

ACADEMIC CALENDER - 2019-20 , P. N. DAS COLLEGE

DEPARTMENT OF GEOGRAPHY PART -III (GEN)						
PAPER	GROUP	TOPIC	NO.OF LECTURES	NAME OF LECTURER	TEST	REMEDIAL CLASS
4		PAPER -IV-A				
	A	(Theoretical): Applied Geography : 70 marks				
		Section I: Land use and settlement Geography				
		1. Concept and attributes of land.	2	DD		
		2. Objectives and principles of land use.	2	DD		
		3. Factors influencing land use and land categories:	2	DD		
		a) Agricultural land use.	2	DD		
		b) Non-agricultural landuse.	2	DD		
		4. Rural settlements: evolution, nature and effect of physical environment,	4	DC		
		5. Urban settlements: definition, morphology and function.	6	DC		
		Section II: Remote Sensing and Geographical Information System				
		1. Concept of Remote Sensing, different methods of remote sensing – aerial photo and satellite imagery.	6	DC		
		2. Aerial Photo: Types and interpretation keys; concept of principal point, fiducial marks, flight line, photo overlap.	4	CS		
		3. IRS images: Sensors, different types of resolution and their applicability.	4	RG		
		4. Concept of GIS and its applicability: Spatial and attribute data, raster and vector data structure and concept of information layers in GIS.	5	RG		
	B	PRACTICAL - 30 Marks				
		1. Interpretation of Daily Weather Maps published by India Meteorological Department – Monsoon season	10	CS		
		2. Preparation of thematic maps:	2			
		i) Flow diagram and ii) Determination of Detour Index	2	DD		
		3. Aerial photo interpretation for identification of broad physical and cultural features.	8	RG		
		4. Laboratory Note Book and Viva-voce				

DEPARTMENT OF GEOGRAPHY, PART-III (HONOURS)

ACADEMIC CALENDER, 2019-20

SL. NO	HONS/ GEN	PAPER	GROUP	TOPIC	NO.OF LECTURES	NAME OF LECTURER	TEST	REMEDIAL CLASS
	HONOURS	5	A	SOCIAL, CULTURAL AND POLITICAL GEOGRAPHY				
				Social and Cultural Geography				
				1. Concept of culture and its components with special emphasis on India: language, religion and ethnicity.	4	DC		
				2. Social geography of rural India: caste structure and social stratification; tribe – Santhals and Lepcha.	4	CS		
				3. Urban social Geography — Social ecology and social space.	4	CS		
				4. Rural settlements – its forms, site and situations. Urban settlement – morphology and hierarchy.	14	CS		
				Political Geography		DD		
				5. Concept of Political Geography and geo-politics; concept of frontier and boundary	6	DD		
				6. Concept of cold war; bi-polarisation and unipolarisation	6	DD		
				7. Political geography of India: Administrative settings of India, problem of border states, partition and its geo-political implications	6	DC		
			B	REGIONAL GEOGRAPHY		RG		
				1. Concepts of regions; basis of regionalization with reference to India physical, economic and planning	4	RG		
				2. a) Physiographic Regions of India with special reference to Kashmir Himalaya	2	RG		
				b) Agricultural Region of India of India with special reference to Punjab-Haryana	2	RG		
				c) Industrial Region of India with special reference to Mumbai-Pune industrial belt	2	DC		
				3. Regional disparities in India: causes and implications	3	DC		

		6	A	PHILOSOPHY OF GEOGRAPHY AND CONTEMPORARY ISSUES		CS		
				1. Definition and nature of Geography.	2	CS		
				2. Selected contributors in the evolution of geographical thought Humboldt, Vidal de la Blache, Carl Sauer and David Harvey	6	CS		
				3. Major postulates: Determinism, Possibilism, Regional differentiation, location, time and space	8	CS		
				4. Changing approaches and methodology: Positivism, Quantitative Revolution, Welfare-Behavioural approach, Structural and radical approach	10	CS		
			B	CONTEMPORARY ISSUES IN GEOGRAPHY				
				Section -1: Natural hazards and their management in the Indian Sub-continent				
				5. Concept of hazards and disasters: Natural, quasi-natural and man-made hazards, different approaches in hazard management	2	DC		
				6. Climatic hazards: Flood, drought and cyclone mechanism – environmental impact and management	6	DC		
				7. Geomorphic hazards: landslide, river bank erosion, coastal erosion environmental impact and management	6	DC		
				8. Edaphic and biotic hazards: Deforestation, desertification, loss of bio-diversity – environmental impact and management	6	DC		
				Section-2: Economic and human development in the Third World		DD		
				9. Concept of third world, concept of development and under development: Basic indicators of economic, human and gender development	6	DD		
				10. Problems of third world – Poverty, Population explosion, food security and hunger, unemployment, malnutrition and child labour.	14	DC		
				11. Globalization and sustainable development.	4	DD		
				12. Problem of urbanization	1	DD		
		7		APPLIED GEOGRAPHICAL TECHNIQUES (PRACTICAL)				

				1.Interpretation of geological maps and drawing of sections: Uniclinal, folds with unconformity and igneous intrusions	10	CS		
				2.Interpretation of Indian Daily Weather Maps – Monsoon and Post Monsoon.	10	DD		
				3.Remote Sensing		DC		
				a. Basic concept of remote sensing, EMR, Band	2	DC		
				b. Types of satellites and sensors with special reference to IRS series of satellites; types of resolutions and their applicability	3	DC		
				c. Principles of preparing standard false colour composite, landuse and land cover mapping from standard FCC with header information.	3	DD		
				d. Interpretation of aerial photograph – basic principles of aerial photography, side lap, end lap, flight line, air base, fiducial marks, .Principle Point, Nadir Point, Conjugate Principal Point,	10	RG		
				e.Preparation of aerial photo mosaics, demarcation of effective area, extraction of cultural and physiographic features within this area with preparation of interpretation key	10	RG		
				4.Geographical Information System.		CS,RG		
				a. Concept of GIS and its applicability: Spatial and attribute data, raster and vector data structure and concept of information layers in GIS.	4	CS,RG		
				b. Georeferencing of scanned maps and ascribing projection (Polyconic/ UTM)	4	CS,RG		
				c. Digitisation of point, line and polygon layers; Attachment of appropriate attribute tables.	4	CS, RG		
				d. Preparation of thematic maps from attached data: choropleth, pie chart and bar graphs.	10	CS,RG		
				5. Field Report:		CS,RG,DD		
		8	A	Statistical Techniques (PRACTICAL)				
				1. Nature of statistical data: discrete, continuous, parametric and non-parametric data.	2	RG		
				2. Tabulation and classification of statistical data.	2	RG		
				3. Frequency distribution: histogram, frequency polygon, ogive, normal and skewed distribution,	4	RG		

				measures of skewness.				
				4. Measures of central tendency: mean, median, mode, partition values : quartile, decile, percentile	8	RG		
				5. Measures of dispersion: mean deviation, quartile deviation, semi-quartile range, standard deviation and co-efficient of variation.	8	DC		
				6. Simple bivariate correlation and regression trend line.	6	DC		
				7. Time series analysis	2	DC		
			B	Contemporary issues in Geography				
				Section-A : Representation of climatic and hydrological data of the Indian Sub-continent		CS		
				1. a) Preparation and Interpretation of a climatic chart showing relationship between rainfall, temperature, pressure and relative humidity of a station for three months, preparation and interpretation of Taylor's Climograph and Hythergraph.	6	CS		
				b) Preparation of station models for different meteorological stations of India with the help of Synoptic chart	4	DC		
				2. Preparation and interpretation of rating curves, hydrographs and unit hydrographs of rivers flowing through the Indian Sub-continent.	6	CS		
				Section-B: Economic and Human Development in Third World				
				3. Computation of Human and Gender Development Index and ranking of countries/states/districts based on HDI and GDI.	4	DC		
				4. Preparation of questionnaire schedule for assessment of development and for perception survey	2	RG		
				5. Measures of Spatial and size-class distribution.		DC		
				6.a) Dominant-distinctive function	4	CS		
				b) Rank-size rule.	2	CS		
				c) Lorenz curve.	2	DC		

Academic Calendar Year: 2019-20

P.N.Das College

Department of Geography SEM-I (HONS) GEOA

GEOACOR01T –Geotectonic and Geomorphology

4 Credits, 50 Marks [60 classes]

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						IA-I	IA-II	IA-III	Remarks
	Unit I:		Geotectonic			11.9.19-13.19	23.9.19, 25.9.19, 27.9.19	11.11.19-16.11.19, 27.11.19	
GEOACOR01T		1	Earth's tectonic and structural evolution with reference to geological time scale	5	RG				
GEOACOR01T		2	Earth's interior with special reference to seismology. Isostasy: Models of Airy and Pratt	8	RG				
GEOACOR01T		3	Plate Tectonics as a unified theory of global tectonics: Processes and landforms at plate margins and hotspots.	5	CS				
GEOACOR01T		4	Folds and Faults—origin and types	7	DC				
	Unit II:		Geomorphology						
GEOACOR01T		5	Degradational processes: Weathering, mass wasting and resultant landforms	7	CS				
GEOACOR01T		6	Development of river network and landforms on uniclinal and folded	6	RG				
GEOACOR01T		7	Development of landforms on granites, basalts and limestones.	4	DC				
GEOACOR01T		8	Coastal processes and landforms	4	DD				
GEOACOR01T		9	Glacial and glacio-fluvial processes and landforms	4	DD				
GEOACOR01T		10	Aeolian and fluvio-aeolian processes and landforms	4	DC				
GEOACOR01T		11	Models on landscape evolution: Views of Davis, Penck and Hack	6	CS,RG,DD				

GEOACOR01P –Geotectonic and Geomorphology

2 Credits, 25 Marks [60 classes]

GEOACOR01P	Unit III:	1	Megascopic identification of (a) <i>mineral samples</i> : Bauxite, calcite, chalcopyrite, feldspar, galena, gypsum, hematite, magnetite, mica, quartz, talc, tourmaline; and (b) <i>rock samples</i> : Granite, basalt, dolerite, laterite, limestone, shale, sandstone, conglomerate, slate, phyllite, schist, gneiss, quartzite, marble	30	RG(M),DD(R)				
GEOACOR01P		2	Interpretation of geological maps with unconformity and intrusions on uniclinal and folded structures	30	CS				

Academic Calendar Year: 2019-20**P.N.Das College****Department of Geography SEM-I (HONS)****GEOACOR02T –Cartographic Techniques**

4 Credit, 50 Marks [60 classes]

PAPER	UNI T-I	SL. N O.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
GEOACOR02T		1	Maps: Classification and types. Components of a map	6	CS				
GEOACOR02T		2	Concept and application of scales: Plain, comparative, diagonal and venire	12	CS,DC				
GEOACOR02T		3	Survey of India topographical maps: Reference scheme of old and open series. Information on the margin of maps	8	DD				
GEOACOR02T		4	Coordinate systems: Polar and rectangular	8	DC				
GEOACOR02T		5	Concept of generating globe and UTM projection	8	CS				
GEOACOR02T		6	Grids: angular and linear systems of measurement	8	DD				
GEOACOR02T		7	Map projections: Classification, properties and uses	10	RG				

Academic Calendar Year: 2019-20**P.N.Das College****Department of Geography SEM-I (HONS)****GEOACOR02P –Cartographic Techniques (Lab)****2 Credits, 25 Marks [90 classes]**

PAPER	UNI T-II	SL. N O.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
GEOACOR02P		1	Graphical construction of scales: Plain, comparative, diagonal and vernier	15	CS,DC				
GEOACOR02P		2	Construction of projections: Polar Zenithal Stereographic, Simple Conic with two standard parallels, Bonne's, Cylindrical Equal Area, and Merc	15	RG				
GEOACOR02P		3	Delineation of drainage basin from Survey of India topographical map. Construction and interpretation of relief profiles (superimposed, projected and composite), relative relief map, slope map (Wentworth), and stream ordering (Strahler) on a drainage basin.	15	DD				
GEOACOR02P		4	Correlation between physical and cultural features from Survey of India topographical maps using transect chart.	15	DC				

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**P.N.Das College
Department of Geography SEM-I (GENERAL) GEOG**

**GEOGCOR01T–Physical Geography
6 Credit, 75 Marks [90 classes]**

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
	Unit I:		Unit I: Geotectonics and Geomorphology						
GEOGCOR01T		1	Physical Geography –Definition and Scope, Components of Earth System.	8	DD				
GEOGCOR01T		2	Internal Structure of Earth based on Seismic Evidence, Plate Tectonics and its associated Features	9	DD				
GEOGCOR01T		3	Influence of rocks on topography: Limestone and Granite	9	DD				
GEOGCOR01T		4	Evolution of landforms under fluvial process, Normal Cycle of Erosion of Davis	10	DD				
GEOGCOR01T		5	Formation of erosional and depositional landforms by coastal and aeolian processes	12	DD				
	Unit II:		Unit II: Climatology and Oceanography						
GEOGCOR01T		6	Insolation and Heat Balance.	8	RG				
GEOGCOR01T		7	Horizontal and Vertical distribution of temperature and pressure	8	RG				
GEOGCOR01T		8	Planetary wind system, characteristics of Monsoon and Tropical Cyclone	10	CS				
GEOGCOR01T		9	Climatic Classification: Köppen	5	CS				
GEOGCOR01T		10	11. Hydrological Cycle, Ocean Bottom Relief Features, ocean currents.	11	CS				

Academic Calendar Years: 2019-20

**P.N. Das College
Department of Geography SEM-II(HONS)GEOACOR03T –Human Geography 6 Credits, 75 Marks [90
classes]**

Unit I: Nature and Principles

Paper	UNIT	SL. NO.	Topic	No. of Lect.	Lecturer	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
GEOACOR03T	UNIT-I	1	Nature, scope and recent trends. Elements of Human Geography	5	DD				
GEOACOR03T	UNIT-I	2	Approaches to Human Geography; Resource, Locational, Landscape, Environmental	10	DD				
GEOACOR03T	UNIT-I	3	Concept and classification of race; ethnicity	10	CS				
GEOACOR03T	UNIT-I	4	Space, society and cultural regions (language and religion)	10	DD				

Unit :II: Society, Demography and Ekistics

GEOACOR03T	Unit :II	5	Evolution of human societies: Hunting and food gathering, pastoral nomadism, subsistence farming and industrial society	10	RG				
GEOACOR03T	Unit :II	6	Human adaptation to environment: Eskimo, Masai and Maori	10	DD				
GEOACOR03T	Unit :II	7	Population growth and distribution, composition; demographic transition	10	RG				
GEOACOR03T	Unit :II	8	Population–Resource regions (Ackerman)	8	CS				
GEOACOR03T	Unit :II	9	Types and patterns of rural settlements	7	CS				
GEOACOR03T	Unit :II	10	Morphology of urban settlements	10	RG				

Academic Calender Years: 2019-20

**P.N.Das College
Department of Geography SEM-II(HONS)GEOACOR04T - Cartograms and Thematic Mapping**

GEOACOR04T –Cartograms and Thematic Mapping ,4 Credits, 50 Marks [60 classes]

Paper	UNIT 1	S L · N O ·	Topic	No. of Lect.	Lecturer	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
GEOACOR04T		1	Concepts of rounding, scientific notation, logarithm and anti-logarithm, natural and log scales	8	DD				
GEOACOR04T		2	Diagrammatic representation of data: Line, Bar, Isopleths	8	RG				
GEOACOR04T		3	Representation of area data: Dots and spheres, proportional circles and Choropleth	8	CS				
GEOACOR04T		4	Preparation and interpretation of land use land cover maps	10	RG				
GEOACOR04T		5	Preparation and interpretation of socio-economic maps	8	CS				
GEOACOR04T		6	Bearing: Magnetic and true, whole-circle and reduced	8	RG				
GEOACOR04T		7	Basic concepts of surveying and survey equipment: Prismatic Compass, Dumpy Level, Theodolite	10	RG,CS,RG				

GEOACOR04P –Cartograms and Thematic Mapping (Lab), 2 Credits, 25 Marks [60 classes]

GEOACOR04P	UNIT-1	1	Thematic maps:						
			Choropleth showing density of population	8	RG				
			Dots and Spheres diagram showing distribution of rural and urban population	8	CS				
			Proportional pie-diagrams representing economic data and land use data	8	CS				
GEOACOR04P	UNIT 2	2	Traverse survey using prismatic compass	18	RG				
			Profile survey using dumpy Level	18	CS				

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P.N.Das College

Department of Geography SEM-II(GEN)(GEOGCOR02T) –Human Geography, 6 Credits, 75 Marks [90 classes]

Unit- I Population and Social Geography

Paper	UNIT	SL. NO	TOPIC	No. of Lect.	Lecturer	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
GEOGCOR02T	UNIT-I	1	Factors of Growth and distribution of world population. Demographic Transition Theory	9	DD				
GEOGCOR02T	UNIT-I	2	World Population Composition: Age, Gender and Literacy	9	DD				
GEOGCOR02T	UNIT-I	3	Migration: Types, causes and consequences.	9	DD				
GEOGCOR02T	UNIT-I	4	Space and Society: Cultural Regions; Race; Religion and Language	10	DD				
GEOGCOR02T	UNIT-I	5	Contemporary social issues: Illiteracy and Poverty	9					

Unit II Economic and Settlement Geography

GEOGCOR02T	UNIT-II	6	Sectors of the economy: primary, secondary, tertiary and quaternary	9	RG				
GEOGCOR02T	UNIT-II	7	Types of agriculture: Intensive subsistence rice farming, Plantation agriculture (Tea and Coffee)	9	RG				
GEOGCOR02T	UNIT-II	8	Location, problems and prospects of Indian industries — Cotton textile, Petroleum refining, Locomotive	9	CS				
GEOGCOR02T	UNIT-II	9	Types and Patterns of Rural Settlements	8	CS				
GEOGCOR02T	UNIT-II	10	Classification of Urban Settlements; Trends and Patterns of World Urbanization	9	CS				

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P.N.Das College

Department of Geography SEM-III(HONS)GEOA COR05T –Climatology

GEOACOR05T-4 Credits, 50 Marks [60 classes]

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
	Unit I:		Elements of the Atmosphere			11.9.19-13.19	23.9.19, 25.9.19, 27.9.19	11.11.19-16.11.19, 27.11.19	
		1	Nature, composition and layering of the atmosphere	3	DD				
		2	Insolation: controlling factors. Heat budget of the atmosphere	3	DD				
		3	Temperature: horizontal and vertical distribution. Inversion of temperature: types, causes and consequences	4	DC				
		4	Greenhouse effect and importance of ozone layer	3	DC				
	Unit II:		Atmospheric Phenomena and Climatic Classification						
		5	Condensation: Process and forms. Mechanism of precipitation: Bergeron-Findeisen theory, collision and coalescence. Forms of precipitation	5	CS				
		6	Air mass: Typology, origin, characteristics and modification	4	RG				
		7	Fronts: warm and cold; frontogenesis and frontolysis	6	CS				
		8	Weather: stability and instability; barotropic and baroclinic conditions	6	RG				
		9	Circulation in the atmosphere: Planetary winds, jet stream, index cycle	8	CS				
		10	Tropical and mid-latitude cyclones	7	RG				
		11	Monsoon circulation and mechanism with reference to India	6	CS				
		12	Climatic classification after Köppen, Thornthwaite (1955) and Oliver	5	RG				

Academic Calendar Year: 2019-20**P.N.Das College
Department of Geography SEM-III(HONS) GEOACOR05P –Climatology****GEOACOR05T 2 Credits, 25 Marks [60 classes]**

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
		1	Interpretation of daily weather map of India (any two): Pre-Monsoon, Monsoon and Post-Monsoon	10	CS				
		2	Construction and interpretation of hythergraph and climograph (G. Taylor)	10	RG				
		3	Construction and interpretation of wind rose	10	RG				
		4	A Project File, comprising of one exercise from each of the following is to be prepared and submitted						

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**P.N.Das College
Department of Geography SEM-III(HONS)GEOA COR06T –Geography of India**

6 Credits, 75 Marks [90 classes]

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						IA-I	IA-II	IA-III	Remarks
	Unit I:		Geography of India			11.9.19- 13.19	23.9.19, 25.9.19, 27.9.19	11.11.19- 16.11.19,27.1 1.19	
		1	Tectonic and stratigraphic provinces, physiographic divisions	6	RG				
		2	Climate, soil and vegetation: Characteristics and classification	6	RG				
		3	Population: Distribution, growth, structure and policy	10	RG				
		4	Tribes of India with special reference to Gaddi, Toda, Santal and Jarwa	5	DD				
		5	Agricultural regions. Green revolution and its consequences	6	DD				
		6	Mineral and power resources distribution and utilisation of iron ore, coal, petroleum and natural gas	5	DC				
		7	Industrial development: Automobile and information technology	10	DC				
		8	Regionalisation of India: Physiographic (R.L. Singh) and economic (P. Sengupta)	10	CS				
	Unit II:		Geography of West Bengal						
		9	Physical perspectives: Physiographic divisions, forest and water resources	10	RG				
		10	Resources: Agriculture, mining, and industry		RG				
		11	Population: Growth, distribution and human development	10	CS				
		12	Regional Issues: Darjeeling Hills and Sundarban	10	CS				

ACADEMIC CALENDAR YEAR: 2019-20

**P.N.Das College
Department of Geography SEM-III(HONS)GEOACOR07T –Statistical Methods in Geography**

4 Credits, 40 Marks [60 classes]

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
	Unit I:		Frequency Distribution and Sampling						
		1	Importance and significance of statistics in Geography	5	CS				
		2	Discrete and continuous data, population and samples, scales of measurement (nominal, ordinal, interval and ratio),	6	CS				
		3	Sources of geographical data for statistical analysis	5	DC				
		4	Collection of data and formation of statistical tables	5	DC				
		5	Sampling: Need, types, and significance and methods of random sampling	7	DC				
		6	Theoretical distribution: frequency, cumulative frequency, normal and probability	8	RG				
	Unit II:		Numerical Data Analysis						
		7	Central tendency: Mean, median, mode, partition values	4	CS				
		8	Measures of dispersion range: mean deviation, standard deviation, coefficient of variation	5	RG				
		9	Association and correlation: Rank correlation, product moment correlation	5	DC				
		10	Regression: Linear and non-linear	5	DC				
		11	Time series analysis: Moving average	5	RG				

ACADEMIC CALENDAR YEAR: 2019-20

**P.N.Das College
Department of Geography SEM-III(HONS)GEOACOR07P –Statistical Methods in Geography (Lab)**

2 Credits, 25 Marks [60 classes]

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
		1	Construction of data matrix with each row representing an areal unit (districts / blocks / <i>mouzas</i> / towns) and corresponding columns of relevant attributes	10	DD				
		2	Based on the above, a frequency table, measures of central tendency and dispersion would be computed and interpreted using histogram and frequency curve	20	CS				
		3	From the data matrix a sample set (20%) would be drawn using, random, systematic and stratified methods of sampling and locate the samples on a map with a short note on methods used	15	DC				
		4	Based on the sample set and using two relevant attributes, a scatter diagram and linear regression line would be plotted and residual from regression would be mapped with a short interpretation	15	RG				

Academic Calendar Year: 2019-20**P.N.Das College
Department of Geography SEM-III GEOSSEC01M –Remote Sensing (For both Honours and General courses)****Skill Enhancement Course****2 Credits, 25 Marks [30 classes]**

Paper	UNIT	SL. NO.	Topic	No. of Lect.	Lecturer	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
		1	Principles of Remote Sensing (RS): Classification of RS satellites and sensors	8	CS				
		2	Sensor resolutions and their applications with reference to IRS and Landsat missions, image referencing schemes and data acquisition.	7	DD				
		3	Preparation of False Colour Composites from IRS LISS-3 and Landsat TM and OLI data. Principles of image rectification and enhancement.	8	RG				
		4	Principles of image interpretation and feature extraction. Preparation of inventories of land use land cover features from satellite images.	7	CS				

ACADEMIC CALENDAR YEAR: 2019-20**P.N.Das College
Department of Geography SEM-III GEOHGEC03T –General Cartography****4 Credits, 50 Marks [60 classes]**

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
		1	Concept of map scale: Types and Application. Reading distances on a map.	15	DC				
		2	Map Projections: Criteria for choice of projections. Attributes and properties of: Zenithal Gnomonic Polar Case, Zenithal Stereographic Polar Case, Cylindrical Equal Area, Mercator' Projection, Bonne's, Concept of UTM projection Projection.	15	RG				
		3	Survey of India topographical maps: Reference scheme of old and open series. Information on the margin of maps.	15	CS				
		4	Representation of Data – Symbols, Dots, Choropleth, Isopleth and Flow Diagrams, Interpretation of Thematic Maps.	15	DC				

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**P.N.Das College
Department of Geography SEM-III GEOHGEC03P –General Cartography**

2 Credits, 25 Marks [60 classes]

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	EXAM SCHEDULE			
						TEST-I	TEST-II	TEST-III	REMARKS
		1	Graphical construction of scales: Plain and comparative. [10]	10	DC				
		2	Construction of projections: Zenithal Gnomonic Polar Case, Zenithal Stereographic Polar Case, Cylindrical Equal Area, Mercator's [30] Projection,	30	RG				
		3	Construction and interpretation of relief profiles from Survey of India topographical map — superimposed, projected and composite, relative relief map, slope map (Wentworth), and Correlation between physical and cultural features from Survey of India topographical maps using transect chart.	20	CS				

Academic Calendar Year: 2019-20

P.N.Das College

Department of Geography SEM-IV(HONS)GEOA COR08T – Regional Planning and Development

GEOACOR08T - 6 Credits, 75Marks [90 classes]

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						I.A-I	I.A.-II	I.A.-III	Remarks
	Unit I:		Regional Planning						
		1	Concept of regions: Types of regions and their delineation	6	CS				
		2	Regional Planning: Types, principles, objectives, tools and techniques	8	CS				
		3	Need for regional planning in India multi - level planning in India	6	CS				
		4	Metropolitan concept and urban agglomerations	6	CS				
	Unit II:		Regional Development						
		5	Concepts of growth and development, growth versus development	8	DD				
		6	Indicators of development: Economic, social and environmental	8	DD				
		7	Human development: Concept and measurement	8	DD				
		8	Theories and models for regional development: Cumulative causation (Myrdal)	8	DC				
		9	Theories and models for regional development: Stages of development (Rostow), growth pole model (Perroux)	8	RG				
		10	Concept and causes of under development	8	RG				
		11	Regional development in India: Disparity and diversity	8	RG				
		12	Need and measures for balanced development in India	8	RG				

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P.N.Das College

Department of Geography SEM-IV(HONS) (GEOA) GEOACOR09T – Economic Geography

GEOACOR09T --6 Credits, 75Marks [90 classes]

PAPER	UNIT	SL. NO	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
	Unit I:		Concepts						
		1	Meaning and approaches to Economic Geography	6	CS				
		2	Concepts in Economic Geography: Goods and services, production, exchange and consumption	8	CS				
		3	Concept of economic man, theories of choices	8	CS				
		4	Economic distance and transport costs	8	DC				
	Unit II:		Economic Activities						
		5	Concept and classification of economic activities	6	RG				
		6	Factors affecting location of economic activity with special reference to agriculture (Von Thünen), and industry (Weber)	8	RG				
		7	Primary activities: Agriculture, forestry, fishing and mining	8	RG				
		8	Secondary activities: Manufacturing (cotton textile, iron and steel), concept of manufacturing regions, special economic zones and technology parks	10	DC				
		9	Tertiary activities: Transport, trade and services	6	DD				
		10	Agricultural systems: Case studies of tea plantation in India and mixed farming in Europe	8	DD				
		11	Transnational sea-routes, railways and highways with reference to India	6	DD				
		12	International trade and economic blocs : WTO , GATT and BRICS: Evolution, structure and functions	8	DD				

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**P.N.Das College
Department of Geography SEM-IV (HONS) GEOACOR10T – Environmental Geography**

GEOACOR10T 4Credits, 50 Marks [60 classes]

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURE R	Exam Schedule			
						IA-I	IA-II	IA-III	Remarks
	Unit I:		Concepts						
		1	Geographers' approach to environmental studies	7	DC				
		2	Concept of holistic environment and systems approach	7	DC				
		3	Ecosystem: Concept, structure and functions	8	CS				
		4	Space –time hierarchy of Environmental problems: Local, regional and global	8	CS				
	Unit II:		Environmental problems and policies						
		5	Environmental pollution and degradation: Land, water and air	7	RG				
		6	Urban environmental issues with special reference to waste management	8	RG				
		7	Environmental policies – National Environmental Policy, 2006, Earth Summits (Stockholm, Rio, Johannesburg)	8	DD				
		8	Global initiatives for environmental management (special reference to Montreal Protocol, Kyoto Protocol, Paris Climate Summit)	7	DD				

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P.N.Das College
Department of Geography SEM-IV(HONS GEOACOR10P - Environmental Geography (Lab))

GEOACOR10P 2 Credits, 25 Marks [60 classes]

PAPER	UNI T	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
		1	Preparation of questionnaire for perception survey on environmental problems	20	CS				
		2	Preparation of check - list for Environmental Impact Assessment of an urban / industrial project	20	DD				
		3	Interpretation of air quality using CPCB / WBPCB data	20	RG				

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**P.N.Das College
Department of Geography SEM-IV (HONS) GEOSSEC02M - Advanced Spatial Statistical Techniques**

Skill Enhancement Course , 2 Credits, 25 Marks [30 classes]

PAPER	UNIT	SL. NO.	TOPIC	NO. OF LECT.	LECTURER	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
	Unit I:								
		1	Probability theory, probability density functions with respect to Normal, Binomial and Poisson distributions and their geographical applications						
		2	Sampling: Sampling plans for spatial and non- spatial data, sampling distributions. Sampling estimates for large and small samples tests involving means and proportions.						
		3	Correlation and Regression Analysis : Rank order correlation and product moment correlation; linear regression, residuals from regression, and simple curvilinear regression. Introduction to multi -variate analysis.						
		4	Time Series Analysis: Time Series processes; Smoothing time series; Time series components						

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P.N.Das College

Department of Geography SEM IV(general)-GEOGCOR04T – Environmental Geography

6 Credits,75 Marks [90 Classes]

Paper	UNIT	SL. NO.	Topic	No. of Lect.	Lecturer	Exam Schedule			
						Test-I	Test-II	Test-III	Remarks
	UNIT-I		Concepts						
		1	Environmental Geography: Concepts and Approaches	10	CS				
		2	Human-Environment Relationship in equatorial, desert, mountain and coastal regions	13	CS				
		3	Concept of holistic environment and system approach	10	RG				
		4	Ecosystem: Concept, structure and functions	12	RG				
	UNIT-II		Environmental problems and policies						
		5	Environmental Problems and Management: Air Pollution; Water pollution Biodiversity Loss; Solid and Liquid Waste.	13	DD				
		6	Environmental problems and management: Desertification and soil erosion	10	DD				
		7	Environmental Programmes and Policies: Developed Countries; Developing Countries	12	DC				
		8	New Environmental Policy of India.	10	DC				