Geographical Information System (GIS) – II • Importing Scanned Images into GIS Software and Geo-referencing • Creating Layers by Digitisation of Point, Line and Polygon Features – Editing • Linking Attribute Data to Spatial Data - Preparation of Thematic Maps with GIS • Map Layout, Design, and Export

10	Scheme of Examination and Assessment Pattern Paper – 100 Marks External Examination: Semester End External - 100 marks Time: 4:00 hours (Practicals) Format of Question Paper Attempt all questions. <table><tr><th>Question No</th><th>Nature of Questions</th><th>Marks</th></tr><tr><td>Q.1</td><td>Practical based on Unit I</td><td>16</td></tr><tr><td>Q.2</td><td>Practical based on Unit II</td><td>16</td></tr><tr><td>Q.3</td><td>Practical based on Unit III</td><td>16</td></tr><tr><td>Q.4</td><td>Practical based on Unit IV</td><td>16</td></tr><tr><td>Q.5</td><td>Practical based on Unit V</td><td>16</td></tr><tr><td>Q.6</td><td>Thematic Maps Prepared with GIS</td><td>10</td></tr><tr><td>Q.7</td><td>Practical Journal and Viva</td><td>10</td></tr><tr><td></td><td></td><td>Total 100</td></tr></table>	Question No	Nature of Questions	Marks	Q.1	Practical based on Unit I	16	Q.2	Practical based on Unit II	16	Q.3	Practical based on Unit III	16	Q.4	Practical based on Unit IV	16	Q.5	Practical based on Unit V	16	Q.6	Thematic Maps Prepared with GIS	10	Q.7	Practical Journal and Viva	10			Total 100
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11	REFERENCES: 1. Agrawal, N. K. (2006). <i>Essentials of GPS</i>. Book Selection Centre. 2. Barrett, E. G., & Curtis, L. F. (1992). <i>Fundamentals of remote sensing in air photo interpretation</i>. McMillan. 3. Campbell, J. (1989). <i>Introduction to remote sensing</i>. Guilford. 4. CBSE. (n.d.). <i>Geospatial technology: Textbook of Central Board of Secondary Education (New Delhi) for Class XI and XII</i>. Central Board of Secondary Education. 5. George, J. (2013). <i>Fundamentals of remote sensing</i>. Universities Press (India) Pvt. Ltd. 6. Bhatia, B. (2018). <i>Remote sensing and GIS</i>. Oxford University Press. 7. Bhuvan. (n.d.). <i>National Remote Sensing Centre (NRSC)</i>. Retrieved from http://bhuvan.nrsc.gov.in 8. Indian Space Research Organisation. (n.d.). <i>ISRO: Indian Space Research Organisation</i>. Retrieved from https://www.isro.gov.in																											

Department of Geography:

Sr. No.	Name of the Faculty	Designation and College	Signature
1.	Dr. Dipesh Karmarkar	Head & Associate Professor, Dept. of Geography, Smt. CHM College, Ulhasnagar - 03	

Name and Signature of the Ad hoc BoS Chairperson: Dr. Dipesh Karmarkar

Name and Signature of the Dean: Dr. Prashant Kelkar

