TEACHING PLAN

Academic Session 2014-2015, 2015-16, 2016-2017, 2017-2018

Under 1+1+1 system

Geography Honours

Part-I

Module -1-Geotectonics and Geomorphology	***Teacher***	***Class Hour***		***Teaching Method***
Unit -I-Geotectonics Unit II-Geomorphology Unit III-Geomorphology and Structure Unit Iv- Theories of Geomorphology	SM KN KG+SM SM	45 mins 45 mins 45 mins		Lecture, ppt, Drawing, Handouts
Module-II-Hydrology and Oceanography *Unit-I- Surface hydrology* *Unit-II-Groundwater hydrology* *Unit-III- Ocean Water* *Unit -IV- Ocean Basin*	KN KG SM SM	45 min 45 min 45 min		Lecture, PPt, Drawing, Handouts
Module -III-Economic Geography *Unit*-I -Resources Unit-II-Primary Activities Unit-III- Secondary Activities Unit-IV-Tertiary Activities	KN SM SM KG	45 min 45 min 45 min		Lecture, ppt, Drawing, Handouts
Module-IV-Cartograms and				

Geological Maps Scales, Divided Proportional Circles, Flow diagram, Bar graphs Interpretation Of Geological Maps Identification of Rocks and Minerals	KN, Sm. KG SM KN	45 min 45 min 45 min		Lecture, ppt, Drawing, Handouts
		Total class hour		

Geography Honours -Part -II

2014-15, 2015-16, 2016-2017,2017-2018

Module -V Climatology	***Teacher***	***Class Hour***		***Teaching Method***
Unit-I- Atmospheric Layers and Thermal Variation	SM	45 mins		Lecture, PPt, Drawing, Handouts
Unit -II Atmospheric Layers and Wind Circulation	KN	45 mins		
Unit-III- Precipitation and Air mass	KD	45 mins		
Unit-IV- Weather disturbance and Climatic Classification	KG	45		

		mins		

Module-VI-Soil and Bio Geography Unit-I Soil Formation, Profile Characteristics and Properties Unit-II Soil and Land management Unit-III- Concepts in Bio-Geography Unit-IV Ecological Aspects of Bio Geography	KN SM KN KD KN SM	45 mins 45 mins 45 mins 45 mins 45 mins		Lecture, PPt, Drawing, Handouts
Module VII-Social, Cultural and Political Geography Unit I- Concept in Social Geography Unit-II- Components of Social Geography Unit III-Cultural Geography Unit-IV- Political Geography	KD KG SM SM+KG+KN+KD	45 mins 45 mins 45 mins 45 mins 45 mins		Lecture, PPt, Drawing, Handouts Lecture, ppt, Drawing, Handouts
Module VIII-Map Interpretation and Survey with Instruments Unit I- Topographical Sheet Unit-II- Survey with Instruments				

			Total class hour	

Geography Honours -Part -III

2014-15, 2015-16, 2016-2017,2017-2018

Module IX-Population and Settlement Geography	***Teacher***	***Class Hour***		***Teaching Method***
Unit-I-Population Dynamics	SM	45 mins		Lecture, ppt, Drawing
Unit-II- Demographic	SM	45 mins		
Attributes Unit-III- Rural	KN	45 mins		
Settlements	KG			
Unit-IV- Urban Settlements				

Module-X-Regional Geography of India Unit-I-Concepts and Bases Unit-II General Geography of India Unit-III Case Studies Unit-IV Studies of Geographical problems ***Module-XI-Philosophy***	SM SM KG KN KD	45 min 45 min 45 min		Lecture, ppt, Drawing

of Geography Unit-I Nature of Geography Unit-II -Basic Concepts Unit-III- Modern Thoughts Unit-IV- Contemporary Thoughts ***Module-XII Contemporary Issues in Geography*** Unit-I Climatic and biotic hazards in the Indian Sub continent Unit-II-Other terrestrial Hazards in the Indian Sub-continent Unit-III+ Unit-IV Human development in the third World **Module-XIII** Mapping Techniques Unit-I-Map Projection Unit-II-Cartograms and Representation of Population data Unit-III-Thematic mapping and Climatic and Soil data **Module -XIV** Unit-I-GIS Unit-II-Remote Sensing	KN KG SM KN KG SM SM+KD KN KG SM SM Sm+KG+KN SM+KG+KN KN SM KG SM	45 min 45 min 45 min 45 min 45 min 45 min 45 mins 45 mins 45 mins 45 mins 45 mins 45 mins		Lecture, ppt, Drawing Lecture, ppt, Drawing Lecture, ppt, Drawing

Unit-III-Laboratory note bk Unit-IV-Field Report and Viva Voce				

Module XV **Statistical Tecniques** Unit- 1 Basic Concepts Unit-II-Dispersion and Regression **Module-XVI** Unit-I-Natural hazards and their management in the Indian Sub continent Unit-II-Economic and Human Development in Third World	SM	45 mins 45 mins 45 mins		

			Total class hour		

Geography General -Part -I
Under 1+1+1 System
2014-15, 2015-16, 2016-2017,2017-2018

Paper -I	***Teacher***	***Class Hour***		***Teaching Method***
Module -I Geotectonics and Geomorphology • Structure of the earth's crust • Influence of the rocks on topography • Broad outline of plate tectonics • Development of landforms	KN SM SM KG	45 mins 45 mins 45 mins		Lecture, ppt, Drawing, Handouts
Module -II-Social and Economic Geography • Growth and distribution of world population • Contemporary social issues • Sectors of economy • Scales of production • Location, problems, and prospects of Indian industries	SM KG KN SM	45 min 45 min 45 min		Lecture, ppt, Drawing, Handouts

			Total class hour	

Geography General -Part -II

2014-15, 2015-16, 2016-2017,2017-2018

Paper -II	***Teacher***	***Class Hour***		***Teaching Method***
• **Module-III** • Insolation and Heat Budget • Monsoon System • Climatic classification after	SM KN	45 mins 45		Lecture, ppt, Drawing, Handouts

Koeppen				

• Origin of Soils • Properties of Soil • Definition of ecosystem and biomes • Plant types and distribution	SM SM KG	mins 45 mins		

• **Module -IV** • Regional Geography of India • Concept of region • Broad physiographic regions of India • Vagaries of Indian Monsoon • Regions of India	SM KG KD SM	45 min 45 min 45 min		Lecture, ppt, Drawing, Handouts
Paper-III **Module-V-Applied Geographical Techniques** • Scale • Statistics • Map Interpretation •	KN SM+KD KG	45 mins 45 mins		Lecture, ppt, Drawing, Handouts
Module-VI-Applied Geographical Techniques • Map Projections • Cartograms' • Project Report	SM+KG+KN KN SM+KD KG+KN+SM	45 mins 45 mins 45 mins 45 mins		Lecture, ppt, Drawing, Handouts

			Total class hour	

Geography General -Part -III

2014-15, 2015-16, 2016-2017,2017-2018

Paper-IV	***Teacher***	***Class Hour***	***Domain***	***Teaching Method***
Module-VII Land Use and Settlement Geography • Concept and Attributes of land • Objectives and Principles of land use • Factors influencing Land use • Rural And Urban Settlement	SM KG KN KD	45 mins 45 mins 45 mins		Lecture, drawing, PPt
Module-VIII Remote Sensing and Thematic mapping • Definition of Remote Sensing • Air Photo -Characteristics and Interpretation • Satellite Imagery • Definition, Objectives and Thematic Mapping **Module-IX-Applied Geographical Techniques** • Preparation of Land use maps From Cadastral Maps • Preparation of thematic maps • Air photo Interpretation	SM KD KD KN SM KN KD	45 mins 45 mins 45 mins 45 mins 45 mins		Lecture, drawing, PPt Lecture,

		45 min		drawing, PPt
		Total class hour		

TEACHING PLAN

Academic Session 2018-2019

Under CBCS System

Semester 1(July-December)

CC – 1

Subject Geography Honours

CC-1(Theory)	***Teacher***	***Class Hour***	***Domain***	***Teaching Method***
UNIT:-1-Geotectonic • Earth's tectonic and structural evolution • Earth's interior with special reference to seismology, isostacy, models of Airy, Pratt • Plate tectonics as unified theory of global tectonics • Folds and Faults	*KN* *KN* *KG* *SM*	45 min 45 min 45 min 45 min	4	Lecture. Drawing and demonstration Lecture. Drawing and demonstration

UNIT- iI= Geomorphology • Degradational Process Weathering, Mass wasting and landforms • Process of entrainment, transportation, and deposition by different geomorphic agents • Development of River network and landforms on uniclinal and folded structure • Development of river network, and landforms on granite, basalt and limestones • Coastal process and landforms • Glacial and Glacio- fluvial Process • Aeolian and fluvio-aeolian process and landforms • Role of time in Geomorphology, Schumm and Litchy's Model, Views of Davis, Penck , King and Hack	KG KD SM KD SM KG KN SM & KD	4545 min 45 min 45 min 45 min 45 min		Lecture, PPT presentation Lecture. Drawing and demonstration Lecture. Drawing and demonstration Lecture. Drawing and demonstration
• **Practical -CC1** • Measurement of dip and strike using Clinometer • Identification of minerals and rock samples • Construction of hypsometric curves of a drainage basin • Extraction and interpretation of geomorphic information from survey of India 1:50 K topographical map	KD KN KG SM			Lecture. Drawing and demonstration Lecture. Drawing and demonstration
		Total class hour		

Semester 1/CC – 2-2018-19
Cartographic Techniques

CC-2(Theory)	***Teacher***	***Class Hour***		***Teaching Method***
• Maps, Components and Classification • Concept and Application of Scales • Coordinate Systems • Grids, angular and linear system • Bearing- Magnetic and true, whole circle and reduced • Concept of Geoid and spheroid • Representation of using dots sphere and proportional circles • Representation of data using isopleths, choropleths and chorochromatic maps • Survey of India Topographical Maps Reference Scheme of old and open series	KG KN SM KD KD SM SM SM	45 min 45 min 45 min 45 min 45 min 45 min 45 min 45 min 45 min		Demonstration in class with diagrams and handouts Demonstration in class with diagrams and handouts
• **CC2 Practical** • Graphical Construction of Scales, Plain, Diagonal and Vernier	KN KD	45 min 45 min		Demonstration in class with diagrams and handouts
• Construction of Projection: Polar Zenithal, Simple Conic with one standard Parallel, Bonne's,	KG, KN	45 min 45 min		Demonstration in class with diagrams and

Cylindrical Equal area, Mercator's	KD	45 min		handouts
• Thematic Maps: Proportional Squares, Pie Diagrams, Proportional Circles, Dots and Spheres	KN, KG SM	45 min 45 min 45 min		Demonstration in class with diagrams and handouts
• Choropleth, Isopleth, Chorochromatic maps	SM	45 min		Demonstration in class with diagrams and handouts
Total class hour				

Semester-3 2018-19
CC – 5
Climatology

CC-5(Theory) Climatology	***Teacher***	***Class Hour***		***Teaching Method***
• Nature and Composition and layering of Atmosphere • Insolation, Controlling Factors, Heat Budget	KN	1 hr 1 hr		Demonstration in class with diagrams and handouts
• Horizontal and vertical distribution of temperature, • Inversion of temperature	KD	1 hr 1 hr		Demonstration in class with diagrams and handouts

• Overview of Climatic Change, Greenhouse Effect, Formation, Depletion and Significance	SM	1 hr		Demonstration in class with diagrams and handouts

Unit-II Atmospheric Phenomena and Climatic Classification	KN	1 hr	4	Demonstration in class with diagrams and handouts
• Condensation, process and forms, forms of precipitation	KD	1hr		
• Air Mass: Typology, origin and characteristics	KG	1 hr		
• Fronts: Warm and Cold. Frontogenesis and Frontolysis	KD	1 hr		
• Weather: Stability and Instability, barotropic and baroclinic conditions	KG SM	1 hr 1 hr		
• Circulation in the atmosphere, planetary winds, jet streams	SM	1 hr		
• Atmospheric Disturbances-Cyclones and thunderstorms	KD	1 hr		
• Monsoon Circulation and mechanism in India				
• Climatic Classification-Thornthwaite and Oliver	SM+ KD	1 hr		
Practical	SM	1 hr		Demonstration in class with diagrams and handouts
• Measurement and weather elements using analogue instruments	KD & KG	1 hr		
• Interpretation of weather map	KN	1 hr		
• Construction of Hythergraph and Climograph				
• Construction of Wind Rose				

			Total class hour	

CC – 6 (Semester 3)
Hydrology and Oceanography

CC-6- ***Unit-I Hydrology***		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• System approach in hydrology, Global Hydrological cycle • Run-Off, Controlling Factors • Drainage basin, principles of water harvesting and watershed management • Groundwater occurance and storage		KN KN KD KD	1 hr 1 hr 1 hr 1 hr	Lecture, drawing and ppt
Unit-II Oceanography • Major relief features of the ocean floor • Physical and chemical properties • Water mass, T-S diagram		KG KG KD	1 hr 1 hr 1 hr	lecture and drawing

• Air sea interactions, ocean circulation, wave and tide • Ocean temperature and Salinity • Coral reefs-formation and classification • Marine resources • Sea level change, types and causes		KG SM SM SM KD	1 hr 1 hr 1 hr 1 hr 1 hr	
Practical • Construction and Interpretation of rating curves • Construction and Interpretation of Hydrographs • Construction and interpretation of rainfall dispersion diagram, Climatic water budget, and Ergograph • Construction of Theisson Polygon		KN KG KN & SM KD	1 hr 1 hr 1 hr 1 hr	
		Total class hour		

CC – 7 (Semester 3)
Statistical Methods in Geography

CC-7 ***Unit* -I Frequency distribution and Sampling**		***Teacher***	***Class hour***	***Teaching Method***
• Importance and Significance in Geography • Discrete and continuous data, Scales of measurement • Sources of geographical data for statistical analysis • Collection of data and preparation of statistical tables • Sampling-need types and		KL SM	1 hr 1hr 1 hr	Lecture, Drawing and PPt

significance • Theoritical distribution: frequency,				

cumulative frequency and probability		SM	1 hr	
Unit-II-Numerical data Analysis • Central Tendency-Mean, Median Mode and Partition Values • Measures of dispersion, range, mean deviation, standard deviation and coefficient of variation • Association and correlation-Product moment Correlation and rank correlation • Regression, Linear and non-linear • Time series analysis • Hypothesis testing		SM SM KL KL KL	1 hr 1 hr 1 hr 1 hr 1 hr	Lecture, Drawing and PPt
CC7-practical • Construction of data matrix with each row representing an areal unit • Based on above data a frequency table, measures of central tendency and dispersion would be computed • From the data matrix a sample set would be drawn using random, stratified and systematic sampling • Scatter diagram, linear regression would be plotted based on the data set		SM SM SM KL	1 hr 1 hr 1 hr 1 hr	Lecture, Drawing and PPt
		Total class hour		

SEC – A3-01- Theory
Coastal Management

SEC-A3		***Teacher***	***Class hour***	***Teaching Method***
• Components of coastal Zones-Coastal morpho dynamic variables		KD	1 hr	Lecture, PPt
• Environmental impacts and management of mining, oil exploration, salt manufacturing, land reclamation and tourism		KD	1 hr	Lecture, PPt
• Coastal hazards and their management		KD	1 hr	Lecture, PPt
• Principles of Coastal Zone Management Exclusive Economic Zone and Coastal Regulation Zones		KD	1 hr	Lecture, PPt
		Total class hour		

Semester 5-2018-19

CC11

CC-11 Research Methodology		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• Research In Geography • literature Review • Defining research problem • Research materials and methods • Techniques of writing reports • Plagiarism		KD KD KN KN	1 hr 1 hr 1 hr 1 hr	Lecture, PPt
• Fieldwork in Geographical Studies • Field techniques and tools • Positioning and collection of samples • Post field tabulation • Fieldwork-Logistic and handling of emergencies		SM KN KG KD		Lecture, PPt

		SM		
Practical Field report and Lab bk		KN KD KG SM	1 hr 1 hr 1 hr 1 hr	Lecture, PPt
			Total class hour	

Semester-5/CC-12-2018-19

Remote Sensing And GIS

CC-12		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• Principles of remote sensing • Sensor resolutions and their applications • Image referencing scheme • Preparation of false colour composite • Principles of image interpretation • Acquisition and utilisation of free Digital elevation		KD KD KN KN	1 hr 1 hr 1 hr 1 hr	Lecture, PPt
• GIS data structure type • Principles of preparing attribute tables • Principle of buffer preparation • Principles of overlay analysis • GNSS • Transferring GNSS to GIS		SM KN KG KD SM		Lecture, PPt

Practical • Image georeferencing and enhancement • Supervised image classification • Digitisation of features • Waypoint collection from GNSS		KD	1 hr 1 hr 1 hr 1 hr	Lecture, PPt

CBCS System

Semester 2(January-June)-2018-19

CC –3

Human Geography

CC-3(Unit-I)-Nature and principles	***Teacher***	***Class Hour***	***Domain***	***Teaching Method***
• Nature and scope and recent trends in human Geography	KD	45 min		Demonstration in class with diagrams and handouts
• Approaches to Human Geography, Resource, Locational, Landscape and environment	KD	45 Min		Demonstration in class with diagrams and handouts
• Concept and Classification of Race, Ethnicity	KN	45 min		Demonstration in class with diagrams and handouts

• Space, Society, And cultural Regions	KN	45 min		Demonstration in class with diagrams and handouts
Unit II Society, Demography and				

Ekistics Evolution of Human society-hunting, food gathering, Pastoral nomadism Human Adaptation to Environment-Case studies of Eskimo, Masai and Maori Population Growth and Distribution, Demographic transition Development and environment conflict Population Resource Region Types and patterns of rural settlement Rural House Types in India Morphology and hierarchy of urban settlement **Practical** Spatial variation in continent or country level religious composition by divided proportional circles Measuring Arithmetic Growth Rate of population comparing two decadal data bases Types of Age Sex Pyramid, graphical Representation and analysis Nearest Neighbour analysis from survey of India Maps	SM KN KG KD SM SM SM KG KN KD KG SM	45 min 45 min 45 min 45 min 45 min 45 min 45 min 45 min 45 min 45 min 45 min 45 min		Demonstration in class with diagrams and handouts Demonstration in class with diagrams and handouts
		Total class hour		

CC-4 (Semester 2)-2018-19
Thematic Mapping and Surveying

CC-4Theory	***Teacher***	***Class Hour***		***Teaching Method***
• Concept of rounding, scientific notation. logarithm, natural and log scales	KD	45 min		Demonstration in class with diagrams and handouts
• Concept of diagrammatic representation of data	KD	45 min		Demonstration in class with diagrams and handouts
• Preparation and interpretation of geological map • Preparation and Interpretation of weather map • Preparation and Interpretation of land use and landcover map	SM	45 min		Demonstration in class with diagrams and handouts
• Preparation and Interpretation of Socio-economic map	KN	45 min		Demonstration in class with diagrams and handouts
• Principal national agencies producing thematic maps in India (NATMO, GSI, NRSC/BHUVAN)	KD	45 min		Demonstration in class with diagrams and

				handouts
• Basic concept of surveying and survey equipment: Prismatic Compass	KG	45 min		Demonstration in class with diagrams and handouts
• Basic concept of surveying and survey equipment: Dumpy Level	KN	45 min		Demonstration in class with diagrams and handouts
• Basic concept of surveying and survey equipment: Theodolite	KD	45 min		Demonstration in class with diagrams and handouts
• Basic concept of surveying and survey equipment: Abney Level • Basic concept of surveying and survey equipment: Laser Distance Measurer	KD	45 min		Demonstration in class with diagrams and handouts
• **CC4 Practical** • Traverse Survey using Prismatic Compass • Profile survey using dumpy level • Height determination of base accessible and inaccessible by theodolite • Interpretation of Geological Maps	KG KN KD SM	45 min 45 min 45 min 45 min		Demonstration in class with diagrams and handouts
		Total class hour		

Economic Geography

CC-8-Unit I Concepts		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• Meaning and Approaches to Economic Geography • Concepts in Economic Geography • Concept of economic man • Economic distance and transport costs		KN KD KD KD	1 hr 1 hr 1 her 1 hr	Lecture, ppt
Unit II- Economic Activities • Concept and Classification of economic activities • Factors affecting location of economic activity • Primary activities agriculture, forestry, fishing mining • Secondary activities-Classification of manufacturing regions • Tertiary activities-Transport trade and service • Transnational sea routes, railways and highways with reference to India • International trade and economic blocks • WTO and BRICs-Evolution, structure and functions		SM SM SM KG SM KD KN KG	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture, drawing and ppt
Practical • Choropleth Mapping • Proportional divided circles • Time series analysis • Detour Index		SM KN KG KD	1 hr 1 hr 1 hr 1 hr	Lecture , drawing and handouts

			Total class hour	

Semester-4-2018-19

CC – 9

Regional Planning and Development

CC-9 ***Unit-I Regional Planning***		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• Regions-Concept, Types and delineation		SM	1 hr	Lecture, ppt
• Regional Planning, types, principles, objectives, tools and techniques		KG	1 hr	
• Regional planning and multi-level planning in India		KG	1 hr	
• Concept of metropolitan area and urban agglomeration		KD	1 hr	

Unit-II Regional Development • Concept of growth and development • Indicators of development • Human development • Theories and models of regional development: cumulative causation • Stages of development: Rostow, Growth Pole Model • Underdevelopment Concept and Causes • Regional Development in India-Disparity and Diversity • Need and measures of balanced development in India		KN KN SM SM KD SM KD KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture, PPt
Practical • Delineation of formal regions by weighted index method • Delineation of Functional regions by Breaking Point analysis • Measurement of inequality by Location Quotient • Measuring regional Disparity for Sopher Index		KG KD SM KN	1 hr 1 hr 1 hr 1 hr	Lecture and PPt

			•		
				Total class hour	

(Semester - 4)
CC-10
Soil and Biogeography

CC-10 ***Unit I Soil Geography***		***Teacher***	***Class hour/ Domain***	***Teaching Method***
• Factors of soil formation		SM	1 hr	Lecture, PPt
• Soil Properties-Texture, Structure, And moisture		SM	1 hr	
• Soil pH, Organic Matter, and NPK		SM	1 hr	
• Soil Profile and profile characteristics of laterite, podzol and Chernozem soil		KG	1 hr	
• Soil Erosion and degradation-factors, process and management		KG	1 hr	
• Principles of soil classification-USDA and Genetic		KD	1 hr	

Unit II Biogeography		•		

• Concepts of biosphere, biome, ecotone, community and ecology • Concept of trophic structure, food chain, food web and energy flow • Classification of World biomes • Bio geochemical Cycles • Deforestation • Biodiversity		• KG KN KN KD KD KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture, PPt
• **Practical** • Determination of soil reaction-pH and Salinity • Determination of soil type by ternary diagram • Plant diversity determination Matrix method • Time Series analysis of biogeography data		• SM KG KD KN	1 hr 1 hr 1 hr 1 hr	Lecture, PPt

Semester 4 SEC/ Rural development-2018-19

SEC-Rural development		***Teacher***	***Class hour/ Domain***	***Teaching Method***

• Rural development, concept, basic elements • Paradigms of rural development-Big Push Theory, Lewis Model • PMGSY, SJSY, MNREGA, Jan Dhan yojana • Rural Governance, Panchayati Raj System		SM	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture, PPt
		•		

Semester 6-2018-19

CC-13

SEM-6/CC-13 ***Unit-I Nature of Pre–Modern Geography***		***Teacher***	***Class hour***	***Teaching Method***
• Development of pre-modern Geography Contribution of Greek, Chinese and Indian Geographers • Impact of Dark age in Geography • Geography during the age of Discovery and Exploration • Transition from Cosmography to scientific Geography		SM KG KD SM	1 hr 1 hr 1 hr 1hr	Lecture and ppt, drawing

• **Unit-II Foundations of modern Geography** • Evolution of Geographical thought • Contributions of Humboldt and ritter • Contributions of Richthofen, Hartshorne, Ratzel and La Blache • Trends of Geography in the post-World War-II Quantitative revolution and system approach • Structuralism and materialism • Changing concept of Space • Evolution of critical Geography • Towards the post modernism Geography in the 21st century		KN KN SM SM kD SM KD KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing
Practical • Changing Perception of maps of the world • Mapping Voyages • Group presentation of 5 to 10 students		KD KN SM	1 hr 1 hr 1hr	lecture ppt and drawing

Semester 6 2018-19

CC-14

Hazard Management

-

SEM-6/CC-14 ***Unit-I concept***		***Teacher***	***Class hour***	***Teaching Method***
• Classification of hazard and disaster • Approaches to hazard study • Responses to hazards • Hazard mapping		KG SM KG KD	1 hr 1 hr 1 hr 1hr	Lecture and ppt, Drawing
• **Unit-II Hazard Specific Study** • Earthquake Factors, Vulnerability and management • Landslide factors, vulnerability and management • Flood factors, Vulnerability and management • Riverbank erosion, factors and management • Fire factors: Factors, vulnerability and management • Biohazard-Classification, Vulnerability and management • Tropical Cyclone Factors, Vulnerability and management		KN KD SM SM KD KG SM	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing
Practical A group project report is to be prepared and submitted based on any one case study Earthquake Landslide		KD and KN		lecture

Thunderstorm Flood Riverbank/ Coastal Erosion Fire Industrial Accident Road accident Structural Collapse Environmental Pollution Biohazard				
		Total class hour		

Semester- 6-2018-19

DSE-Environmental Studies

SEM-6/DSE-A6		***Teacher***	***Class hour***	***Teaching Method***

• Geographer's approach to environmental studies • Concept of holistic environment and system approach • Ecosystem and their relation with habitats: habitat loss in West Bengal • Wetland ecosystem with special reference to East Kolkata Wetlands • Wetland Ecosystem with special reference to East Kolkata Wetlands • Rural Environmental issues: Special reference to sanitation and public health • Urban environmental issues with special reference to waste management • Environmental impact assessment and environmental Management Planning • Overview of principal environment related regulations • Principles of watershed management • Principles of forest management		KN KN KG KG KG SM SM SM KD	1 hr 1 hr 1 hr 1hr 1hr 1hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing

		KN KG	1 hr 1 hr 1 hr	Lecture and ppt, drawing

Practical • Preparation of questionnaire for perception survey • Preparation of check list for environmental Impact assessment • Quality assessment of soil using field kit • Interpretation of changes in air quality using multi seasonal and multi-city CPCB data		SM SM KD KD	1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing

		Total class hour		

Semester- 6 2018-19

DSE-Fluvial Geomorphology

SEM-6/DSE-A5		***Teacher***	***Class hour***	***Teaching Method***

• Scope and Components of fluvial Geomorphology • Processes and significance of sediment entrainment • Models of channel Initiation • Linear, Areal and altitudinal properties • Fundamentals of Rosgen Stream Classification • Fluvial Morpho Dynamics • Large rivers of tropics • Fluvial Landforms • Riverbank Erosion and river degeneration • Human Intervention on fluvial Systems • Concept and Significance of Ecological Flow • Integrated watershed management		KD SM	1 hr for each class 1 hr for each class	Lecture and ppt, drawing Lecture and ppt, drawing
• **Practical** • Identification of drainage pattern from Topographical maps • Riverbank erosion -Quantification of eroded area and Vulnerability Zonation • Flood Frequency analysis		SM KD	1 hr 1 hr 1 hr	Lecture and ppt, drawing

• Analyses of pebbles		SM KD	1 hr	Lecture and ppt, drawing

		Total class hour		

Academic Session 2019-2020

Under CBCS System

Semester 1(July-December)

CC – 1

CC-1(Theory)	***Teacher***	***Class Hour***		***Teaching Method***
UNIT:-1-Geotectonic • Earth's tectonic and structural evolution • Earth's interior with special reference to seismology, isostacy, models of Airy, Pratt • Plate tectonics as unified theory of global tectonics • Folds and Faults	*KN* *KN* *KG* *SM*	1 hr 1 hr 1 hr		Lecture. Drawing and demonstration Lecture. Drawing and demonstration

UNIT- II= Geomorphology • Degradational Process Weathering, Mass wasting and landforms • Process of entrainment, transportation, and deposition by different geomorphic agents • Development of River network and landforms on uniclinal and folded structure • Development of river network, and landforms on granite, basalt and limestones • Coastal process and landforms • Glacial and Glaciofluvial Process • Aeolian and fluvio-aeolian process and landforms • Role of time in Geomorphology, Schumm and Litchy's Model, Views of Davis, Penck , King and Hack	KG KD SM KD SM KG KN SM & KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr		Lecture, PPT presentation Lecture. Drawing and demonstration Lecture. Drawing and demonstration Lecture. Drawing and demonstration
• **Practical -CC1** • Measurement of dip and strike using Clinometer • Identification of minerals and rock samples • Construction of hypsometric curves of a drainage basin • Extraction and interpretation of geomorphic information from survey of India 1:50 K topographical map	KD KN KG SM	1 hr 1 hr 1 hr 1 hr		Lecture. Drawing and demonstration Lecture. Drawing and demonstration

			Total class hour	

CC – 2/ Semester 1-2019-20
Cartographic Techniques

CC-2(Theory)	***Teacher***	***Class Hour***	***Teaching Method***	
• Maps, Components and Classification • Concept and Application of Scales • Coordinate Systems • Grids, angular and linear system • Bearing- Magnetic and true, whole circle and reduced • Concept of Geoid and spheroid • Representation of using dots sphere and proportional circles • Representation of data using isopleths, choropleths and chorochromatic maps • Survey of India Topographical Maps Reference Scheme of old and open series	KG KN SM KD KD SM SM SM	1 hr 1 hr 1 hr 1 hr 1hr 1 hr 1 hr 1 hr	Lecture, ppt, Drawing Lecture, ppt, Drawing	
CC2 Practical • Graphical Construction of Scales, Plain, Diagonal and Vernier	KN	1 hr	Lecture, ppt, Drawing	
• Construction of Projection: Polar Zenithal, Simple Conic	KD KN	1 hr 1	Lecture, ppt, Drawing	

with one standard Parallel, Bonne's , Cylindrical Equal area, Mercator's	KG	hr 1 hr		
• Thematic Maps: Proportional Squares, Pie Diagrams, Proportional Circles, Dots and Spheres	KN KD KG	1hr 1hr 1 hr	Lecture, ppt, Drawing	
• Choropleth, Isopleth, Chorochromatic maps	SM	1 hr	Lecture, ppt, Drawing	
		Total class hour		

(Semester 3)-2019-20
CC – 5
Climatology

CC-5(Theory) Climatology	***Teacher***	***Class Hour***		***Teaching Method***
• Nature and Composition and layering of Atmosphere • Insolation, Controlling Factors, Heat Budget	KN	1 hr 1 hr		Demonstration in class with diagrams and handouts
• Horizontal and vertical distribution of temperature, • Inversion of temperature	KD	1 hr 1 hr		Demonstration in class with diagrams and handouts
• Overview of Climatic Change, Greenhouse Effect, Formation, Depletion and Significance	SM	1 hr		Demonstration in class with diagrams and handouts

Unit-II Atmospheric Phenomena				

and Climatic Classification • Condensation, process and forms, forms of precipitation • Air Mass: Typology, origin and characteristics • Fronts: Warm and Cold , Frontogenesis and Frontolysis • Weather: Stability and Instability, barotropic and baroclinic conditions • Circulation in the atmosphere, planetary winds, jet streams • Atmospheric Disturbances-Cyclones and thunderstorms • Monsoon Circulation and mechanism in India • Climatic Classification-Thornthwaite and Oliver	KN KD KG KD KG SM SM KD SM+ KD	1 hr 1hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	4	Demonstration in class with diagrams and handouts
Practical • Measurement and weather elements using analogue instruments • Interpretation of weather map • Construction of Hythergraph and Climograph • Construction of Wind Rose	SM KD & KG KN	1 hr 1 hr 1 hr		Demonstration in class with diagrams and handouts

			Total class hour	

CC – 6 (Semester 3)-2019-20
Hydrology and Oceanography

CC-6- ***Unit-I Hydrology***		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• System approach in hydrology, Global Hydrological cycle • Run-Off, Controlling Factors • Drainage basin, principles of water harvesting and watershed management • Groundwater occurrence and storage		KN KN KD KD	1 hr 1 hr 1 hr 1 hr	Lecture, drawing and ppt
Unit-II Oceanography • Major relief features of the ocean floor • Physical and chemical properties • Water mass, T-S diagram • Air sea interactions, ocean circulation,		KG KG KD	1 hr 1 hr 1 hr 1 hr	lecture and drawing

wave and tide • Ocean temperature and Salinity • Coral reefs-formation and classification • Marine resources • Sea level change, types and causes		KG SM SM SM KD	1 hr 1 hr 1 hr 1 hr	
Practical • Construction and Interpretation of rating curves • Construction and Interpretation of Hydrographs • Construction and interpretation of rainfall dispersion diagram, Climatic water budget, and Ergograph • Construction of Theisson Polygon		KN KG KN & SM KD	1 hr 1 hr 1 hr 1 hr	
		Total class hour		

CC – 7 (Semester 3)
Statistical Methods in Geography

CC-7 ***Unit* -I Frequency distribution and Sampling**		***Teacher***	***Class hour***	***Teaching Method***
• Importance and Significance in Geography • Discrete and continuous data, Scales of measurement • Sources of geographical data for statistical analysis • Collection of data and preparation of statistical tables		KL SM	1 hr 1hr 1 hr	Lecture, Drawing and PPt

• Sampling-need types and significance • Theoritical distribution: frequency, cumulative frequency and probability		SM	1 hr	
Unit-II-Numerical data Analysis • Central Tendency-Mean, Median Mode and Partition Values • Measures of dispersion, range, mean deviation, standard deviation and coefficient of variation • Association and correlation-Product moment Correlation and rank correlation • Regression, Linear and non-linear • Time series analysis • Hypothesis testing		SM SM KL KL KL	1 hr 1 hr 1 hr 1 hr 1 hr	Lecture, Drawing and PPt
CC7-practical • Construction of data matrix with each row representing an areal unit • Based on above data a frequency table, measures of central tendency and dispersion would be computed • From the data matrix a sample set would be drawn using random, stratified and systematic sampling • Scatter diagram, linear regression would be plotted based on the data set		SM SM SM KL	1 hr 1 hr 1 hr 1 hr	Lecture, Drawing and PPt
		Total class hour		

Semester – 3 Honours-2019-20

SEC – A3-01- Theory

Coastal Management

SEC-A3		***Teacher***	***Class hour***	***Teaching Method***
• Components of coastal Zones-Coastal morpho dynamic variables		KD	1 hr	Lecture, PPt
• Environmental impacts and management of mining, oil exploration, salt manufacturing, land reclamation and tourism		KD	1 hr	Lecture, PPt
• Coastal hazards and their management		KD	1 hr	Lecture, PPt
• Principles of Coastal Zone Management Exclusive Economic Zone and Coastal Regulation Zones		KD	1 hr	Lecture, PPt
		Total class hour		

Semester 5 -2019-20

CC-11

CC-11 Research Methodology		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• Research In Geography • literature Review • Defining research problem • Research materials and methods • Techniques of writing reports • Plagiarism		KD KD KN KN	1 hr 1 hr 1 hr 1 hr	Lecture, PPt
• Fieldwork in Geographical Studies • Field techniques and tools • Positioning and collection of samples • Post field tabulation • Fieldwork-Logistic and handling of emergencies		SM KN KG KD SM		Lecture, PPt

Practical Field report and Lab bk		KN KD KG SM	1 hr 1 hr 1 hr 1 hr	Lecture, PPt
		Total class hour		

Semester-5/CC-12

2019-20

Remote Sensing And GIS

CC-12		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• Principles of remote sensing • Sensor resolutions and their applications • Image referencing scheme • Preparation of false colour composite • Principles of image interpretation • Acquisition and utilisation of free Digital elevation		KD KD KN KN	1 hr 1 hr 1 hr 1 hr	Lecture, PPt

• GIS data structure type • Principles of preparing attribute tables • Principle of buffer preparation • Principles of overlay analysis • GNSS • Transferring GNSS to GIS		SM KN KG KD SM		Lecture, PPt

Practical • Image georeferencing and enhancement • Supervised image classification • Digitisation of features • Waypoint collection from GNSS		KD	1 hr 1 hr 1 hr 1 hr	Lecture, PPt

Academic Session 2019-2020

CBCS System

Semester 2(January-June)
CC – 3
Human Geography

CC-3 Unit I Nature and Principles		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• Nature and Scope and recent trends of human Geography • Approaches in Human Geography, resource and locational landscape • Concept and classification of race • Space, society and culture		KD KD KN KN	1 hr 1 hr 1 hr 1 hr	Lecture, PPt

• **Unit-II-Society, Demography and Ekistics** • Evolution of human Societies, hunting and food gathering pastoral nomads • Human adaptation to environment • Population growth and distribution • Population Resource Region • Development-environment conflict		SM KN KG		Lecture, PPt

• Types and patterns of rural settlement • Rural house types • Morphology and hierarchy of urban settlement		KD SM SM KG		
Practical • Spatial Variation in Continent or country level religious composition by divided proportional circles • Measuring arithmetic growth rate • Types of age-sex pyramid • Nearest neighbour analysis		KN KD KG SM	1 hr 1 hr 1 hr 1 hr	Lecture, PPt
		Total class hour		

(Semester 2)
CC-4
Thematic Mapping and Surveying

CC-4		***Teacher***	***Class hour***	***Teaching Method***
• Concept of Rounding,		KD	1 hr	

Logarithm, and anti logarithm • Concept of diagrammatic representation of data • Preparation and Interpretation of Geological maps • Preparation of weather maps • Preparation of land use and land cover maps		KD SM SM SM	1 hr 1 hr 1 hr 1hr	
• Preparation and Interpretation of Socio economic maps • Principal National Agencies producing thematic maps in India • Basic Concepts of Surveying: Prismatic Compass • Theodolite • Abney Level • Laser Distance Measurer		KN KD KG KD KD KD	1 hr 1 hr 1 hr 1hr 1hr 1hr	
Practical • Traverse Surveying • Profile Survey using Dumpy Level • Height determination by Theodolite • Interpretation of geological maps		KG KN KD SM	Ihr 1 hr 1 hr 1 hr	

Total class hour		

CC-8 (Semester 4)

Economic Geography

CC-8-Unit I Concepts		***Teacher***	***Class Hour/***	***Teaching***
			Domain	***Method***
• Meaning and Approaches to Economic Geography • Concepts in Economic Geography • Concept of economic man • Economic distance and transport costs		KN KD KD KD	1 hr 1 hr 1 her 1 hr	Lecture, ppt
Unit II- Economic Activities • Concept and Classification of economic activities • Factors affecting location of economic activity • Primary Activities agriculture, forestry, fishing mining • Secondary activities-Classification of manufacturing regions • Tertiary activities-Transport trade and service • Transnational sea routes, railways and highways with reference to India • International trade and economic blocks • WTO and BRICs-Evolution, structure and functions		SM SM SM KG SM KD KN KG	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture, drawing and ppt

Practical • Choropleth Mapping • Proportional divided circles • Time series analysis • Detour Index		SM KN KG KD	1 hr 1 hr 1 hr 1 hr	Lecture drawing and handouts
Total class hour				

(Semester 4)
CC – 9
Regional Planning and Development

CC-9 ***Unit-I Regional Planning***		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• Regions-Concept, Types and delineation • Regional Planning, types, principles, objectives, tools and techniques • Regional planning and multi-level planning in India • Concept of metropolitan area and urban agglomeration		SM KG KG KD	1 hr 1 hr 1 hr 1 hr	Lecture, ppt

Unit-II Regional Development • Concept of growth and development • Indicators of development • Human development • Theories and models of regional development: cumulative causation • Stages of development: Rostow, Growth Pole		KN KN SM SM KD SM KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture, PPt

Model • Underdevelopment Concept and Causes • Regional Development in India-Disparity and Diversity • Need and measures of balanced development in India		KD	1 hr		

Practical • Delineation of formal regions by weighted index method • Delineation of Functional regions by Breaking Point analysis • Measurement of inequality by Location Quotient • Measuring regional Disparity for Sopher Index		KG KD SM KN	1 hr 1 hr 1 hr 1 hr	Lecture and PPt	
		•			
			Total class hour		

(Semester - 4)
CC-10
Soil and Biogeography

CC-10 ***Unit I Soil Geography***		***Teacher***	***Class hour/ Domain***	***Teaching Method***
• Factors of soil formation • Soil Properties-Texture, Structure, And moisture		SM SM	1 hr 1 hr	Lecture, PPt

• Soil pH, Organic Matter, and NPK • Soil Profile and profile characteristics of laterite, podzol and Chernozem soil • Soil Erosion and degradation-factors, process and management • Principles of soil classification-USDA and Genetic		SM KG KG KD	1 hr 1 hr 1 hr 1 hr	

Unit II Biogeography		•		
• Concepts of biosphere, biome, ecotone, community and ecology • Concept of trophic structure, food chain, food web and energy flow • Classification of World biomes • Bio geochemical Cycles • Deforestation • Biodiversity		• KG KN KN KD KD KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture, PPt
• **Practical** • Determination of soil reaction-pH and Salinity • Determination of soil type by ternary diagram • Plant diversity determination Matrix method • Time Series analysis of biogeography data		• SM KG KD KN	1 hr 1 hr 1 hr 1 hr	Lecture, PPt

Total class hour	

Semester – 4-Honours

SEC – B1

Rural Development

SEC – B1		***Teacher***	***Class hour***	***Teaching Method***
• Rural development, concept and basic elements • Paradigms of rural development-Gandhian approach to rural development-Lewis model, big push theory, Myrdal's Model		SM	1 hr	Lecture PPt
• Area based approach to rural development, Drought prone area programme, PMGSY, SJSY, MNREGA, Jan Dhan Yojana		SM	1 hr	Lecture , PPt
• Rural Governance: Panchayati Raj System and Rural development, Policies and Programmes		SM	1 hr	Lecture and ppt
			Total class hour	

Semester 6 -2019-20

CC-13

SEM-6/CC-13 ***Unit-I Nature of Pre Modern Geography***		***Teacher***	***Class hour***	***Teaching Method***
• Development of pre-modern Geography Contribution of Greek, Chinese and Indian Geographers		SM	1 hr 1 hr	Lecture and ppt, drawing

• Impact of Dark age in Geography • Geography during the age of Discovery and Exploration • Transition from Cosmography to scientific Geography		KG KD SM	1 hr 1hr	

• **Unit-II Foundations of modern Geography** • Evolution of Geographical thought • Contributions of Humboldt and ritter • Contributions of Richthofen, Hartshorne, Ratzel and La Blache • Trends of Geography in the post-World War-II Quantitative revolution and system approach • Structuralism and materialism • Changing concept of Space • Evolution of critical Geography • Towards the post modernism Geography in the 21st century		KN KN SM SM kD SM KD KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing
Practical • Changing Perception of maps of the world • Mapping Voyages • Group presentation of 5 to 10 students		KD KN SM	1 hr 1 hr 1hr	lecture ppt and drawing
		Total class hour		

Semester-6 -2019-20

CC-14

Hazard Management

-

SEM-6/CC-14 ***Unit-I concept***		***Teacher***	***Class hour***	***Teaching Method***
• Classification of hazard and disaster • Approaches to hazard study • Responses to hazards • Hazard mapping		KG SM KG KD	1 hr 1 hr 1 hr 1hr	Lecture and ppt, Drawing
• **Unit-II Hazard Specific Study** • Earthquake Factors, Vulnerability and management • Landslide factors, vulnerability and management • Flood factors, Vulnerability and management • Riverbank erosion, factors and management • Fire factors: Factors, vulnerability and management		KN KD SM SM	1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing

• Biohazard-Classification, Vulnerability and management • Tropical Cyclone Factors, Vulnerability and management		KD KG SM	1 hr 1 hr 1 hr	

Practical A group project report is to be prepared and submitted based on any one case study Earthquake Landslide Thunderstorm Flood Riverbank/ Coastal Erosion Fire Industrial Accident Road accident Structural Collapse Environmental Pollution Biohazard		KD and KN		lecture
		Total class hour		

Semester 6-2019-20

DSE-Fluvial Geomorphology

SEM-6/DSE-A5		***Teacher***	***Class hour***	***Teaching Method***

• Scope and Components of fluvial Geomorphology • Processes and significance of sediment entrainment • Models of channel Initiation • Linear, Areal and altitudinal properties • Fundamentals of Rosgen Stream Classification • Fluvial morpho dynamics • Large rivers of tropics • Fluvial Landforms • Riverbank Erosion and river degeneration • Human Intervention on fluvial Systems • Concept and Significance of Ecological Flow • Integrated watershed management		KD SM	1 hr for each class 1 hr For each class	Lecture and ppt, drawing Lecture and ppt, drawing
• **Practical** • Identification of drainage pattern from Topographical maps • Riverbank erosion -Quantification of eroded area and Vulnerability Zonation • Flood Frequency analysis • Analyses of pebbles		SM KD SM KD	1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing

Total class hour	

Semester- 6-2019-20

DSE-Environmental Studies

SEM-6/DSE-A6		***Teacher***	***Class hour***	***Teaching Method***
• Geographer's approach to environmental studies • Concept of holistic environment and system approach • Ecosystem and their relation with habitats: habitat loss in West Bengal • Wetland ecosystem with special reference to East Kolkata Wetlands • Wetland Eco system with special reference to East Kolkata Wetlands • Rural Environmental issues: Special reference to sanitation and public health • Urban environmental issues with special reference to waste management • Environmental impact assessment and environmental Management Planning • Overview of principal environment related regulations • Principles of watershed management • Principles of forest management		KN KN KG KG KG SM SM SM KD KN KG	1 hr 1 hr 1 hr 1hr 1hr 1hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing Lecture and ppt, drawing

Practical • Preparation of questionnaire for perception survey • Preparation of check list for environmental Impact assessment • Quality assessment of soil using field kit • Interpretation of changes in air quality using multi seasonal and multi-city CPCB data		SM SM KD KD	1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing
		Total class hour		

Academic Session 2020-2021 (Geography Honours)

CBCS System

Semester 2(January-June)
CC-3 Human Geography

SEM-2 /CC-3		***Teacher***	***Class hour***	***Teaching Method***
• Nature and Scope and recent trends of human Geography • Approaches in Human Geography, resource and locational landscape • Concept and classification of race • Space, society and culture		KD KD KN KN	1 hr 1 hr 1 hr 1 hr	Lecture, ppt. demonstration, drawing
• **Unit-II-Society, Demography and Ekistics** • Evolution of human Societies, hunting and food gathering, pastoral nomads • Human adaptation to environment • Population growth and distribution • Population Resource Region • Development-environment conflict • Types and patterns of rural settlement • Rural house types • Morphology and hierarchy of urban settlement		SM KN KG SM SM KG	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing
Practical • Spatial Variation in Continent or country level religious composition by divided proportional circles • Measuring arithmetic growth rate • Types of age-sex pyramid • Nearest neighbour analysis		KD KN KG SM	1hr 1hr 1 hr 1 hr	Lecture and ppt, Drawing
		Total class hour		

Semester 2(January-June)
CC-4 Thematic Mapping and Surveying

SEM-2 /CC-4		***Teacher***	***Class hour***	***Teaching Method***
• Concept of Rounding, Logarithm, and anti logarithm • Concept of diagrammatic representation of data • Preparation and Interpretation of Geological maps • Preparation of weather maps • Preparation of land use and land cover maps		KD KD SM SM SM	1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing
• Preparation and Interpretation of Socio economic maps • Principal National Agencies producing thematic maps in India • Basic Concepts of Surveying: Prismatic Compass • Theodolite • Abney Level • Laser Distance Measurer		KN KG KG KD KD KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing
Practical • Traverse Surveying • Profile Survey using Dumpy Level • Height determination by Theodolite • Interpretation of geological maps		KG KN KD SM		Lecture and ppt, drawing
		Total class hour		

Semester 4(January-June)-2020-2021
CC-8-Economic geography

SEM-4/CC-8		***Teacher***	***Class***	***Teaching***

Unit-I Concepts			***hour***	***Method***
• Meaning and Approaches to Economic Geography • Concepts in Economic Geography • Concept of economic man • Economic distance and transport costs		KN KD KD KD	1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing
Unit II- Economic Activities • Concept and Classification of economic activities • Factors affecting location of economic activity • Primary Activities agriculture, forestry, fishing mining • Secondary activities-Classification of manufacturing regions • Tertiary activities-Transport trade and service • Transnational sea routes, railways and highways with reference to India • International trade and economic blocks • WTO and BRICs-Evolution, structure and functions		SM SM SM KG SM KD KD KG	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing
Practical • Choropleth Mapping • Proportional divided circles • Time series analysis • Detour Index		SM KN KG KD		Lecture and ppt, Drawing

		Total class hour		

Semester 4(January-June)
CC-9 Regional Planning

SEM-4/CC-9 ***Unit-I Regional Planning***		***Teacher***	***Class hour***	***Teaching Method***
• Regions-Concept, Types and delineation • Regional Planning, types, principles, objectives, tools and techniques • Regional planning and multi-level planning in India • Concept of metropolitan area and urban agglomeration		SM KG KG KD	1 hr 1 hr 1 hr 1 hr	Lecture and ppt, Drawing
Unit-II Regional Development • Concept of growth and development • Indicators of development • Human development • Theories and models of regional development: cumulative causation • Stages of development: Rostow, Growth Pole Model • Underdevelopment-Concept and Causes • Regional Development in India Disparity and Diversity • Need and measures of balanced development in India		KN KN SM SM kD SM KD KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing

Practical • Delineation of formal regions by weighted index method • Delineation of Functional regions by Breaking Point analysis • Measurement of inequality by Location Quotient • Measuring regional Disparity for Sopher Index		KN KD SM KD	1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing
		Total class hour		

Semester 4(January-June)
CC-10 Soil and Biogeography

-

SEM-4/CC-10 ***Unit-I Soil Geography***		***Teacher***	***Class hour***	***Teaching Method***
• Factors of soil formation • Soil Properties-Texture, Structure and moisture • Significance of soil properties-pH, organic matter and NPK • Soil Profile and profile characteristics of laterite, podzol and Chernozem soil • Soil Erosion and degradation-factors,		SM KG KG KD	1 hr 1 hr 1 hr 1hr	Lecture and ppt, Drawing

process and management • Principles of soil classification-USDA and Genetic				
• **Unit-II Bio Geography** • Concepts of biosphere, biome, ecotone, community and ecology • Concept of trophic structure, food chain, food web and energy flow • Classification of World biomes • Bio geochemical Cycles • Deforestation • Biodiversity		KN KN SM SM kD SM KD KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing
• **Practical** • Determination of soil reaction-pH and Salinity • Determination of soil type by ternary diagram • Plant diversity determination Matrix method • Time Series analysis of biogeography data		SM KN KD KD	1 hr 1 hr 1hr 1hr	Lecture and ppt, Drawing

Total class hour	

Semester-6-2020-2021

CC-13-Evolution of Geographical Thought

-

SEM-6/CC-13 ***Unit-I Nature of pre–Modern Geography***		***Teacher***	***Class hour***	***Teaching Method***
• Development of pre-modern Geography Contribution of Greek, Chinese and Indian Geographers • Impact of Dark age in Geography • Geography during the age of Discovery and Exploration • Transition from Cosmography to scientific Geography		SM KG KD SM	1 hr 1 hr 1 hr 1hr	Lecture and ppt, Drawing
• **Unit-II Foundations of modern Geography** • Evolution of Geographical thought • Contributions of Humboldt and ritter • Contributions of Richthofen, Hartshorne, Ratzel and La Blache • Trends of Geography in the post-World War-II Quantitative revolution and system approach • Structuralism and materialism • Changing concept of Space		KN KN SM SM kD SM KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing

• Evolution of critical Geography • Towards the post modernism Geography in the 21st century		KD	1 hr 1 hr	
Practical • Changing Perception of maps of the world • Mapping Voyages • Group presentation of 5 to 10 students		KD KN SM	1 hr 1 hr 1hr	lecture ppt and drawing
		Total class hour		

Semester 6/CC-14-2020-21

Hazard Management

Semester-6-2020-2021

CC-14

-

SEM-6/CC-14 ***Unit-I concept***		***Teacher***	***Class hour***	***Teaching Method***
• Classification of hazard and disaster • Approaches to hazard study • Responses to hazards • Hazard mapping		KG SM KG	1 hr 1 hr 1 hr	Lecture and ppt, Drawing

		KD	1hr	
• **Unit-II Hazard Specific Study** • Earthquake Factors, Vulnerability and management • Landslide factors, vulnerability and management • Flood factors, Vulnerability and management • Riverbank erosion, factors and management • Fire factors: Factors, vulnerability and management • Biohazard-Classification, Vulnerability and management • Tropical Cyclone Factors, Vulnerability and management		KN KD SM SM KD KG SM	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing
Practical A group project report is to be prepared and submitted based on any one case study Earthquake Landslide Thunderstorm Flood Riverbank/ Coastal Erosion Fire Industrial Accident Road accident		KD and KN		lecture

Structural Collapse				

Environmental Pollution Biohazard				
			Total class hour	

Semester 6 DSE-A5-2020-21

Fluvial Geomorphology

SEM-6/DSE-A5		***Teacher***	***Class hour***	***Teaching Method***
• Scope and Components of fluvial Geomorphology • Processes and significance of sediment entrainment • Models of channel Initiation • Linear, Areal and altitudinal properties • Fundamentals of Rosgen Stream Classification • Fluvial morpho dynamics • Large rivers of tropics • Fluvial Landforms		KD	1 hr for each class	Lecture and ppt, drawing
• Riverbank Erosion and river degeneration • Human Intervention on fluvial Systems • Concept and Significance of Ecological Flow • Integrated watershed management		SM	1 hr For each class	Lecture and ppt, drawing

• **Practical** • Identification of drainage pattern from Topographical maps • Riverbank erosion -Quantification of		SM	1 hr	Lecture and ppt, drawing
eroded area and Vulnerability Zonation • Flood Frequency analysis • Analyses of pebbles		KD SM KD	1 hr 1 hr 1 hr	Lecture and ppt, drawing
		Total class hour		

Semester 6 Honours- DSE-A6

Environmental Issues in Geography-2020-21

-

SEM-6/DSE-A6		***Teacher***	***Class hour***	***Teaching Method***

• Geographer's approach to environmental studies • Concept of holistic environment and system approach • Ecosystem and their relation with habitats: habitat loss in West Bengal • Wetland ecosystem with special reference to East Kolkata Wetlands • Wetland Ecosystem with special reference to East Kolkata Wetlands • Rural Environmental issues: Special reference to sanitation and public health • Urban environmental issues with special reference to waste management • Environmental impact assessment and		KN KN KG KG KG SM SM	1 hr 1 hr 1 hr 1hr 1hr 1hr	Lecture and ppt, drawing Lecture and ppt,

environmental Management Planning • Overview of principal environment related regulations • Principles of watershed management • Principles of forest management		SM KD KN KG	1 hr 1 hr 1 hr 1 hr	drawing Lecture and ppt, drawing

Practical • Preparation of questionnaire for perception survey • Preparation of check list for environmental Impact assessment • Quality assessment of soil using field kit • Interpretation of changes in air quality using multi seasonal and multi-city CPCB data		SM SM KD KD	1 hr 1 hr 1 hr 1 hr	Lecture and ppt, drawing Lecture and ppt, drawing

		Total class hour		

Academic Session-2021-22-July to December

Under CBCS System

Semester 1(July-December)

CC – 1

CC-1(Theory)	***Teacher***	***Class Hour***		***Teaching Method***

UNIT:-1-Geotectonic • Earth's tectonic and structural evolution • Earth's interior with special reference to seismology, isostacy, models of Airy, Pratt • Plate tectonics as unified theory of global tectonics • Folds and Faults	*KN* *KN* *KG* *SM*	1 hr 1 hr 1 hr		Lecture. Drawing and demonstration Lecture. Drawing and demonstration
UNIT- II= Geomorphology • Degradational Process Weathering, Mass wasting and landforms • Process of entrainment, transportation, and deposition by different geomorphic agents • Development of River network and landforms on uniclinal and folded structure • Development of river network, and landforms on granite, basalt and limestones	KG KD SM KD SM	1 hr 1 hr 1 hr 1 hr		Lecture, PPT presentation Lecture. Drawing and demonstration Lecture. Drawing and demonstration

• Coastal process and landforms • Glacial and Glacio-fluvial Process • Aeolian and fluvio-aeolian process and landforms • Role of time in Geomorphology, Schumm and Litchy's Model, Views of Davis, Penck, King and Hack	KG KN SM & KD	1 hr 1 hr 1 hr 1 hr		Lecture. Drawing and demonstration
• **Practical -CC1** • Measurement of dip and strike using Clinometer • Identification of minerals and rock samples • Construction of hypsometric curves of a drainage basin • Extraction and interpretation of geomorphic information from survey of India 1:50 K topographical map	KD KN KG SM	1 hr 1 hr 1 hr 1 hr		Lecture. Drawing and demonstration Lecture. Drawing and demonstration
		Total class hour		

CC – 2/ Semester 1-2021-22
Cartographic Techniques

CC-2(Theory)	***Teacher***	***Class Hour***	***Teaching Method***	
• Maps, Components and Classification • Concept and	KG KN	1 hr	Lecture, ppt, Drawing	

Application of Scales • Coordinate Systems • Grids, angular and linear system • Bearing- Magnetic and true, whole circle and reduced • Concept of Geoid and spheroid • Representation of using dots sphere and proportional circles • Representation of data using isopleths, choropleths and chorochromatic maps • Survey of India Topographical Maps Reference Scheme of old and open series	SM KD KD SM SM SM	1 hr 1 hr 1 hr 1hr 1 hr 1 hr 1 hr	Lecture, ppt, Drawing	
CC2 Practical • Graphical Construction of Scales, Plain, Diagonal and Vernier	KN	1 hr	Lecture, ppt, Drawing	Lecture, ppt, Drawing
• Construction of Projection: Polar Zenithal, Simple Conic with one standard Parallel, Bonne's , Cylindrical Equal area, Mercator's	KD KN KG	1 hr 1 hr 1 hr	Lecture, ppt, Drawing	
• Thematic Maps: Proportional Squares, Pie Diagrams, Proportional Circles, Dots and Spheres	KN KD KG	1hr i hr 1 hr	Lecture, ppt, Drawing	and handouts
• Choropleth, Isopleth, Chorochromatic maps	SM	1 hr	Lecture, ppt, Drawing	and handouts

Total class hour			

Semester-3 hons.(July to December)-2021-2022

CC – 5

Climatology

CC-5(Theory) Climatology	***Teacher***	***Class Hour***		***Teaching Method***
• Nature and Composition and layering of Atmosphere • Insolation, Controlling Factors, Heat Budget	KN	1 hr 1 hr		Demonstration in class with diagrams and handouts
• Horizontal and vertical distribution of temperature, • Inversion of temperature	KD	1 hr 1 hr		Demonstration in class with diagrams and handouts
• Overview of Climatic Change, Greenhouse Effect, Formation, Depletion and Significance	SM	1 hr		Demonstration in class with diagrams and handouts

Unit-II Atmospheric Phenomena and Climatic Classification • Condensation, process and forms, forms of precipitation • Air Mass: Typology, origin and characteristics • Fronts: Warm and Cold , Frontogenesis and Frontolysis • Weather: Stability and Instability, barotropic and baroclinic conditions • Circulation in the atmosphere, planetary winds, jet streams • Atmospheric Disturbances-Cyclones and thunderstorms	KN KD KG KD KG SM	1 hr 1hr 1 hr 1 hr 1 hr 1 hr		Demonstration in class with diagrams and handouts

• Monsoon Circulation and mechanism in India • Climatic Classification-Thornthwaite and Oliver **Practical** • Measurement and weather elements using analogue instruments • Interpretation of weather map • Construction of Hythergraph and Climograph • Construction of Wind Rose	SM KD SM+ KD SM KD & KG KN	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	4	Demonstration in class with diagrams and handouts
		Total class hour		

CC – 6 (Semester 3)
Hydrology and Oceanography

CC-6- ***Unit-I Hydrology***		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• System approach in hydrology, Global Hydrological cycle • Run-Off, Controlling Factors • Drainage basin, principles of water harvesting and watershed management • Groundwater occurrence and storage		KN KN KD KD	1 hr 1 hr 1 hr 1 hr	Lecture, drawing and ppt
Unit-II Oceanography • Major relief features of the ocean floor • Physical and chemical properties • Water mass, T-S diagram • Air sea interactions, ocean circulation, wave and tide • Ocean temperature and Salinity • Coral reefs-formation and classification • Marine resources • Sea level change, types and causes		KG KG KD KG SM SM SM KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	lecture and drawing

Semester-3
2021-22
SEC – A3-01- Theory
Coastal Management

SEC-A3		***Teacher***	***Class hour***	***Teaching Method***
• Components of coastal Zones-Coastal morpho dynamic variables		KD	1 hr	Lecture, PPt

• Environmental impacts and management of mining, oil exploration, salt manufacturing, land reclamation and tourism		KD	1 hr	Lecture, PPt
• Coastal hazards and their management		KD	1 hr	Lecture, PPt
• Principles of Coastal Zone Management Exclusive Economic Zone and Coastal Regulation Zones		KD	1 hr	Lecture, PPt
		Total class hour		

Semester-5 hons(July to December)

2021-22

CC-11

CC-11 Research Methodology		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• Research In Geography • literature Review • Defining research problem • Research materials and methods • Techniques of writing reports • Plagiarism		KD KD KN KN	1 hr 1 hr 1 hr 1 hr	Lecture, PPt
• Fieldwork in Geographical Studies • Field techniques and tools • Positioning and collection of samples • Post field tabulation • Fieldwork-Logistic and handling of emergencies		SM KN KG KD SM		Lecture, PPt

Practical Field report and Lab bk		KN KD KG SM	1 hr 1 hr 1 hr 1 hr	Lecture, PPt
		Total class hour		

Sem-5/CC-12-2021-22

Remote Sensing And GIS

CC-12		***Teacher***	***Class Hour/ Domain***	***Teaching Method***
• Principles of remote sensing • Sensor resolutions and their applications • Image referencing scheme • Preparation of false colour composite • Principles of image interpretation • Acquisition and utilisation of free Digital elevation		KD KD KN KN	1 hr 1 hr 1 hr 1 hr	Lecture, PPt
• GIS data structure type • Principles of preparing attribute tables • Principle of buffer preparation • Principles of overlay analysis • GNSS • Transferring GNSS to GIS		SM KN KG KD SM		Lecture, PPt
Practical				Lecture, PPt

• Image georeferencing and enhancement • Supervised image classification • Digitisation of features • Waypoint collection from GNSS		KD	1 hr 1 hr 1 hr 1 hr	

TEACHING PLAN (Geography General)

Academic Session 2018-2019

Under CBCS System

Semester 1(July-December)

CC/GE – 1

Physical Geography

CC/GE-1 ***Unit I-Geotectonics***		***Teacher***	***Class hour***	***Teaching Method***
• Earth's interior with special reference to seismology • Plate tectonics • Folds and faults		KN KG SM	1 hr 1 hr 1 hr	Lecture, PPt
Unit-II Geomorphology • Degradational process-Weathering, Mass Wasting and Resultant Landforms • Principal geomorphic agents classification, and evolution of fluvial, coastal, aeolian and glacial landforms • Basic models of slope evolution, decline, replacement and retreat		KG SM KD	1 hr 1 hr 1 hr	Lecture, PPt

• **Unit-III Hydrology** • Global Hydrological Cycle • Run Off: Controlling Factors, Concept of Ecological Flow		KN	1 hr 1 hr	Lecture, PPt

• Drainage basin as hydrological Unit		KD	1 hr	
Unit IV- Oceanography • Physical and Chemical Properties of Ocean Water: Distribution and Determination of temperature and Salinity • Ocean Circulation • Marine Resources • **Practical** • Identification of Rocks and minerals • Extraction of physiographic information from Survey of India topographical map • Extraction of drainage information from Survey of India Topographical Map		KD KN SM KN SM KG+KD	1 hr 1 hr 1 hr 1 hr 1 hr 1 hr	Lecture, PPt

				Lecture, PPt
			Total class hour	

Semester -3-2018-19
GE-3

CC/GE-3 ***Unit-I- Economic Geography***		***Teacher***	***Class hour***	***Teaching Method***
• Sectors of Economy • Location of economic activities: Theories of Von Thunen, Losch, Weber • Location of industries: Cotton, Iron and Steel • Globalisation and integration of world economies		• SM SM KG KD	1 hr 1 hr 1 hr 1 hr	Lecture, PPt