

# Swarnamoyee Jogendranath Mahavidyalaya

At+P.O.: Amdabad, P.S.: Nandigram, Dist.: Purba Medinipur, PIN 721650

## DEPARTMENT OF GEOGRAPHY

### COURSE OUTCOMES OF HONOURS COURSES UNDER CBCS w.e.f. 2017-18

#### **Introduction:**

Geography delves into the exploration of locations and the dynamics between humans and their surroundings. It encompasses an examination of Earth's physical attributes as well as the distribution of human communities over it. This field of study investigates how cultural practices interact with the natural landscape and how specific locations can influence human experiences. Geography aims to uncover the reasons behind the geographical distribution of various phenomena, their development, and their evolution over time. It is dedicated to understanding the complex relationships among the Earth's different environments, places, and spaces, seeking explanations for their specific characteristics. Rooted in a tradition that dates back to ancient times, geography as an academic field focuses on the study of place characteristics, including both their natural settings and human populations, and the interactions between these elements.

#### **Semester: I**

#### ***CC-1: Geotectonics and Geomorphology***

***6 credits***

This course offers a foundational understanding of Earth, covering its age, the processes it undergoes, its various features, and their outcomes. It introduces students to the core concepts of Geography as a Physical Science, including the basics of structural geology at both micro and macro levels, their formation, analysis, and interpretation in relation to tectonic activities, aiming to uncover the deformation history of rocks.

#### **Outcome:**

- Students will gain fundamental knowledge of the subject, understanding Earth's diverse landforms, plate tectonics principles, crustal deformation, and isotopic geochronology methods.
- Comprehend the evolution of Earth's tectonics and structure across geological time.

- Enhance your understanding of Earth's interior through the study of seismology.
- Learn about the principle of isostasy and its significance.
- Formulate insights into the theory of plate tectonics and the landforms it creates.
- Describe various geomorphic processes, including weathering and mass movement.
- Review and critically assess theories related to landscape evolution and the development of slopes.
- Understand how geological structures influence river networks and landform patterns.
- Expand your knowledge on the different types of rocks.
- Gain insight into various geomorphological processes and their associated landforms.

***CC-2T: (Theory)-Cartographic Techniques***

***4 credits***

- Gain an understanding of the various kinds of maps.
- Learn about different measurement scales.
- Comprehend the various fundamentals of map projection.
- Acquire insights into the Topographical Maps by the Survey of India.
- Recognize various rocks and minerals. CO 6- Grasp the diverse theories behind Geological Mapping.

***CC-2P: (Practical)-Cartographic Techniques***

***2 credits***

- Acquire the skills to create various scales, including linear, diagonal, and vernier.
- Map creation using map projection techniques.
- Develop the ability to interpret, read, analyze, and recognize elements in geological and topographical maps.

## **Semester: II**

### ***CC-3: Human Geography***

***6 credits***

This course explores the human elements within Geography, focusing on society, settlements, and their significance in human life. It delves into social geography, investigating the interrelation between society and space.

#### **Outcomes:**

- Students will broaden their perspective to include human aspects within Geography, comprehending how space and place influence and are influenced by social divides such as class, race, and caste, alongside understanding societal and cultural structures.
- Enhance your understanding of the primary concepts in human geography.
- Learn about the development of human beings, including discussions on race and ethnicity.
- Form insights into the relationship between space, society, and cultural regions.
- Investigate various facets of culture.
- Comprehend the methodologies and dynamics within human geography, including the varied patterns of human settlements and adaptations.
- Deepen your knowledge on various aspects of demography.
- Examine the structure of rural settlements.
- Understand the functional categorization of urban areas.

### ***CC-4T (Theory)-Cartograms and Thematic Mapping***

***4 credits***

- Cultivate an understanding of cartograms and the various thematic mapping methods.
- Learn the foundational principles of surveying and get acquainted with survey instruments such as the Abney Level, Clinometer, Prismatic Compass, Dumpy Level, and Transit Theodolite.
- Analyze and understand maps depicting land use and land cover.

***CC-4P (Practical)-Cartograms and Thematic Mapping***

***2 credits***

- Learn about diagrammatic representation of data like Age-sex pyramid, Pie-diagram, dots and spheres, isopleth and choropleth.
- Brings direct interaction of different types of surveying instruments like Prismatic Compass, Dumpy level and Theodolite with environment.

**Semester: III**

***CC-5: Climatology***

***6 credits***

Focusing on the atmosphere, soil, and ecosystems, this course examines the physical foundations of geographical studies. It addresses the characteristics, structures, and impacts of atmospheric elements, soil's nature and role in human development, and ecosystem diversity.

**Outcomes:**

- Students will understand daily atmospheric changes, the implications of climate change, soil science's importance, and the political and social aspects of ecosystem conservation, appreciating Earth's sustainability.
- Grasp the characteristics, makeup, and stratification of the atmosphere.
- Formulate insights on solar radiation and the atmospheric heat balance.
- Learn about various atmospheric conditions, including temperature variations, the greenhouse effect, condensation processes, air masses, frontal systems, atmospheric stability and instability, wind patterns, and climate alterations.
- Understand the dynamics of cyclones. CO5- Explore different methodologies for classifying climate.

***CC-6T: (Theory)-Statistical Methods in Geography***

***6 credits***

- Acquire an understanding of the role of statistics within the field of geography.
- Comprehend the critical importance of data utilization in geographical studies.

- Familiarize yourself with various measurement scales.
- Learn about the diverse methods of sampling.
- Formulate concepts related to theoretical distribution.
- Gain insights into measures of central tendency, variability, correlation, linear regression, and the analysis of time series.

**CC-6P: (Practical)-Statistical Methods in Geography**

**2 credits**

- Ability to construct data matrix.
- Using statistical techniques in order to summarize, represent, analyze and interpret the data matrix.

**CC-7: Geography of India**

**6 credits**

- Grasp the geology, landforms, climate, soil, and plant life across India.
- Enhance your understanding of India's population demographics and social structure.
- Formulate insights into India's economic resources.
- Explore the concept of dividing India into different regions.
- Gain insights into different geographical aspects of West Bengal.

**SEC:1- Computer Basics and Computer Applications**

**2 credits**

- Grasp the concepts of different numbering systems.
- Gain practical abilities in applying various statistical methods and creating annotated diagrams using computers.
- Learn the basics of navigating the internet.

## **Semester: IV**

### ***CC-8: Regional Planning and Development***

***6 credits***

- A specialized study of regional planning, this course looks at its origins, development, and application in both advanced economies and conventional land use.
- Outcomes: Students will learn to identify and describe regions based on a multitude of characteristics and understand contemporary planning challenges and opportunities.
- Recognize and comprehend regions as a crucial element of geographic analysis.
- Acquire information on the various forms of planning, foundational principles, and methodologies for regional and multilevel planning.
- Understand the diverse facets of development and regional inequalities, aiming to devise strategies for equitable growth.
- Develop insights into the frameworks and approaches for fostering regional progress.
- Become familiar with the evaluation of development indicators.
- Gain an understanding of the NITI Aayog and its operational roles.

### ***CC-9: Economic Geography***

***6 credits***

- Acquire insights into fundamental principles and methodologies in economic geography.
- Comprehend the determinants affecting the placement of economic activities and the implications of transportation costs.
- Gain understanding of diverse economic activities.
- Familiarize yourself with the various forms of primary, secondary, and tertiary sectors.
- Develop an understanding of theories related to agricultural and industrial locations.
- Evaluate the significance of highways and global trade alliances in promoting economic growth.

**CC-10T: (Theory)-Environmental Geography**

**4 credits**

- Understand the perspective of geographers on environmental studies.
- Formulate insights into the interactions between humans and the environment.
- Develop an understanding of the composition and operations of ecosystems.
- Evaluate the impact of environmental degradation and pollution.
- Gain knowledge of environmental challenges associated with agriculture, waste management, and biodiversity.
- Become acquainted with environmental initiatives and regulations.

**CC-10P: (Practical)-Environmental Geography Lab.**

**2 credits**

- CO1- Enhance abilities in designing questionnaires for surveys on perceptions of environmental issues.
- CO2- Evaluate environmental impacts using the Leopold Matrix.
- CO3- Gain hands-on experience in assessing soil quality with a field kit.
- CO4- Learn how to interpret air quality data from central and state pollution control boards.

**SEC-2 (Practical)-Advanced Spatial Statistical Techniques**

**2 credits**

- Understand the principles of probability and their application in geography.
- Develop hands-on experience with various statistical methods such as correlation, regression analysis, time series analysis, t-tests, and nearest neighbor analysis.

**Semester: V**

**CC-11: (Theory)- Field Work and Research Methodology**

**4 credits**

- Understand the importance of research within geography.
- Achieve proficiency in identifying the study area, formulating the research problem, setting objectives and hypotheses, deciding on methodology, and performing quantitative and qualitative analysis to draw conclusions—essentials for geographic research.

- Learn about various fieldwork techniques and tools.

***CC-11P: (Practical)-Research Methodology and Field Work- Lab.***

***2 credits***

- Engage in field excursions and compile field reports using both primary and secondary data.

***CC-12: (Theory)-Remote Sensing and GIS***

***4 credits***

- Familiarize yourself with the concepts, components, evolution, platforms, and types of remote sensing and GIS.
- Gain insights into Aerial photography and Satellite Remote Sensing.
- Understand GIS data structures.
- Develop an understanding of the interpretation and application of remote sensing and GIS.
- Learn the principles of GNSS Positioning.

***CC-12:P (Practical)-Remote Sensing and GIS- Lab.***

***2 credits***

- Receive training in GIS software for modern mapping techniques.
- Develop practical skills in georeferencing, image processing, classification, digitization, and thematic map creation.

***DSE:1- Hydrology and Oceanography***

***6 credits***

- Understand the importance and function of the global hydrological cycle.
- Acknowledge the importance of water conservation, including challenges related to fresh and marine water scarcity, water-related issues, and the connections between water conservation, climate change, and urbanization.
- Identify marine resources and comprehend the characteristics of ocean waters.
- Learn how to interpret hydrological data and rainfall distribution through graphs and diagrams.



***DSE:1- Cultural and Settlement Geography***

***6 credits***

- Grasp the scope, essence, and evolution of cultural geography.
- Learn about cultural hearths, cultural landscapes, innovation and diffusion, segregation, diversity, and acculturation.
- Study various racial groups worldwide.
- Understand settlement geography's scope and essence.
- Gain knowledge about rural settlements, including definitions, characteristics, and the importance of site and situation.
- Learn about urban settlement definitions and categories according to the census.
- Analyze classical urban morphology models.
- Understand the functional classification of cities.

***DSE: 2- Resource Geography***

***6 credits***

- Understand the significance of resource geography and its interconnection with other sub-disciplines.
- Develop insights into the concepts and categorization of resources.
- Evaluate the functional theory of resources.
- Address the issues of resource depletion and strategies for conservation.
- Grasp the concept of 'Limits to Growth'.
- Learn about the distribution, usage, challenges, and management of mineral and energy resources in India.
- Assess the current energy crisis and anticipate future trends.
- Critically examine sustainable resource development strategies.

## **Semester: VI**

### ***CC:13- Evolution of Geographical Thought***

**6 credits**

This course investigates the historical and philosophical underpinnings of Geography, including the study of India's regional geography for a detailed spatial analysis.

#### **Outcome:**

- Students will learn the history and evolution of geographic thought, gaining insight into the subject's various branches to guide their future academic paths, and acquiring a thorough understanding of India's geography.
- Grasp the scope and essence of geography and examine its role as a spatial science.
- Delve into the historical progression of geographical thought from ancient times to the present.
- Acknowledge the significant contributions of notable geographers.
- Familiarize yourself with various schools of geographical thought.
- Examine modern and contemporary geographical theories including determinism, possibilism, neo-determinism, and the systematic and regional approaches.

### ***CC-14T: (Theory)-Disaster Management***

**4 credits**

- Understand the nature and categorization of hazards and disasters.
- Analyze risk, perception, and vulnerability associated with hazards.
- Conceptualize preparedness, trauma, resilience, and capacity building as responses to hazards.
- Learn about methods and data for hazard mapping.
- Gain insight into the factors, vulnerability, impacts, and management strategies for earthquakes, landslides, cyclones, and fires.

### ***CC-14P: (Practical)- Disaster Management Lab.***

**2 credits**

- Create an individual project report on a case study related to earthquakes, landslides, cyclones, floods, droughts, riverbank erosion, mining area subsidence, or tsunamis.

***DSE:3- Soil and Bio Geography***

***6 credits***

- Understand the definitions and factors influencing soil formation.
- Acquire knowledge about the physical and chemical characteristics of soil.
- Investigate soil types, classification principles, degradation, and management.
- Explore the field of biogeography.
- Introduce concepts of ecosystems and the biosphere.
- Analyze the significance and function of biogeochemical cycles.
- Learn about the determinants of plant growth.
- Develop insights into biomes and understand the reasons and effects of biodiversity loss.

***DSE:4- Urban Geography***

***6 credits***

- Develop a comprehensive understanding of Urban Geography.
- Focus on deepening your knowledge regarding the spatial and chronological aspects of urban studies; including the physical, social, cultural, and economic frameworks of urban centers, with a particular emphasis on India.
- Enhance your ability to understand, analyze, and interpret the morphology of urban centers.
- Learn about the importance of human activities, as well as physical-biological and cultural phenomena, and their variations over time and space, in shaping the urban landscape.
- Gain the ability to tackle a range of contemporary challenges, utilizing insights from the rapidly evolving field of urban geography.
- Understand and value diverse viewpoints in exploring the complexities of urban life and the impacts of the constructed environment.