SHAHID MATANGINI HAZRA GOVERNMENT GENERAL DEGREE COLLEGE FOR WOMEN



LESSON PLAN FOR THE ACADEMIC SESSION 2022–23

DEPARTMENT: GEOGRAPHY

LESSON PLAN FOR THE ACADEMIC SESSION 2022–23

DEPARTMENT: GEOGRAPHY

SEMESTER: SECOND

B.Sc. HONOURS

Teacher	Course Title	Units	Contents	Commence ment Date	Classes required	Total Classes
Dr. Ina Dhar Roy Dasgupta	СЗТ	UNIT-I Human Geography:	Nature and scope and recent trends. Elements of Human Geography	17 Apr 2023	02	09
		Nature and Principles	2. Approaches to the study of Human Geography; Resource, Locational, Landscape, Environmental		03	
			3. Evolution of humans. Concept of race and ethnicity		02	
			4. Space, society and cultural regions (language and religion)		02	
Dr. Ina Dhar Roy Dasgupta	СЗТ	UNIT –II Society, Demography and Ekistics	1. Evolution of human societies: Hunting and food gathering, pastoral nomadism, subsistence farming, industrial and urban societies	17 Apr 2023	06	12
			2. Human adaptation to environment: Eskimo, Masai, Jarwa, Gaddi, Santhals		06	
Nabendu Sekhar Kar	СЗТ	UNIT –II Society, Demography and Ekistics	3. Population growth and distribution, population composition; demographic transition model	17 Apr 2023	04	12
			4. Population–Resource regions (Ackerman)		01	
			5. Human population and environment with special reference to development—environment conflict		01	
			6. Social morphology and rural house types in India		02	
			7. Types and patterns of rural settlements		02	
			8. Types and patterns of urban settlements		02	
Dr. Ina Dhar Roy Dasgupta	C4T	Cartograms and Thematic Mapping	Concepts of rounding, scientific notation, logarithm and anti-logarithm, natural and log scales	17 Apr 2023	02	10
			2. Diagrammatic representation of data: Line, Bar, and Circle		03	
			3. Representation of point data: Isopleths		02	

			4. Representation of area data: Dots, proportional circles and choropleth		03	
Nabendu Sekhar Kar	C4T	Cartograms and Thematic Mapping	5. Preparation and interpretation of large scale thematic maps: Geomorphological maps	17 Apr 2023	02	10
			6. Preparation and interpretation of large scale thematic maps: Climatological maps		03	
			7. Preparation and interpretation of large scale thematic maps: Landuse landcover maps		02	
			8. Preparation and interpretation of large scale thematic maps: Socio-economic maps		03	
Nabendu Sekhar Kar	C4P	Cartography Lab	Traverse survey using Prismatic Compass	17 Apr 2023	05	10
			2. Levelling by Dumpy Level and Prismatic Compass		05	
Dr. Ina Dhar Roy Dasgupta	C4P	Cartography Lab	3. Thematic maps: Proportional squares, pie diagrams with proportional circles, dots and spheres	17 Apr 2023	05	10
			4. Thematic maps: choropleth, isoline map, chorochromatic map		05	

LESSON PLAN FOR THE ACADEMIC SESSION 2022–23

DEPARTMENT: GEOGRAPHY

SEMESTER: FOURTH
B.Sc. HONOURS

Teacher	Course Title	Units	Contents	Commence ment Date	Classes required	Total Classes
Nabendu Sekhar Kar	С8Т	UNIT-I Regional	1. Concept of regions: Types of regions and their delineation	11 Mar 2023	03	10
		Planning	2. Types of planning, principles and objectives of regional planning, multi- level planning in India		03	
			3. Tools and techniques of regional planning, need for regional planning in India		02	
			4. Metropolitan concept: metropolitan areas, and urban agglomerations		02	
Dr. Ina Dhar Roy	С8Т	UNIT –II Regional	Development: Meaning, growth versus development	11 Mar 2023	02	20
Dasgupta		Development	Concept and strategies of regional development with reference to India		02	
			3. Theories and models for regional development: Growth pole model of perroux; growth centre model in Indian context		04	
			4. Theories and models for regional development: Cumulative causation (Myrdal) and core periphery (Hirschman, Rostov and Friedman)		03	
			5. Changing concept of development, concept of underdevelopment; efficiency-equity debate		02	
			6. Indicators of development: Economic, social and environmental. Human development		02	
			7. Regional development in India, regional inequality, disparity and diversity		03	
			8. Need and measures for balanced development in India		02	
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Dr. Ina Dhar Roy Dasgupta	С9Т	UNIT-I Economic Geography:	Meaning and approaches to Economic Geography, new Economic Geography	11 Mar 2023	02	08

		Concepts	2. Concepts in Economic Geography: Goods and services, production, exchange and consumption		02	
			3. Concept of economic man, theories of choices		02	
			4. Economic distance and transport costs		02	
Nabendu Sekhar Kar	С9Т	UNIT-II Economic	Concept and classification of economic activities	11 Mar 2023	01	20
		Activities	2. Factors affecting location of economic activity with special reference to agriculture (Von Thunen), and industry (Weber)		02	
			3. Primary activities: Subsistence and commercial agriculture, forestry, fishing and mining		03	
			4. Secondary activities: Manufacturing (cotton textile, iron and steel), concept of manufacturing regions, special economic zones and technology parks		04	
			5. Tertiary activities: transport, trade and services		03	
			6. Agricultural systems: Case studies of tea plantation in India and mixed farming in Europe		02	
			7. Transnational sea-routes, railways and highways with reference to India		02	
			8. International agreements and trade blocs: GATT and OPEC		03	
Nabendu Sekhar Kar	C10T	Environmental Geography	Geographers' approach to environmental studies	11 Mar 2023	01	16
			2. Perception of environment in different stages of civilization		01	
			3. Concept of holistic environment and system approach		02	
			4. Ecosystem: Concept, structure and functions		02	
			5. Environmental pollution and degradation: Land, water and air		02	
			6. Space—time hierarchy of environmental problems: Local, regional and global		01	
			7. Urban environmental issues with special reference to waste management		02	

			8. Environmental programmes and policies – Global, national and local levels		05	
Dr. Ina Dhar Roy Dasgupta	C10P	Environment Geography Lab	Preparation of questionnaire for perception survey on environmental problems	11 Mar 2023	04	08
			2. Preparation of check-list for Environmental Impact Assessment of an urban / industrial project		04	
Nabendu Sekhar Kar	C10P	Environment Geography Lab	Quality assessment of soil using field kit: pH and NPK	11 Mar 2023	06	08
			4. Interpretation of air quality using CPCB / WBPCB data		02	
Dr. Ina Dhar Roy Dasgupta	SEC- 2T	Research Methods	1. Geographic Enquiry: Definition and Ethics; Literature Review; Framing Research Questions, Objectives and Hypothesis; Preparing Sample Questionnaires and inventories	11 Mar 2023	04	08
			Data Collection: Type and Sources of Data; Methods of data Collection; Data Input and Editing		04	
Nabendu Sekhar Kar	SEC- 2T	Research Methods	3. Data Analysis: Qualitative and Quantitative Analysis; Techniques Data Representation	11 Mar 2023	04	08
			4. Structure of a Research Report: Preliminaries; Text; Citation, Notes, References, Bibliography and Abstract and Key words		04	

LESSON PLAN FOR THE ACADEMIC SESSION 2022–23

DEPARTMENT: GEOGRAPHY

SEMESTER: SIXTH B.Sc. HONOURS

Teacher	Course Title	Units	Contents	Commence ment Date	Classes required	Total Classes
Nabendu Sekhar Kar	C13T	UNIT-I Geographical Thought: Nature of Pre	1. Development of Geography and contributions of Greek, Chinese, and Indian geographers	6 th Feb 2023	02	12
		Modern Geography	2. Impact of 'Dark Age' on Geography and Arab contributions		02	
			3. Geography during the Age of 'Discovery' and 'Exploration' (Contributions of Portuguese Voyages, Columbus, Vasco da Gama, Magellan, Thomas Cook)		02	
			4. 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. Nomeothetic)		06	
Dr. Ina Dhar Roy Dasgupta	C13T	UNIT –II Foundations of Modern Geography and	Evolution of Geographical thoughts in Germany, France, Britain and United States of America	6 th Feb 2023	03	20
		Recent Trends	2. Contributions of Humboldt and Ritter		02	
			3. Contributions of Richthofen, Hettner and Ratzel		02	
			4. Schools of geographical thought: French, British and American		03	
			5. Trends of Geography in the post World War-II period		02	
			6. Evolution of Geography in India: formative periods, establishments and emerging trends		02	
		7. Quantitative Revolution and its impact, behaviouralism, systems approach, radicalism, feminism		04		
			8. Towards Post Modernism: Changing concept of space in		02	

			geography. Geography in the 21st Century			
Nabendu Sekhar Kar	C14T	UNIT – I Disaster Management: Concepts	1 Classification of hazards and disasters. 2. Approaches to hazard study: Risk perception and vulnerability assessment. Hazard paradigms	6 th Feb 2023	02	08
			3. Responses to hazards: Preparedness, trauma and aftermath. Resilience and capacity building		02	
			Hazards mapping: Data and techniques		02	
Dr. Ina Dhar Roy Dasgupta	C14T	UNIT – II Disaster Case Studies	Earthquake: Factors, vulnerability, consequences and management	6 th Feb 2023	02	08
			Landslide: Factors, vulnerability, consequences and management		02	
			3. Cyclone: Factors, vulnerability, consequences and management		02	
			4. Fire: Factors, vulnerability, consequences and management		02	
Dr. Ina Dhar Roy Dasgupta & Nabendu Sekhar Kar [50/50]	C14P	Disaster Management based Project Work	An individual Project Report based on any one case study among the following disasters incorporating a preparedness plan in the vicinity of the candidate's institution or residence: 1. Thunderstorm 2. Landslide 3. Flood 4. Coastal / riverbank erosion 5. Fire 6. Industrial accident 7. Structural collapse	6 th Feb 2023	16 [Excluding field work]	16 [Excludin g field work]
Nabendu Sekhar Kar	DSE3T	Soil and Biogeography	Factors or soil formation. Man as an active agent of soil transformation	6 th Feb 2023	01	22
			2 Soil profile. Origin and profile characteristics of Lateritic, Podzol and Chernozem soils		03	
			3. Definition and significance of soil properties: Texture, structure and moisture		02	
			4. Definition and significance of soil properties: pH, organic matter and NPK		02	

			5. Soil erosion and degradation:		02	
			Factors, processes and		02	
			mitigation measures			
			6. Principles of soil		02	
			classification: Genetic and		02	
			USDA. Concept of land			
			capability and			
			its classification			
			7. Concepts of biosphere,		01	
			ecosystem, biome, ecotone,			
			community and ecology			
			8. Concepts of trophic		02	
			structure, food chain and food			
			web. Energy flow in ecosystems			
			9. Geographical extent and		02	
			characteristic features of:			
			Tropical rain forest, Taiga and			
			Grassland biomes			
			10. Bio-geochemical cycles with		02	
					02	
			special reference to carbon			
			dioxide and nitrogen		0.1	
			11. Deforestation: Causes,		01	
			consequences and management			
			12. Bio-diversity: Definition,		02	
			types, threats and conservation			
			measures			
Dr. Ina	DSE4T	Unit I:	1. Urban Geography: nature and	6 th Feb 2023	02	22
Dr. Ina Dhar Roy	DSE4T Urban	Unit I: Basic Concepts	Urban Geography: nature and scope, different approaches and	6 th Feb 2023	02	22
				6 th Feb 2023	02	22
Dhar Roy	Urban		scope, different approaches and	6 th Feb 2023	02	22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography	6 th Feb 2023	02	22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography 2. Origin of urban places in	6 th Feb 2023		22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and	6 th Feb 2023		22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern	6 th Feb 2023		22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and	6 th Feb 2023		22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics.	6 th Feb 2023	04	22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places:	6 th Feb 2023		22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size	6 th Feb 2023	04	22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities:	6 th Feb 2023	04	22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule,	6 th Feb 2023	04	22
Dhar Roy	Urban Geogra		scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central	6 th Feb 2023	04	22
Dhar Roy	Urban Geogra	Basic Concepts	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory;	6 th Feb 2023	04	22
Dhar Roy	Urban Geogra	Basic Concepts Unit I:	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban	6 th Feb 2023	04	22
Dhar Roy	Urban Geogra	Unit I: Urban	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-	6 th Feb 2023	04	22
Dhar Roy	Urban Geogra	Basic Concepts Unit I:	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-Region	6 th Feb 2023	04 03 03	22
Dhar Roy	Urban Geogra	Unit I: Urban	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-	6 th Feb 2023	04	22
Dhar Roy	Urban Geogra	Unit I: Urban	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-Region	6 th Feb 2023	04 03 03	22
Dhar Roy	Urban Geogra	Unit I: Urban	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-Region 2. Theories of city structure-	6 th Feb 2023	04 03 03	22
Dhar Roy	Urban Geogra	Unit I: Urban	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-Region 2. Theories of city structure-concentric zone theory, sector	6 th Feb 2023	04 03 03	22
Dhar Roy	Urban Geogra	Unit I: Urban	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-Region 2. Theories of city structure-concentric zone theory, sector theory, multiple nuclei	6 th Feb 2023	04 03 03	22
Dhar Roy	Urban Geogra	Unit I: Urban	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-Region 2. Theories of city structure-concentric zone theory, sector theory, multiple nuclei theory	6 th Feb 2023	04 03 03 03	22
Dhar Roy	Urban Geogra	Unit I: Urban	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-Region 2. Theories of city structure-concentric zone theory, sector theory, multiple nuclei theory 3. Patterns and trends of urbanization in India	6 th Feb 2023	04 03 03 03 03	22
Dhar Roy	Urban Geogra	Unit I: Urban	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-Region 2. Theories of city structure-concentric zone theory, sector theory, multiple nuclei theory 3. Patterns and trends of urbanization in India 4. Patterns of urbanisation in	6 th Feb 2023	04 03 03 03	22
Dhar Roy	Urban Geogra	Unit I: Urban	scope, different approaches and recent trends in urban geography 2. Origin of urban places in Ancient, Medieval, Modern and Post-Modern Periods factors, stages, and characteristics. 3. Aspects of urban places: Location, site and situation, Size and Spacing of Cities: The Rank Size Rule, 4. Urban Hierarchies: Central Place Theory; 1. Ecological processes of urban growth; Urban fringe; City-Region 2. Theories of city structure-concentric zone theory, sector theory, multiple nuclei theory 3. Patterns and trends of urbanization in India	6 th Feb 2023	04 03 03 03 03	22



LESSON PLAN FOR THE ACADEMIC SESSION 2022–23

DEPARTMENT: GEOGRAPHY

SEMESTER: **SECOND B.Sc. GENERAL**

Teacher	Course Title	Units	Contents	Commence ment Date	Classes required	Total Classes
Nabendu Sekhar Kar	DSC 1BT	Human Geography	Definition, Nature, Major Subfields, Contemporary Relevance	17 Apr 2023	02	20
			2. Space and Society: Cultural Regions; Race; Religion and Language		04	
			3 Population: Population Growth and Demographic Transition Theory		04	
			4. World Population Distribution and Composition (Age, Gender and Literacy)		04	
			5. Settlements: Types and Patterns of Rural Settlements; Classification of Urban Settlements; Trends and Patterns of World Urbanization		06	

LESSON PLAN FOR THE ACADEMIC SESSION 2022–23

DEPARTMENT: GEOGRAPHY

SEMESTER: FOURTH
B.Sc. GENERAL

Teacher	Course Title	Units	Contents	Commence ment Date	Classes required	Total Classes
Nabendu Sekhar Kar	DSC 1DT	Environmental Geography	Environmental Geography: Concepts and Approaches; Ecosystem – Concept and Structure; Ecosystem Functions	11 Mar 2023	02	20
			2. Human-Environment Relationship in Equatorial, Desert, Mountain and Coastal Regions		04	
			3. Environmental Problems and Management: Air Pollution; Biodiversity Loss; Solid and Liquid Waste		05	
			4. Environmental Programmes and Policies: Developed Countries; Developing Countries		05	
			5. New Environmental Policy of India; Government Initiatives		04	
			-	1		
Dr. Ina Dhar Roy	SEC 2	Regional Planning and	Concept, Need and Types of regional Planning	11 Mar 2023	02	14
Dasgupta		Development	Characteristics and Delineation of Planning Region		01	
			3. Regionalization of India for Planning (Agro Ecological Zones)		01	
			4. Models for Regional Planning: Growth Pole Theory; Core Periphery Model and Growth Foci Concept in Indian Context		04	
			5. Backward Regions and Regional Plans- Special Area Development Plans in India; DVC-Success Story and the Failures; NITIAayog		06	

LESSON PLAN FOR THE ACADEMIC SESSION 2022–23

DEPARTMENT: GEOGRAPHY

SEMESTER: SIXTH
B.Sc. GENERAL

Teacher	Course Title	Units	Contents	Commence ment Date	Classes required	Total Classes
Dr. Ina Dhar Roy Dasgupta	DSE 1BT	Geography Fundamental Conc Economic Geograp Patterns of Develo	Definition, Approaches and Fundamental Concepts of Economic Geography; Patterns of Development	6 Feb 2023	02	20
			2. Locational Theories – Agriculture (Von Thunen) and Industrial (Weber)		04	
			3. Primary Activities – Intensive Subsistence Farming, Commercial Grain Farming, Plantation, Commercial Dairy Farming, Commercial Fishing, and Mining (iron ore, coal and petroleum)		04	
			4. Secondary Activities – Cotton Textile Industry, Petro- Chemical Industry, Major Manufacturing Regions		04	
			5. Tertiary and Quaternary Activities – Modes of Transportation, Patterns of International Trade, and Information and Communication Technology Industry		06	



LESSON PLAN FOR THE ACADEMIC SESSION 2022–23

DEPARTMENT: GEOGRAPHY

SEMESTER: FOURTH

B.Sc. GENERIC ELECTIVE

Teacher	Course Title	Units	Contents	Commence ment Date	Classes required	Total Classes
Nabendu Sekhar Kar	GE 4	Climate Change: Vulnerability	The Science of Climate Change: Origin, scope and trends	TBD	02	14
	and Adaptations		2. Understanding Climate Change with reference to the Geological Time Scale		02	
		3. Evidences and factors of climate change: the natureman dichotomy		02		
		4. Green House Gases and Global Warming		02		
			5. Electromagnetic spectrum, Atmospheric window, heat balance of the earth		02	
		6. Global climatic assessment: IPCC reports		04		
Dr. Ina Dhar Roy Dasgupta			7. Climate change and vulnerability: Physical; economic and social		02	14
			8. Impact of Climate Change: Agriculture and Water; Flora and Fauna; Human Health and morbidity		02	
			9. Global initiatives to climate change mitigation: Kyoto Protocol, Carbon trading, Clean development mechanism, COP, Climate fund		04	
			10. Climate change vulnerability assessment and adaptive strategies with particular reference to South Asia		02	
			11. National Action Plan (of India) on Climate Change		02	
		12. Role of Urban Local Bodies, Panchayats and educational institutions on climate change mitigation: Awareness and action programmes		02		