

Lal Bahadur Shastri College of Arts, Science and Commerce, Satara

Department of Geography

B. A. Geography

Course Outcomes(COs)

Sr. No.	Class	Sem.	Paper	Title of Paper	Course Outcomes
1	B.A. I	I	I	Physical Geography Code: DSC B10	<ol style="list-style-type: none"> 1. Students will be able to understand the basic concepts in Physical Geography. 2. Students understand basic terms used to describe physical processes and landscape forms. 3. Students understand the atmosphere. 4. Students understand the concept of maps and globe.
2	B. A. I	II	II	Human Geography Code: DSC B24	<ol style="list-style-type: none"> 1. Students will be able to understand the basic concepts in Human Geography. 2. Students understand basic terms used to describe population, settlements and agriculture. 3. Students understand the concept of Google Earth and Google Map.
3	B.A.II	III	III	SOIL GEOGRAPHY Code: DSC D19	<p>CO1: Relating to Knowledge</p> <ol style="list-style-type: none"> I. By the end of the course, students will be able to demonstrate knowledge of the definition, nature, and scope of Soil Geography, as well as its history and pedology. II. Students will be able to explain the significance of Soil Geography in various fields, including agriculture, ecology, land use planning, and environmental management. III. Students will have a thorough understanding of the factors that influence soil formation and the physical and chemical properties of soils. <p>CO2: Understanding and application</p> <ol style="list-style-type: none"> I. Students will be able to comprehend

					<p>the Jenny's Factorial Model of Soil Formation and the process of soil formation.</p> <p>II. Students will be able to apply the knowledge of physical and chemical properties of soils in real-world scenarios, such as soil management and conservation.</p> <p>III. Students will be able to identify and classify soils based on their genetic characteristics and distribution.</p> <p>CO3: Students Skills</p> <p>I. By the end of the course, students will have developed practical skills related to soil profile and soil sample tools.</p> <p>II. Students will have gained practical knowledge of pH and NPK soil analysis.</p> <p>III. Students will be able to use GIS for studying soil ecology and planning.</p> <p>IV. Student will start up soil test laboratory. CO4: Students Evaluation</p> <p>I. Students will be evaluated through written assignments, group activity and practical exams to demonstrate their understanding of Soil Geography.</p> <p>II. Students will be evaluated based on their ability to apply their knowledge of soil properties, classifications, and degradation in practical scenarios.</p> <p>III. Students will be evaluated on their practical skills related to soil profile, soil sample tools, soil analysis.</p>
4	B.A. II	III	IV	<p>RESOURCE GEOGRAPHY Code: DSE 20</p>	<p>CO1: Relating to Knowledge</p> <p>I. By the end of the course, students will be able to demonstrate knowledge of the definition, nature, and scope of Resource Geography.</p> <p>II. Students will be able to explain the significance of Resource Geography in various fields, including agriculture, industry, transportation, and environmental management.</p> <p>III. Students will have a thorough understanding about the distribution,</p>

					<p>utilization and problems of worldwide major resources.</p> <p>CO2: Understanding and application I. Students will be able to comprehend the sustainable resource development II. Students will be able to apply the knowledge of resource geography in real-world scenarios, such as management and conservation of resources. III. Students will be able to the classify of resources based on their characteristics and their worldwide distribution. IV. By the end of the course, Students will have gained knowledge of worldwide resource availability, its problems like scarcity, pollution etc. and will be able to imply measures to overcome these problems.</p> <p>CO3: Students Skills I. Students will be able to understand for the need of sustainable resource development and skills of resource management. II. Student will be able to develop the cartographic skills. CO4: Students Evaluation I. Students will be evaluated through written assignments, group activity and practical exams to demonstrate their understanding of Resource Geography. II. Students will be evaluated based on their ability to apply their knowledge of problems of resource availability, its management and sustainable resource development in practical scenarios. III. Students will be evaluated on their practical skills related to cartographic skills.</p>
5	B.A.II	III& IV	IDS-I& II	Tourism Geography Code: GE I and GE II	<p>PO1: Relating to Knowledge:</p> <p>I. Students will be demonstrated a comprehensive understanding of the definition of tourism and tourist and knowledge of the nature and scope of tourism geography.</p> <p>II. Students will be recognized the significance of studying tourism geography in tourism planning, development, and management.</p>

				<p>Students will be able to identify and describe the components of tourism and their interrelationships.</p> <p>III. Students will classify tourism based on various criteria and analyze recent trends in the industry.</p> <p>IV. Understand tourism's historical development, from ancient to contemporary periods.</p> <p>V. Identify tourism's role in the national economy and the process of planning in India.</p> <p>VI. Recognized different types of tourism centers in India and Maharashtra. VII. Summarize the key components of travel documentation.</p> <p>PO2: Relating to Understanding and Application:</p> <p>I. Students will apply their understanding of tourism geography concepts to analyze the impacts of tourism on economic, socio-cultural, and environmental aspects.</p> <p>II. Students will comprehend the principles of sustainable development in tourism and apply them to address the challenges and opportunities in the industry.</p> <p>III. Students will demonstrate an understanding of the use of computer technologies in various aspects of tourism geography, such as e-ticket booking, destination search, promotion, mapping, and distance calculations.</p> <p>IV. Students will be able to interpret and analyze data collected through field surveys, interviews, questionnaires, and sampling techniques in tourism geography research.</p> <p>V. The students will be able to evaluate tourism's impact on the economy and apply planning principles.</p> <p>VI. Analyze characteristics of tourism centers and assess sustainable practices.</p>
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					<p>of primary data in tourism geography research.</p> <p>V. Demonstrate knowledge through assessments.</p> <p>VI. Apply theoretical knowledge to real-world scenarios and case studies.</p> <p>VII. Active participation in discussions and presentations.</p>
6	B.A.II	IV	V	OCEANOGRAPHY Code: DSE 47	<p>CO1. Relating to Knowledge:</p> <p>I. Students will define the nature and scope of oceanography and its connection to physical sciences.</p> <p>II. Students will identify branches of oceanography and their areas of focus.</p> <p>III. Students will describe the factors affecting oceanic temperature, salinity, and distribution.</p> <p>IV. Students will recognize the types of oceanic currents and their origins in different oceans.</p> <p>V. Students will understand the sources, classification, and significance of oceanic deposits.</p> <p>VI. Students will explain the role of the ocean as a source of food and potential future resources.</p> <p>CO2. Understanding and Application:</p> <p>I. Students will apply knowledge of oceanographic principles to illustrate the maps of ocean and NOAA CDR/ NESDIS sea surface temperature, Annual mean of the sea surface salinity distribution.</p> <p>II. Students will apply knowledge of causes, effects of ocean pollution and propose solutions.</p> <p>III. Students will utilize scientific reasoning to understand the relationships between ocean water properties and climate change.</p> <p>IV. Students will be able to distinguish the various marine movements.</p> <p>V. Students will apply theoretical knowledge to practical exercises, such as interpreting hypsographic curves,</p>

					<p>wind roses, isohalines, and isotherms.</p> <p>CO3. Student Skills:</p> <p>I. Develop critical thinking skills through the analysis and evaluation of oceanographic concepts.</p> <p>II. Enhance problem-solving abilities by applying oceanographic principles to real-world situations and to demonstrate the ocean currents.</p> <p>III. Develop effective communication skills through oral and written presentations of oceanographic topics.</p> <p>CO4. Student Evaluation:</p> <p>I. Assess student knowledge and understanding through quizzes, exams, and assignments.</p> <p>II. Assess the development of critical thinking and problem-solving skills through case studies.</p> <p>III. Evaluate the effectiveness of student communication skills through oral examination</p>
7	B.A.II	IV	VI	<p>AGRICULTURE GEOGRAPHY Code: DSC D48</p>	<p>PO1: Relating to Knowledge</p> <p>I. By the end of the course, students will be able to demonstrate knowledge of the definition, nature, and scope of Agriculture Geography, as well as evolution of agriculture over different periods in history and its impact on society.</p> <p>II. Students will be able to explain the significance of Agricultural Geography in various fields, including agriculture, ecology, land use planning, and environmental management.</p> <p>III. Students will have a thorough understanding of the factors that influence soil formation and the physical and chemical properties of soils.</p> <p>PO2: Understanding and application</p> <p>I. Students will be able to comprehend the Jenny's Factorial Model of Soil Formation and the process of soil formation.</p> <p>II. Students will be able to apply the</p>

					<p>knowledge of physical and chemical properties of soils in real-world scenarios, such as soil management and conservation.</p> <p>III. Students will be able to identify and classify soils based on their genetic characteristics and distribution.</p> <p>PO3: Students Skills</p> <p>I. By the end of the course, students will have developed practical skills related to soil profile and soil sample tools.</p> <p>II. Students will have gained practical knowledge of pH and NPK soil analysis.</p> <p>III. Students will be able to use GIS for studying soil ecology and planning.</p> <p>IV. Student will start up soil test laboratory.</p> <p>PO4: Students Evaluation</p> <p>I. Students will be evaluated through written assignments, group activity and practical exams to demonstrate their understanding of Soil Geography.</p> <p>II. Students will be evaluated based on their ability to apply their knowledge of soil properties, classifications, and degradation in practical scenarios.</p> <p>III. Students will be evaluated on their practical skills related to soil profile, soil sample tools, soil analysis.</p>
8	B.A.III	V	VII	Evolution of Geographical Thought (DSEE106)	<p>CO-1 Student should be able to understand indepth about the Evolution of Geographical Thought.</p> <p>CO-2 Students should be able to analyse the recent trends in geography.</p> <p>CO-3 Student should be able to make use of various models of paradigms and debates in the geographical studies.</p> <p>CO-4 Understanding of recent trends in geography.</p>
9	B.A.III	V	VIII	Geography of India. (DSE- E107)	<p>CO-1 In depth understanding the dimensions and physiography of India.</p> <p>CO-2 The students are fully aware about the climatic seasons in India.</p> <p>CO-3 Detailed knowledge about soils,</p>

					<p>vegetations, drainage systems in India.</p> <p>CO-4 Understanding an importance of agriculture and industry in Indian economy.</p> <p>CO-5 Detailed knowledge about the economic setup of the India.</p>
10	B.A.III	V	IX	POPULATION GEOGRAPHY (DSE - E108)	<p>CO-1 This paper would bring an understanding of population geography along with relevance of demographic data.</p> <p>CO-2 The students would get an understanding of distribution and trends of population growth in the developed and less developed countries, along with population concepts.</p> <p>CO-3 The students would get an understanding of the dynamics of population.</p> <p>CO-4 An understanding of the implications of population composition in different regions of the world.</p> <p>CO-5 An appreciation of the contemporary issues in the field of population studies</p>
11	B.A.III	VI	X	Economic Geography (DSEE231)	<p>CO-1 In depth understanding about the economic geography.</p> <p>CO-2 Detailed knowledge about locational factors of economic activities with</p> <p>CO-3 Detailed understanding of the basics concepts related to manufacturing and major manufacturing industries</p> <p>CO-4 Understanding of the transport and trade.</p>
12	B.A.III	VI	XI	Urban Geography (DSE- E232)	<p>CO-1 The students were known the importance of urban settlements through urban geography.</p> <p>CO-2 The students understood the types of Urban Settlements, Site and Situations.</p> <p>CO-3 The students were familiar with an idea of relationship between human activities and urban development.</p> <p>CO-4 Detail understanding of students</p>

					regarding present urban problems and students are capable to handling of present problematic situations in urban areas. CO-5 The students are developed as a good urban planner and environmental conservator.
13	B.A.III	VI	XII	POLITICAL GEOGRAPHY (DSE – E 233)	CO-1 The students are fully aware about the Political geography as a fundamental branch of Human Geography. CO-2 The students are familiarized with the basics and fundamental concepts and theories of Political CO-3 The students are aware about resource conflicts and politics of displacement.
14	B.A.III	VI	XIII	(Practical Paper - I) Fundamentals of Map Making and Map Interpretation (DSE-E234)	CO-1 In depth understanding the map, concept of scale and projection. CO-2 Detailed knowledge about the analysis of landforms and its identification. CO-3 The students are deeply aware about basic information to the students about S.O.I. topomaps and I.M.D. weather maps and obtained the skills about map interpretation. CO-4 The students are deeply familiar with different cartographic techniques and methods used for representation of demographic and physio- socio-economic database.
15	B.A.III	VI	XIV	(Practical Paper - II), Advanced Tools, Techniques & Field Work in Geography (DSE-E235)	CO-1 In depth understanding the importance of field work and advanced Techniques in Geography. CO-2 The students are trained to implement modern tool and techniques in Geography. CO-3 Detailed knowledge about the use of computer for analysis of Geographical data. CO-4 The students are deeply aware about the basics and trained in instrumental survey. CO-5 The students are deeply familiar with computer, GIS, GPS and Remote Sensing.


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Department of Geography,
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Department of Geography

2023-24

M. A./M.Sc. I Geography

Course Outcomes(COs)

Sr. No.	Class	Sem.	Paper No.	Title of Paper	Course Outcome
1	M.A.	I	MT-101	Geomorphology	<ol style="list-style-type: none">1. Understand the nature and scope of geomorphology and establish the relationship between the tectonism and geomorphology with the knowledge of interior of the Earth.2. Look into the evolution of continents and ocean basins with continental drift theory.3. Know the endogenetic and exogenetic forces controlling landform development with special reference to the denudation processes.4. Verify the impact of dynamic agencies on denudation and their work.5. Understand the cycle of erosion with different views with special reference to hill slope development.6. See the application of geomorphology in the view of anthropogenic and environmental geomorphology.
2	M.A.	I	MT-102	Principles of Climatology	<ol style="list-style-type: none">1. Distinguish the weather and climate with an understanding of structure and composition of Atmosphere;2. Understand the variations of weather systems in terms of Stability and Instability of atmosphere;3. Enable the students to understand

					<p>the vertical and horizontal distribution of atmospheric air;</p> <p>4. Get complete information about Atmospheric Disturbances in terms of cyclones and anti-cyclones;</p> <p>5. Understand the regional and seasonal variations of weather systems in India; 6. Know the significance of synoptic Climatology in pollution studies and navigation</p>
3	M.A.	I	MT-103	Economic Geography	<p>1. Understand the concepts and basis of economic processes</p> <p>2. Get acquainted with theories and models in economic geography</p> <p>3. Get comprehensive knowledge of World energy resources, situation and distribution</p> <p>4. Know about the Nature, scope and Principles of Industrial Geography</p> <p>5. Understand transport and Trade policies of country</p> <p>6. Get detail knowledge of economic power determinants of country and able to analyse the economic development of country.</p>
4	M.A.	I	ET-102	Settlement Geography	<p>1. Know the fundamentals of settlement geography.</p> <p>2. Understand the approaches to rural settlement geography; rural services; hierarchy; morphology etc.</p> <p>3. Know the concept and processes of urban settlement studies; urban problem & their planning; concept smart cities, urban agriculture, etc.</p> <p>4. Understand the theories and models of settlement geography to understand the structure of settlements.</p>
5	M.A.	I	MP-101	Research Methodology in Geography	<p>1. Identify the objectives and significance of research in geography;</p> <p>2. Prepare schedule and questionnaire</p>

					<p>in geography;</p> <ol style="list-style-type: none"> 3. Collect data of physical and human elements; 4. Tabulate data, formulate research design and represent data by using most appropriate methods; 5. Effective writing, maintaining research ethics and academic integrity; 6. Write abstracts, thesis, project report and research papers
6	M.A.	I	MP-102	Computer Applications in Geography	<ol style="list-style-type: none"> 1. Learn the representation of geographic data using various computational methods; 2. Develop writing, editing, and presentation skill for representation of geographical information; 3. Compute statistical parameters with the help of computer; 4. Prepare and design maps and graphs with the help of computer software; 5. Apply computational techniques relevant in the discipline of Geography; 6. Know about sources and uses of online educational resources and e-learning methods
7	M.A.	II	MT-201	Advanced Cartography and Surveying	<ol style="list-style-type: none"> 1. Understand basic principles of cartography and surveying 2. Gain understandings of various cartographic methods and techniques 3. Acquaint with the skills of digital cartography 4. Identify sources and types of errors occurs during surveying 5. Get familiar with the basic aspects of linear, vertical and angular measurements of surveying.
8	M.A.	II	MT-202	Climate Change and Disaster Management	<ol style="list-style-type: none"> 1. Recognize the importance of climate on human life; 2. Identify and categorize climate

					<p>types and climatic regions of the world;</p> <p>3. Get comprehensive knowledge about causes and impacts of atmospheric pollution, GHGs emission, ozone layer depletion, acid rain and el-nino;</p> <p>4. Know about the history, recent trends, impacts and dynamics of climate change on earth;</p> <p>5. Assess future risks of climate change and the adaptation and mitigation options;</p> <p>6. Understand causes, consequences and vulnerabilities of various natural and man-made disasters;</p> <p>7. Plan for prevention, preparation and mitigation of disasters</p>
9	M.A.	II	ET-201	Fundamentals and Applications of GIS and GPS	<p>1. Understand the basic concepts of Geographical Information System and GPS.</p> <p>2. Know various applications of GIS and GPS in various fields.</p> <p>3. Familiar with modern techniques of geography.</p> <p>4. Apply these skills in professional careers.</p>
10	M.A.	II	EP-201	Introduction to GIS Software and GPS	<p>1. Familiarize with QGIS software and tools.</p> <p>2. Apply Comprehensive knowledge of GIS software and GPS for analysis of geographical data and to solve real world problems</p> <p>3. Understand the role of GIS as decision support system and to develop various model for GIS spatial analysis.</p> <p>4. Examine the various functions of GPS for surveying and mapping.</p> <p>5. Develop practical skills in spatial</p>

					data acquisition, management, and analysis. 6. Learn to create and visualize maps using GIS techniques
11	M.A.	II	MP-203	Advanced Surveying	1. Familiar with various advance surveying methodologies 2. Develop practical skills as well as organizational and interpersonal abilities 3. Perform survey using advanced surveying instruments like theodolite, total station, DGPS and drone 4. Create a map based on a survey
12	M.A.	II	FP-201	Field Project	1. Carry out field project on their own; 2. Formulate project design and methodologies; 3. Organize and carry out field visits, collect field data and/or conduct review of literature; 4. Effective writing and dissemination of project output having scientific and/or social relevance.



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2022-23

M. A. I Geography

Course Outcomes(COs)

Sr. No.	Class	Sem.	Paper No.	Title of Paper	Course Outcome
1	M.A.	I	CC-101	Fundamentals of Geomorphology	<ul style="list-style-type: none">▪ To understand the development of geomorphic thought throughout the time with a view of fundamental concepts of geomorphology.▪ To look into the evolution of continents and ocean basins with continental drift theory.▪ To know the endogenetic and exogenetic forces controlling land form development with special reference to the denudational processes.▪ To see the mountain building activities through different theories.
2	M.A.	I	CC-102	Principles of Climatology	<ul style="list-style-type: none">▪ To distinguish the weather and climate with an understanding of structure and composition of Atmosphere.▪ To understand the variations of weather systems in terms of Stability and Instability of atmosphere.▪ To enable the students to understand the vertical and horizontal distribution of atmospheric air.▪ To get complete information about Atmospheric Disturbances in terms of cyclones and anti-cyclones.

					<ul style="list-style-type: none"> ▪ To know the significance of synoptic Climatology in pollution studies and navigation.
3	M.A.	I	CC-103	Economic Geography	<ul style="list-style-type: none"> ▪ To understand the concepts and basis of economic processes. ▪ To get acquainted with theories and models in economic geography ▪ To get comprehensive knowledge of World energy resources, situation and distribution. ▪ To know about the Nature, scope and Principles of Industrial Geography ▪ To understand transport and Trade policies of country. ▪ To get detail knowledge of economic power determinants of country and able to analyze the economic development of country.
4	M.A.	I	CC-104	Geography of Population and Human Resource Development	<ul style="list-style-type: none"> ▪ Infer factors influencing population distribution and density; Acquire skill to describe regional patterns of population composition; Compute and explore fertility, mortality and human development levels for micro, meso and macro regions. ▪ Analyse the population-resource regions and discover problems arising due to over and under population. ▪ Understand and create awareness about provincial aspects of gender equity, social well-being and quality of life.
5	M.A.	I	CCPr-105.1	Practical's in Geomorphology and	<ul style="list-style-type: none"> ▪ To know the methods of representation of relief. ▪ Understanding the topographical

				Surveying	<p>maps.</p> <ul style="list-style-type: none"> ▪ Identification and mapping of drainage patterns ▪ To look into the drainage basin morphometry. ▪ To understand the field surveying methods
6	M.A.	I	CCPr-105.2	Analysis of Climatic Data	<ul style="list-style-type: none"> ▪ To identify various sources of climate data. ▪ To understand the formats of Indian daily weather report and reading of weather signs and symbols. ▪ To represent meteorological elements diagrammatically and interpretation of results. ▪ To know methods of measurement of meteorological elements ▪ To analyse inter relationship between various meteorological elements. ▪ To analyse present and future trends of meteorological elements.
7	M.A.	I	CCPr-105.3	Analysis of Socio-Economic Data	<ul style="list-style-type: none"> ▪ To identify the importance of population studies regarding the fertility, mortality, ▪ To understand the socio-economic structure of population ▪ To study various statistical methods for analysis of Agricultural activities. ▪ To determine the agriculture productivity and analyze results. ▪ To get basic understanding of the economic data and its analysis.
8	M.A.	II	CC-201	Applied Geomorphology	<ul style="list-style-type: none"> ▪ To establish the relationship between the tectonism and geomorphology with the

					<p>knowledge of interior of the Earth.</p> <ul style="list-style-type: none"> ▪ To verify the impact of dynamic agencies on denudation and their work. ▪ To understand the cycle of erosion with different views with special reference to hillslope development ▪ To see the application of geomorphology in the view of anthropogenic and environmental geomorphology
9	M.A.	II	CC-202	Applied Climatology and Climate Change	<ul style="list-style-type: none"> ▪ To recognize the importance of climate on human life; ▪ To identify and categorize climate types and climatic regions of the world. ▪ To understand the regional and seasonal variations of weather systems in India. ▪ To get comprehensive knowledge about causes and impacts of atmospheric pollution, GHG emission, ozone layer depletion, acid rain and el-nino. ▪ To know about the history, recent trends, impacts and dynamics of climate change on earth. ▪ To assess future risks of climate change and the adaptation and mitigation options;
10	M.A.	II	CCS-203	Advanced Cartography and	<ul style="list-style-type: none"> ▪ To understand basic principles of cartography and surveying ▪ To explain various cartographic methods and techniques for preparation of maps and diagrams. ▪ To compare the difference between manual and digital

				Surveying	<p>cartography</p> <ul style="list-style-type: none"> ▪ To acquaint with the skills regarding digital cartography. ▪ To identify sources and types of errors occurs during surveying. ▪ To get familiar with the basic aspects of linear, vertical and angular measurements of surveying.
11	M.A.	II	CCS-204	Social and Cultural Geography	<ul style="list-style-type: none"> ▪ To study and identify the philosophical base, problems associated with society & its culture. ▪ To know about the culture, cultural regions, hearths and their diffusion, realms, and distribution of races. ▪ To study and knowing of socio-cultural diversity of India, and processes of social changes. ▪ To understand the social justice and well-being of society, to find out the level of well-being in India
12	M.A.	II	CCPr-205.1	Computer Applications in Geography	<ul style="list-style-type: none"> ▪ To learn the representation of geographic data using various computational methods. ▪ To know about sources and uses of online educational resources and e-learning methods. ▪ To develop writing, editing, and presentation skill for representation of geographical information. ▪ To compute statistical parameters with the help of computer. ▪ To prepare and design maps and graphs with the help of computer software. ▪ To apply computational techniques relevant in

					the discipline of Geography
13	M.A.	II	CCPr-205.2	Statistical Techniques in Geography	<ul style="list-style-type: none"> ▪ To understand the importance and use of statistical techniques in geography. ▪ To form frequency distributions tables and graphically interpret the results. ▪ To measure central tendency and dispersion of data. ▪ To examine relationship between two or more variables with correlation and regression analysis. ▪ To apply comprehensive knowledge of statistics for analysis of geographical data
14	M.A.	II	CCPr-205.3	Quantitative Techniques in Geography	<ul style="list-style-type: none"> ▪ To understand correlation and regression among spatio-temporal data. ▪ To learn what is Spatial Analysis. ▪ For The Measurement Levels and Spatial Data ▪ To Measure probability ▪ To become expert in techniques for analysis of data in research For Exploratory Data Analysis



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2023-24

M. A./M.Sc. II Geography

Course Outcomes(COs)

Sr. No.	Class	Sem.	Paper No.	Title of Paper	Course Outcome
1	M.A.	III	CC-301	Applied Climatology and Climate Change	<ol style="list-style-type: none">1. Recognize the importance of climate on human life;2. Identify and categorize climate types and climatic regions of the world;3. Understand the regional and seasonal variations of weather systems in India;4. Get comprehensive knowledge about causes and impacts of atmospheric pollution, GHGs emission, ozone layer depletion, acid rain and el-nino;5. Know about the history, recent trends, impacts and dynamics of climate change on earth;6. Assess future risks of climate change and the adaptation and mitigation options;
2	M.A.	III	CCS-302	Fundamentals of Remote Sensing and DIP	<ol style="list-style-type: none">1. Understand the principles and concepts of remote sensing and its role in capturing and analyzing Earth's data.2. Describe the different types of remote sensing platforms, sensors, and image acquisition systems used in the field.3. Interpret and analyze aerial photographs and satellite images using visual interpretation techniques.

					<p>4. Apply digital image processing techniques for feature extraction, including texture, shape, and spectral indices.</p> <p>5. Explore emerging trends and technologies in remote sensing and digital image processing.</p>
3	M.A.	III	DSE-303	Biogeography	<p>1. Understand the concepts and historical development of biogeography</p> <p>2. Get comprehensive knowledge of different classification of animal and plants</p> <p>3. Know about pattern of biogeography</p> <p>4. Understand different processes in biogeography</p> <p>5. Get detail knowledge about influencing factors on biogeography</p>
4	M.A.	III	DSE-304	Geography of India	<p>1. Understand the main regions of the India in terms of both their uniqueness and similarities.</p> <p>2. Identifying and explaining the Indian Geographical Environment, from global to local scales.</p> <p>3. Generate an awareness and responsibility for the environment and India.</p> <p>4. Know about the impacts of human activities on natural environments of India</p>
5	M.A.	III	CCPr-305.1	Research Methodology and Geographical Excursion	<p>1. Identify the objectives and significance of research in geography;</p> <p>2. Prepare schedule and questionnaire in geography;</p> <p>3. Collect data of physical and human elements;</p> <p>4. Tabulate data, formulate research design and represent data by using most appropriate methods;</p>

					<p>5. Effective writing, maintaining research ethics and academic integrity;</p> <p>6. Organize and carry out geographical excursion and field visits;</p>
6	M.A.	III	CCPr-305.2	Dissertation/ Project	<p>1. Recognize the objectives and significance of research work;</p> <p>2. Formulate research design and methods;</p> <p>3. Organize and carry out field visits, collect field data and/or conduct review of literature;</p> <p>4. Effective writing, maintaining research ethics and academic integrity;</p> <p>5. Preparation and dissemination of research output having scientific and/or social relevance.elements.</p>
7	M.A.	IV	CC-401	Applied Geomorphology	<p>1. Establish the relationship between the tectonism and geomorphology with the knowledge of interior of the Earth.</p> <p>2. Assess the impact of tectonism and diastrophism on the earth crust.</p> <p>3. Verify the impact of dynamic agencies on denudation and their work.</p> <p>4. Understand the cycle of erosion with different views with special reference to hill slope development.</p> <p>5. See about the application of geomorphology in the view of anthropogenic and environmental geomorphology.</p>
8	M.A.	IV	CCS-402	Regional Planning and Development	<p>1. Understand the basic concepts in regional planning</p> <p>2. Understand different methods in order to compute regional development</p> <p>3. Get acquainted with theories and models for regional development</p> <p>4. Get a specialized knowledge of policies and experiences of regional planning in India.</p>

9	M.A.	IV	DSE-403	Fundamentals and Applications of GIS and GPS	<ol style="list-style-type: none"> 1. Understand the basic concepts of Geographical Information System and GPS. 2. Know various applications of GIS and GPS in various fields. 3. Familiar with modern techniques of geography. 4. Apply these skills in professional careers
10	M.A.	IV	DSE-404	Agricultural Geography	<ol style="list-style-type: none"> 1. Know about nature, scope and significance of agricultural geography as an academic and professional discipline. 2. Understand the fundamental concept, crop combination, diversification, agricultural productivity and study the determinants of agricultural patterns. 3. Get knowledge about agricultural systems of the world. 4. Understand the agrarian revolution, socio-economic constraints, agricultural problems and policies
11	M.A.	IV	CCPr-405.1	Photogrammetry, Remote Sensing and DIP	<ol style="list-style-type: none"> 1. Understand the fundamental principles and concepts of photogrammetry, remote sensing, and digital image processing. 2. Describe the various sensors, platforms, and techniques used in photogrammetry and remote sensing. 3. Apply photogrammetric techniques to extract three-dimensional information from aerial photographs and digital images. 4. Apply digital image processing techniques for enhancing and analyzing remote sensing data. 5. To apply the knowledge of remote sensing and DIP in various thematic studies

12	M.A.	IV	CCPr-405.2	Introduction to GIS Software and GPS	<ol style="list-style-type: none"> 1. Familiarize with QGIS software and tools. 2. Apply Comprehensive knowledge of GIS software and GPS for analysis of geographical data and to solve real world problems 3. Understand the role of GIS as decision support system and to develop various model for GIS spatial analysis. 4. Examine the various functions of GPS for surveying and mapping. 5. Develop practical skills in spatial data acquisition, management, and analysis. 6. Learn to create and visualize maps using GIS techniques.
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