DEPARTMENT OF GEOGRAPHY

Dewan Abdul Gani College

PO- Harirampur, D/Dinajpur

ANNUAL TEACHING PLAN [2022-23]

CHOICE BASED CREDIT SYSTEM (CBCS)

GEOGRAPHY HONOURS COURSE

SEMESTER- I

Course Name: Geotectonics & Geomorphology
Course Code: DC1A

Months	Units	Topic	Teacher	No. of Classes
Part 1: Geotectonics (Theory)				
July	1.1	Earth's tectonic and structural evolution and geological time scale	**BP**	3
August	1.2	Earth's interior with special reference to seismology; Isostasy: theory of Airy and Pratt	**MB**	2
	1.3	Mechanism of plate tectonics and resultant landforms, origin and types of Folds and Faults and consequent landforms	**MM**	3
Part 2: Geomorphology (Theory)				
August	2.1	Fundamental concepts in Geomorphology; Denudation processes (weathering, mass movement and erosion) andresultant landforms,	**BP**	4
Sept.	2.1	Models on landscape evolution: Views of Davis, Penck, King and Hack	**ZA**	6
Nov.	2.2	Development of river network and landforms on uniclinal and folded structures;	**ZA**	2
	2.2	Slope development and evolution ofslope (Davis and King)	**ZA**	2
Sept.	2.3	Surface and subsurface flow in Karst region, fluvial processes and landforms,	**MI**	2
Nov.	2.3	glacial and fluvio-glacial processes and landforms, aeolian and fluvio-aeolian processes and landforms processes and landforms, aeolian and fluvio-aeolian processes	**MI**	3

Course Name: Geotectonics & Geomorphology (Practical) Course Code: DC-1B				
Sept.	1	Relief profile analysis (representative profile, serial, composite, super imposed, projected, long and cross profile)	**MM**	6
Sept.-Nov	2	Geological maps: Horizontal, Uniclinal and Folded structures	**ZA**	6
Nov.	3	Identification of rocks and minerals (megascopic) (Basalt, granite, gneiss, sandstone, quartzite, limestone, mica, talc, calcite and feldspar)	**BP**	2

Course Name: Cartographic Techniques (Theory) Course Code: DC-2A				
Months	**Unit**	**Topic**	**Assigned Teacher**	**No. of Classes**
July	1	Concept and application of scale: Plain, comparative, diagonal and Positive Vernier	**MI**	2
August	2	Coordinate systems and Map: Grid, concept of geoid, spheroid, rectangular and geographical coordinate system, concept of map, classification of map, components of a map		2
Sept.	3	Bearing: Magnetic and true, whole-circle and quadrantal		1
	4	Map projections: Classification, properties and uses; Concept and significance of UTM projection.		2
July	5	Basic concepts of surveying and leveling: Prismatic compass, Dumpy level, theodolite, Abney level and Clinometer	**MB**	3
Nov.	6	Survey of India topographical maps: Reference scheme of old and open series. Information on the margin of maps	**MM**	3
Course Name: Cartographic Techniques (Practical) Course Code: DC-2B				
August	1	Scale conversion: Statement, RF, Graphical (Linear, Diagonal, Positive vernier; enlargement and reduction of scale)	**MI**	8
Sept.	2	Construction of projections: Polar Zenithal Stereographic, Simple conical with standard parallels,	**MB**	5

		Bonne‘s, Cylindrical Equal Area and Mercator‘s		
July-Nov	2	Surveying: Prismatic compass (closed traverse), dumpy level (along a line), and theodolite (base accessible and inaccessible with same vertical plain)	**ZA**	8

Semester- II

Course Name: Population & Settlement Geography (Theory) Course Code: DC-3A				
Part- 1: Population Geography				
Months	**Unit**	**Topic**	**Assigned Teacher**	**No. of Classes**
January	1.1	Definition, scope and contents of Population Geography, Population Geography and Demography and Sources of population data.	**MI**	2
February	1.2	Components of population change: fertility, mortality and migration; Demographic transition model, Concept of under population, optimum population and over population.	**MI**	6
March	1.3	Population distribution and density; Pattern of population growth in India; and Population policies in India (post-independence).	**ZA**	2
Part- 2: Settlement Geography				
January	2.1	Definition, scope and contents of Settlement Geography	**BP**	1
March	2.1	Definition, nature and characteristics of rural settlements, Morphology (layout-internal and external) of rural settlements, site and situation, rural house types with reference to India, Census categories of rural settlements.	**MM**	4
April	2.2	Census definition (Temporal) and categories of Urban Settlements in India; Urban morphology and theories (Classical Models-Burgess, Homer Hoyt, Harris and Ullman); Concept of Metropolis, City-region, Conurbation and Smart city; Functional classification of cities according to Harris.	**MB**	8
Course Name: Population & Settlement Geography (Practical) Course Code: DC-3B				
March	1	Population data analysis: Decadal growth, population density (Arithmetic and Agricultural) and Age-sex pyramid	**MI**	4
May	2	Spatial Distribution and Interactions: Nearest-Neighbour Analysis (Clerk and Evans) and Rank-Size Rule (Zipf)	**MM**	4

Course Name: Cartograms and Thematic Mapping (Theory) Course Code: DC-4A				
Months	**Unit**	**Topic**	**Assigned Teacher**	**No. of Classes**
January	1	Concepts of rounding, scientific notation, logarithm and anti-logarithm, natural and log scales	**ZA**	3
February	2	Concept, use, advantages and disadvantages of the representation of geographical data: Line, Bar, Dot and Sphere, Proportional circles, Isopleths and choropleth	**ZA**	5
March	3	Preparation and interpretation of large-scale thematic maps: Geomorphological maps, climatological maps, Land use/land cover maps and Thematic Maps	**MB**	4
February	4	Application of GIS in thematic mapping, concept of Cadastral Map.	**BP**	2
Course Name: Cartograms and Thematic Mapping (Practical) Course Code: DC-4B				
April-May	1	Cartograms: Proportional squares, pie diagram, proportional divided circle, dots and spheres	**MI**	10
April	2	Preparation of thematic maps: Choropleth, Isoline and Chorochromatic map	**ZA**	8

SEMESTER- III

Course Name: Climatology (Theory) Course Code: DC-5A				
Months	Unit	**Topic**	Assigned Teacher	No. of Classes
July	1	Structure and composition of the atmosphere, Insolation and heat budget	**ZA**	3
July	2	Horizontal and vertical distribution of temperature, concept and types of inversion of temperature: its causes and consequences, Ozone layer and green house effects	**MB**	5
August	3	Condensation and precipitation process and forms; mechanism of precipitation: Bergeron Flindesion theory, Collision and coalescence theory		4
Sept.	4	Air mass: typology, origin, characteristics and modification; Fronts: warm and cold; frontogenesis and frontolysis; weather: stability and instability; barotropic and baroclinic conditions		3
Nov.	5	Circulation in the atmosphere: Planetary winds, jet stream, index cycle; tropical and mid latitude cyclones; monsoon circulation and mechanism with reference to India		5
Sept.	6	Climatic classification after Köppen and Thornthwaite	**MM**	4
Course Name: Climatology (Practical) Course Code: DC-5B				
Sept.	1	Measurement of weather elements by Meteorological Instruments: Hygrometer, Maximum Minimum Thermometer, Barometer, Rain gauge (Simon‘s)	**MB**	4
Nov.	2	Preparation of Climatic Graphs and Charts: Taylor‘s Climograph, Hythergraph, Star Diagram and Ergograph	**MB, MM, BP**	4

Course Name: Statistical Methods in Geography (Theory) Course Code: DC-6A				
Months	Unit	**Topic**	Assigned Teacher	No. of Classes
July	1	Concept and significance of Statistics; Concept of data, sources of data, methods of data collection, discrete and continuous data, population and samples and scales of measurement (nominal, ordinal, interval and ratio)	**MI**	4
August	2	Sampling: Need, types, and significance and methods of random sampling		2
August	3	Theoretical distribution: frequency, cumulative frequency, normal and probability		2

		distribution		
August	4	Central tendency: Mean, median, mode and other partitioned values	**ZA**	2
August	5	Measures of dispersion: range, quartile deviation, mean deviation, standard deviation; coefficient of variation and coefficient of quartile deviation		2
Sept.	6	Correlation: Rank correlation, product moment correlation; Regression (linear and non-linear) and time series analysis (moving average)		3
Course Name: Statistical Methods in Geography (Practical) Course Code: DC-6B				
August	1	Construction of histograms and frequency curve; measures of central tendency; computation of mean (arithmetic and geometric), median and mode;	**MI**	10
Sept.	2	Measures of dispersions: standard deviation and coefficient of variation	**ZA**	4
Nov.	3	Computation of correlation (Pearson); Regression and graphical plotting		6

Course Name: Geography of India (Theory) Course Code: DC-7A				
Months	Unit	**Topic**	Assigned Teacher	No. of Classes
July	1	Tectonic and stratigraphic provinces, physiographic divisions	**MM**	3
July	2	Climate, soil and vegetation: Characteristics and classification	**BP**	3
August	3	Agricultural regions. Green revolution and its consequences; mineral and power resources distribution and utilisation of iron ore, coal, petroleum and gas		4
Sept.	4	Industrial development: Automobile and information technology		2
August	5	Regionalisation of India: Physiographic (R. L. Singh), Socio-cultural (Sopher) and Economic (Sengupta)	**MM**	4
Nov.	6	Contemporary population issues: Poverty, Illiteracy, Malnutrition and unemployment		4
Course Name: Geography of India (Practical) Course Code: DC-7B				
Nov.- Dec	1	Interpretation of Indian daily weather Map: Temperature, pressure, sky condition, wind direction and speed, sea condition and other weather phenomena (Pre-monsoon, Monsoon and Post-monsoon)	**MM**	12
Sept.	2	Identification of rocks and minerals: Sandstone, Limestone, Shale, Basalt, Granite, Gneiss, Marble, Quartzite, Conglomerate; Quartz, Chalcopyrite, Feldspar, Galena, Calcite, Hematite, Magnetite, Mica and Talc	**BP**	4

SEMESTER- IV

Course Name: Regional Planning and Development (Theory) Course Code: DC-8A				
Months	Unit	**Topic**	Assigned Teacher	No. of Classes
January	1	Concept, Types and delineation of regions	**MI**	1
January	2	Types of planning, tools and techniques of planning, principles, needs and objectives of regional planning and multi- level planning in India	**MI**	3
February	3	Concepts of metropolitan areas and urban agglomerations	**MI**	2
March	4	Development: Meaning and Concept of regional development with reference to India, Indicators (Economic, social and environmental) of development, growth versus development	**MI**	3
February	5	Growth pole model of Perroux, Growth centre model and Cumulative causation (Myrdal) and core periphery (Hirschman, Rostov and Friedman) theories for regional development	**MM**	7
March	6	Strategies of regional development with reference to India, Need and measures for balanced development in India, Regional inequality, disparity and diversity	**MM**	3
Course Name: Regional Planning and Development (Practical) Course Code: DC-8B				
March	1	Delineation of formal region: Weighted index number	**MM**	4
April	2	Delineation of functional region: Gravity Analysis (Reilly‘s)	**MM**	4
May	3	Measuring regional disparity: Lorenz curve, Gini Coefficient and Simson‘s method	**MI**	6

Course Name: Economic Geography (Theory) Course Code: DC-9A				
Months	Unit	**Topic**	Assigned Teacher	No. of Classes
February	1	Meaning, Concepts and approaches of Economic Geography, concepts of goods, services, production, exchange and consumption, GATT, OPEC	**ZA**	3
February	2	Concept of economic man, theories of choices	**ZA**	1
March	3	Economic distance, transport costs, Transnational sea-routes, railways and highways with reference to India	**ZA**	3
April	4	Concept and classification of economic activities, factors affecting location of economic activity with special reference to agriculture (Von Thunen), and industry (Weber).	**ZA**	5

January-February	5	Primary activities: Subsistence (paddy) and commercial agriculture (tea), forestry (lumbering), fishing (India: inland and coastal) and mining (coal, iron in India); Secondary activities: Manufacturing (cotton textile and iron and steel), Special economic zones (SEZ) and technology parks (India); Tertiary activities: transport-types and importance, trade (e commerce) Quaternary and Quinary-concept	**BP**	10
March	6	Liberalization, privatization, globalization and Indian economy	**BP**	3
Course Name: Economic Geography (Practical) Course Code: DC-9B				
April	1	Agricultural Efficiency Analysis: Kendal‘s Method	**ZA**	2
May	2	Measuring transport accessibility: Konig and Shimbel index	**ZA**	2
April	3	Comparison of spatial industrial development: Location quotient and Geographical association	**MB**	4

Course Name: Environmental Geography (Theory) Course Code: DC-10A				
Months	Unit	**Topic**	Assigned Teacher	No. of Classes
January	1	Geographers‘ approach to environmental studies, concept of holistic environment and system approach	**ZA**	3
January	2	Perception of environment in different stages of civilization	**ZA**	1
January	3	Concept, structure and functions of ecosystem	**MB**	1
February	4	Environmental pollution and degradation (Land, water and air), Space–time hierarchy of environmental problems (Local, regional and global)	**MB**	4
May	5	Urban environmental issues with special reference to waste management	**BP**	1
May	6	Environmental programmes and policies – Global, national and local levels	**BP**	2
Course Name: Environmental Geography (Practical) Course Code: DC-10B				
March	1	Preparation of check-list for Environmental Impact Assessment of an urban / industrial project	**ZA**	2
April	2	Determination of soil type by ternary diagram textural plotting	**BP**	2
May	3	Quality assessment of water using lab kit: pH and TDS	**ZA**	4

SEMESTER- V

Months	Unit	Topic	Assigned Teacher	No. of Classes
Course Name: Soil & Biogeography (Theory) **Course Code: DC-11A**				
Part- 1: Soil Geography				
July	1.1	Definition and classification (Genetic & USDA) of soil, Factors of soil formation, Physical (structure and texture) and chemical soil properties (pH and NPK)	**MM**	8
August	1.2	Origin and profile characteristics of Lateritic, Podzol and Chernozem soils		3
August	1.3	Factors and processes of Soil erosion, degradation and mitigation measures		2
Part- 2: Biogeography				
Sept.	2.1	Definition of Biogeography, Concepts of biosphere, ecosystem, biome, ecotone, community, ecology, trophic structure, food chain and food web and biodiversity	**MM**	4
Sept.	2.1	Energy flow in ecosystems, Bio-geochemical cycles with special reference to carbon dioxide and nitrogen		3
Nov.	2.2	Geographical extent and characteristic features of Tropical rain forest and Taiga biomes; Causes, consequences of deforestation and management; Wetland: concept and significance		4
Course Name: Soil & Biogeography (Practical) **Course Code: DC-11B**				
Sept.	1	Particle size distribution analysis by sieving method	**MM**	4
Nov.	2	Measurement of soil nutrient (NPK) and Soil pH by using soil kit		8
August	3	Time series analysis of biogeography data		6

Course Name: Hydrology and Oceanography (Theory) Course Code: DC-12A				
Part- 1: Hydrology				
Months	Unit	Topic	Assigned Teacher	No. of Classes
July	1.1	Definition of hydrology; Concept, Characteristics, Significance and Interpretation of Hydrological Cycles	**BP**	2
August	1.2	Definitions and Characteristics of Precipitation, Evaporation, Evapo-Transpiration, Infiltration, Rainfall Recharge Relationship and Runoff Characteristics		3
August	1.3	Flood Analysis of a drainage basin, Concept of Micro Watershed Planning, Water Management in Tropical Cities and Rainwater Harvesting		4
Part- 2: Oceanography				
Sept.	2.1	Origin, Characteristics of major Structural and Morphological features of Pacific, Atlantic and Indian Ocean	**BP**	3
Nov.	2.1	Origin and evolution of coral reefs and atolls; Origin and Classification of oceanic sediments		2
Nov.	2.2	Temperature and Salinity characteristics of ocean water and marine resources		2
Course Name: Hydrology and Oceanography (Practical) Course Code: DC-12B				
Sept.	1	Annual Hydrograph analysis and rating curve	**BP**	4
Sept.	2	Runoff estimation: Float method		2
Nov.	3	Preparation of temperature-salinity (TS)diagram		2

Course Name: Remote Sensing and GIS (Theory) Course Code: DSE-1A				
Part- 1: Remote Sensing				
Months	Unit	Topic	Assigned Teacher	No. of Classes
July	1.1	Concept, Principles, Stages, Types and Methods of RS, types of RS satellites and sensors	**MB**	3
Nov.	1.2	Sensor resolutions and their applications with reference to IRS and Landsat missions, image referencing schemes and data acquisition; Concept of False Colour Composites from IRS LISS-3 and Landsat TM and OLI data.		6
Nov.	1.3	Principles of image interpretation. Preparation of inventories of land use/land cover (LULC) features		3

		from satellite images.		
Part- 2: Geographical Information Systems				
July	2.1	Concepts, Components, Developments, Functions and Advantages of GIS, raster and vector	**MB**	3
July	2.1	Principles of preparing attribute tables, data manipulation and overlay analysis		2
August	2.2	Principles of GNSS positioning and waypoint collection		2
Course Name: Remote Sensing and GIS (Practical) Course Code: DSE-1B				
August	1	Geo-referencing of scanned maps/ images and assigning projection	**MB**	6
Sept.	2	Digitization: Point, Line & Polygon		6
Nov.- Dec.	3	Preparation of thematic maps		4

Course Name: Social and Cultural Geography (Theory) Course Code: DSE-2A				
Part- 1: Social Geography				
Months	Unit	Topic	Assigned Teacher	No. of Classes
July	1.1	Nature and Scope of Social Geography	**ZA**	1
July	1.2	Concept of Space, Social differentiation and stratification; social processes		3
July	1.3	Social Categories: Caste, Class, Religion, Race and Gender and their Spatial distribution		4
August	1.4	Basis of Social region formation, Evolution of social-cultural regions of India, Social groups, social behaviour and contemporary social issues (dowry, delinquency, child labour, gender discrimination) with special reference to India		8
Part- 2: Cultural Geography				
Sept.	2.1	Scope and content of Cultural Geography	**ZA**	2
Sept.	2.1	Concepts of Cultural Hearth and Realm, Cultural diffusion, Cultural segregation, cultural diversity		5
Nov.	2.2	Races and racial groups of the world, Cultural regions of India		3
Course Name: Social and Cultural Geography (Practical) Course Code: DSE-2B				
Sept.	1	Mapping of composition of social/cultural group of Indian population in any Indian states (district wise) following choropleth technique, bar diagram/proportional divided circle	**ZA**	6

Nov.	2	Calculation of Human Poverty Index (HPI)		4
Nov.	3	Gender parity index		2

Course Name: Geography of Tourism (Theory) Course Code: SEC-1				
Months	Unit	Topic	Assigned Teacher	No. of Classes
July	1.1	Concept, scope and nature of Geography of Tourism, types of Tourism, Recreation and Leisure Inter-Relations Geographical Parameters of Tourism by Robinson.	**MI**	5
August	1.2	Factors (historical, natural, socio-cultural and economic) influencing tourism, Spatial pattern of tourism		4
August	1.3	Physical, economic and social impacts of tourism		2
Sept.	1.4	Environmental laws and tourism: current trends, spatial patterns and recent changes		3
Sept.	1.5	Recent Trends of Tourism: International and Regional; Domestic (India); Sustainable Tourism, Meeting Incentives Conventions and Exhibitions (MICE), Role of foreign capital and impact of globalization on tourism		7
Nov.	1.6	Tourism Infrastructure, regional dimensions of tourist attraction in India, National Tourism Policy;		5

SEMESTER-VI

Course Name: Disaster Management (Theory) Course Code: DC-13A				
Months	Unit	**Topic**	Assigned Teacher	No. of Classes
January	1	Classification of hazards and disasters approaches to hazard study	**MB**	2
January	2	Risk perception and vulnerability assessment, hazard paradigms		2
February	3	Responses to hazards: Preparedness, trauma and aftermath. Resilience and capacity building.		2
February	4	Factors, vulnerability, consequences and management of hydrologic disasters (Flood & Drought)		3
March	5	Factors, vulnerability, consequences and management of Geologic disasters (Earthquake & Landslide)		3
April	6	Factors, vulnerability, consequences and management of Atmospheric disasters (Cyclones)		3
Course Name: Disaster Management (Practical) Course Code: DC-13B				
February	1	Flood Frequency Analysis (Time series)	**MB**	4
March	2	Flood year determination based on peak flow data in reference to danger and extreme danger level		2
April	3	Hydrological Drought Analysis: Standardized Precipitation Index (SPI)		2

Course Name: Evolution of Geographical Thought (Theory) Course Code: DC-14A				
Months	Unit	Topic	Assigned Teacher	No. of Classes
January	1.1	Definition, nature, scope and contents of Geography, Development of Geography and contributions of Greek, Roman and Indian geographers; Impact of _Dark Age‘ on Geography and Arab contributions	**ZA**	6
February	1.2	Transition from Cosmography to Scientific Geography (Contributions of Bernard Varenius and Immanuel Kant); Dualism and Dichotomies (General vs. Particular, Physical vs. Human, Regional vs. Systematic, Determinism vs. Possibilism, Ideographic vs. Nomothetic)		6
March	1.3	Evolution of Geographical thoughts after pre-modern phase, contribution of German, French, British		5

		and America school of thought, Contributions of Humboldt and Ritter		
April	1.4	Quantitative Revolution and its impact, behaviouralism, systems approach, radicalism, feminism in geography		5
May		Concept of hypothesis, theory, law and model, Changing concept of space in geography, Geography in the 21st Century		3
Course Name: Evolution of Geographical Thought (Practical) Course Code: DC-14A				
March-April	1	Hypothesis testing: t test, z test, chi square test (data base computation, testing and inferences)	**ZA**	10

Course Name: Human Geography (Theory) Course Code: DSE-3A				
Months	Unit	Topic	Assigned Teacher	No. of Classes
January	1.1	Nature, scope, approaches and recent trends; elements of Human Geography	**MM**	2
January	1.2	Evolution of humans, concept of race and ethnicity		3
February	1.3	Space, society and cultural regions (language and religion), evolution of human societies- hunting and food gathering, pastoral nomadism, subsistence farming, industrial and urban societies		5
March	1.4	Human adaptation to environment: Eskimo, Masai, Jarwa, Gaddi, Santhals.		10
May	1.5	Population–Resource regions (Ackerman)		2
May	1.6	Human population and environment with special reference to development–environment conflict		2
Course Name: Human Geography (Practical) Course Code: DSE-3B				
April	1	Population Potential and Mean Centre of Population	**MM**	6
April	2	Computation of Human Development Index (HDI)		4

Course Name: Field Report Course Code: DP4				
Months			Assigned Teacher	No. of Classes
March-May		Field visit, measurement, data collection and report preparation	**MI**	20

Course Name: Climate Change: Vulnerability and Adaptations (Theory) Course Code: SEC-2				
Months	Unit	Topic	Assigned Teacher	No. of Classes
January	1.1	Scope and trends of subject, Understanding Climate Change with reference to the Geological Time Scale	**BP**	4
February	1.2	Evidences and factors of climate change, Green House Gases and Global Warming		3
February	1.3	Electromagnetic spectrum, Atmospheric window, heat balance of the earth		3
March	1.4	Economic and social impact of climate Change, impacts on Agriculture and Water; Flora and Fauna; Human Health and morbidity		4
April	1.5	Global initiatives to climate change mitigation: Kyoto Protocol, Carbon trading, clean development mechanism, COP, Climate fund		4
May	1.6	Climate change vulnerability assessment and adaptive strategies with particular reference to South Asia, IPCC reports, National Action Plan (of India) on Climate Change		3

ABBREVIATION:

MI= DR. MD ISMAIL, ZA= MR. ZUBBER AHAMED, BP= MR. BIJON PAUL, MM= DR. MD MONIRUL ISLAM, MB= MR. MAHESH BARMAN