# **ACADEMIC CALENDAR**

### **DEPARTMENT OF GEOGRAPHY**

**Session: 2017- 2018** 

Year	(Hons/General)	Syllabus Module/Unit	Торіс	Teachers	Distribution	Project/ Student Seminar (if any)
			PAPER- I			
		S	1. Geological timescale	D.B		
		GROUP A: GEOTECTONICS	2. Structure of the earth: crust and interior.	D.B	July- October	
		EOTEC	3. Isostasy: concepts postulated by Pratt and Airy.	D.B	October	
		JP A: G	4. Continental Drift, Sea Floor Spreading.	D.B	November- December	
_	- RS	GROL	5. Plate Tectonics as explanation of mountain building, volcanism and earthquakes.	D.B	January- March	
PART	HONOURS	СУ	Processes of weathering and mass wasting and their impact on landforms	A.S		
	84	GROUP B: GEOMORPHOLOGY	2. Influence of lithology on landforms: Granite and Basaltic landforms.	A.S	July- October	
		: GEOMO	3. Definition and classification of folds and faults.	A.S		
		GROUP	4. Evolution of landforms in Uniclinal, Folded and Faulted Structures.	A.S	November- December	
			5. Development of landforms: Fluvial, Glacial, and Coastal.	A.S	January- March	

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		6. Cyclic and non-cyclic concepts of landscape evolution: Davis, Penck and Hack.	A.S	
	КАРНУ	Global hydrological cycle and its significance.	O.M	
	GROUP C: HYDROLOGY AND OCEANOGRAPHY	2. Aspects of runoff, infiltration, evaporation and transpiration, Runoff cycle.	O.M	July- October
	OLOGY AND	3. Factors influencing ground water movement and storage.	O.M	
	JP C: HYDR	4. Ocean sediments: origin, classification.	M.M	November- December
	GROI	5. Salinity and temperature of ocean water.	M.M	January- March
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		PAPER- II		
		1. Resource: Concept and classification. Economic and environmental approaches of resource utilisation	O.M	
	GROUP A: ECONOMIC GEOGRAPHY	2. Different sources of energy resources, production and consumption with special	O.M	July- October
	MIC	reference to coal, petroleum, solar and wind.	O.M	
	ECONO	3. Characteristic of economies:	O.M	
	UP A:	a) Fishing, b) Agricultural, c) Manufacturing	O.M	
	GRC	4. Selected production systems:	A.D.S	
		a) Intensive rice farming: India and South East Asia.	A.D.S	November- December
		b) Extensive wheat farming: USA and Canada.	A.D.S	

	c) Plantation farming: Tea in India and rubber in SE Asia.	A.C		
	d) Cotton textile industry: India and USA.	S.K.D		
	e) Iron and Steel industry: India and Japan.	S.K.D		
	f) Petrochemical industry: India and USA.	S.K.D	January-	
	g) Paper industry: India and Canada.	S.K.D	March	
	5. Economic models:	S.K.D		
	a) Agricultural: Von Thunen	D.B		
	b) Industrial: A. Weber	D.B		
	c) Developmental: S. Myrdal	D.B		
	1. Concept of Human resources.	A.D.S		
	2. Population structure — a) age and b) sex.	A.D.S	July- – October	
	<ul><li>3. Population composition</li><li>— a) economic and b)</li><li>linguistic.</li></ul>	A.D.S		
OGRAPHY	4. Population distribution and density: World and India.	A.C	November- December	
GROUP B: POPULATION GEOGRAPHY	5. Population growth and its related problems: India and China.	A.C	January- March	
3	6. Fertility and Mortality.	A.C		
B: POP	7. Migration : Types, causes and consequences	M.M	July-	
GROUPI	8. Theories of population growth: a) Malthus, b) Marx, c) Demographic transition	M.M	October	
	9. Concept of optimum population, overpopulation and under-population. Population	M.M	November- December	
	explosion and its impact on physical and cultural environment	M.M	January- March	

			PAPER III			
			1. Nature, composition and layering of the atmosphere.	O.M		
			2. Factors affecting insolation & heat budget of the atmosphere.	O.M		
			3. Horizontal and vertical distribution of temperature, inversion of temperature.	O.M	July- October	
		λĐC	4. Green house effect on global environment, importance of ozone layer.	M.M		
		GROUP A: CLIMATOLOGY	5. Planetary wind system with special reference to tricellular model, Rossby Waves, Jet Streams	M.M		January- March
	HONOURS	GROUP A	6. Genesis of Monsoon and its relation with Jet Stream, El Nino and La Nina.	M.M		
		YOURS	7. Processes of condensation and mechanism of precipitation: Bergereon-Fiendison, Collision- Coalescence theories.	S.K.D	November- December	
		8. Tropical and mid latitude cyclones.	A.C	January-		
			9. Climatic classification after Koppen and Thornthwaite.	A.C	March	
			1. Soil: Definition, factors and processes of formation.	A.S		
<b>E</b>	= 3	ОСВВЕН	2. Concept of zonal, azonal and intra-zonal soils, profile development under different conditions	A.S	July- October	
PART		10 TIO	<ul> <li>Podzols, Chernozems and Laterites.</li> </ul>	A.S		
		GROUP B: SOIL GEOGRAPHY	3. Physical properties of soil: texture, structure, colour and moisture.	D.B	November- December	
		<u>ច</u>	4. Chemical properties of soil: pH and organic matter.	D.B	January-	
			5. Soil erosion: types, factors and management.	D.B	March	



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		6. Principles of soil classification: Genetic and Taxonomical – with special reference to India.	D.B		
		7. Principles of land classification: USDA	D.B		
		1. Definitions of biosphere and biogeography. Concept of ecosystem – basic ecological principles – ecotone, communities, niche, succession, and habitat.	A.D.S	July- October	
	GEOGRAPHY	2. Ecosystem and energy: Energy sources, laws of energy exchange, food chains and food web	A.D.S		
	GROUP C: BIO-GEOGRAPHY	3. Concept of Biomes: study of Tropical rainforest, Taiga, Savannah, Desert, Tundra and	O.M	November- December	
	g	Temperate grasslands.  4. Spatial distribution of world fauna.	A.S	_	
		5. Concept of Biodiversity and wildlife conservation in India, Projects and their importance	A.S	January- March	
		<ul> <li>Project Tiger and Man and Biosphere Programme.</li> </ul>	A.S		
		PAPER IV			
OBIT	HNIQUES	Scales: Linear, diagonal and vernier, enlargement and reduction of map (10 Marks)	D.B		
O <sub>K</sub>	HICAL TEC	2. Megascopic analysis of minerals and rocks : (10 marks)	A.D.S		
	APPLIED GEOGRAPHICAL TECHNIQUES	a) Rocks – Granite, Basalt, Dolerite, Shale, Sandstone, Limestone, Conglomerate,	A.D.S	July- October	
	PLIED 6	Slate, Phyllite, Schist, Marble, Quartzite, Gneiss.	A.D.S		
	APF	b) Minerals and ores – Talc, Gypsum, Calcite, Mica, Feldspar, Quartz,	A.D.S		

Chalcopyrite, Hematite,			] i
Magnetite, Bauxite, Galena.	A.D.S		
3. Interpretation of topographical maps of Plateau region with R.F 1: 50,000: (20 marks)	A.S		
a) Demarcation of drainage basin (not more than 4th order, based on Strahler)	A.S		
b) Construction of profiles: superimposed, projected, composite and long profile of	A.S	oll	
river (length of the river not more than 10 km).	A.S	November- December	
c) The morphometric analysis to be done in 10 X 12cm grid	A.S	December	
i Drainage density (to be shown by isopleth)	A.S		
ii Average slope (Wentworth's method to be shown by isopleth)	A.S		
iii Relative Relief (to be shown by isopleth)	A.S		
d) Road density (to be shown gridwise).	A.S		
e) Interpretation of relief, drainage and vegetation characteristics.	A.S		
f) Interpretation of settlement, transport and communication systems.	A.S		
g) Relationship between physical and cultural elements (Transect Chart, not more	A.S		
than 8 km).		January- March	
4. Cartograms and thematic mapping : (10 Marks)			
a) Choropleth showing density of population	O.M		
b) Dots and Spheres diagram showing distribution of rural and urban population.	O.M		
c) Proportional pie-diagrams representing economic data and landuse data.	O.M		



		5. Projections: (20 Marks) a) Concept, classification,			
		constructions and suitability b) Construction and			
		properties of:	A.C		
		Zenithal Gnomonic and Stereographic (Polar Case), Simple Conic (with one standard	Aic	July- October	
		parallel), Bonne's, Sinusoidal, Polyconic, Cylindrical Equal Area and Mercator's	A.S	017	
		Projections.			
		6. Survey: (20 Marks)		November-	
		a) Closed traverse survey by Prismatic Compass.	D.B	December	
		b) Levelling by Dumpy Level with at least one change point: Drawing of profile and determination of gradient.	D.B	January- March	
		determination of gradient.			
		PAPER V			
		Social and Cultural Geography			
	L GEOGRAPHY		O.M		
HONOURS GROUP A: SOCIAL, CULTURAL AND POLITICAL G	OURS LAND POLITICA	2. Social geography of rural India: caste structure and social stratification; tribe – Santhals and Lepcha.	O.M	July- October	
	<ul><li>3. Urban social Geography</li><li>— Social ecology and social space.</li></ul>	M.M			
	OCIAL	4. Rural settlements – its forms, site and situations.	M.M		
		Urban settlement – morphology and hierarchy.	M.M	November-	
		Political Geography		December —	
<u></u>	5. Concept of Political Geography and geo-politics; concept of frontier and boundary	D.B			



		<ul> <li>6. Concept of cold war; bipolarisation and unipolarisation.</li> <li>7. Political geography of India: Administrative settings of India, problem of border states,</li> <li>partition and its geo-political</li> </ul>	D.B A.S	January- March	
		implications.			
	УРНУ	1. Concepts of regions; basis of regionalization with reference to India physical, economic and planning.	A.C	July- October	
	GROUP B: REGIONAL GEOGRAPHY	2. a) Physiographic Regions of India with special reference to Kashmir Himalaya b) Agricultural Region of India of India with special reference to Punjab-Haryana	A.C	November- December	
	GROI	c) Industrial Region of India with special reference to Mumbai-Pune industrial belt	S.K.D	January-	
		3. Regional disparities in India: causes and implications	S.K.D	March	
		PAPER VI			
	GRAPHY	Definition and nature of Geography.	A.C		
3	HY OF GEO	2. Selected contributors in the evolution of geographical thought Humboldt, Vidal de la	A.S	July- October	
	OSOP	Blache, Carl Sauer and David Harvey	A.C		
	GROUP A: PHILOSOPHY OF GEOGRAPHY	3. Major postulates: Determinism, Possibilism, Regional differentiation, location, time and	A.C	November- December	
	0	space.	A.C		

	4. Changing approaches and methodology: Positivism, Quantitative Revolution, Welfare- Behavioural approach,	A.C	January- March
	Structural and radical approach	A.C	
	Section -1: Natural hazards and their management in the Indian Sub-continent:		
	5. Concept of hazards and disasters: Natural, quasinatural and man-made hazards, different	A.S	July- October
	approaches in hazard management.	A.S	
IGRAPHY	6. Climatic hazards: Flood, drought and cyclone mechanism – environmental impact and	A.S	
GEO	management.	A.S	November-
TEMPORARY ISSUES IN GEOGRAPHY	7. Geomorphic hazards: landslide, river bank erosion, coastal erosion environmental impact	A.S	December
RAR	and management.		
	8. Edaphic and biotic hazards: Deforestation, desertification, loss of biodiversity —	M.M	January- March
GROUP B: CON	environmental impact and management.		
GRO	Section-2: Economic and human development in the Third World		
	9. Concept of third world, concept of development and under development: Basic indicators of	A.C	July- October
	economic, human and gender development.		
	10. Problems of third world  – Poverty, Population explosion, food security and hunger,	A.C	November- December

	unemployment, malnutrition and child labour.  11. Globalization and sustainable development.  12. Problem of urbanization.	A.C	January- March -	
	PAPER VII			
	13. Interpretation of geological maps and drawing of sections: Uniclinal, folds with unconformity and igneous	A.S		
	intrusions (20 marks)  14. Interpretation of Indian Daily Weather Maps – Monsoon and Post Monsoon. (15 marks)	D.B		
	15. Remote Sensing (15 marks)			
VIQUES	a. Basic concept of remote sensing, EMR, Band	S.K.D	July- October	
HICAL TECHI	b. Types of satellites and sensors with special reference to IRS series of satellites;	S.K.D		
GRAPI	types of resolutions and their applicability	S.K.D		
APPLIED GEOGRAPHICAL TECHNIQUES	c. Principles of preparing standard false colour composite, landuse and land cover	S.K.D		
	mapping from standard FCC with header information.	S.K.D		
	d. Interpretation of aerial photograph – basic principles of aerial photography, side	D.B		
	lap, end lap, flight line, air base, fudicial marks, .Principle Point, Nadir Point,	D.B	November- December	
	Conjugate Principal Point,	D.B		
	e. Preparation of aerial photo mosaics, demarcation of effective area, extraction of	D.B		

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cultural and physiographic features within this area with preparation of	D.B		
interpretation key.			
16. Geographical Information System. (15 marks)	D.B		
a. Concept of GIS and its applicability: Spatial and attribute data, raster and vector	D.B		
data structure and concept of information layers in GIS.	D.B	010	<b>)</b>
b. Georeferencing of scanned maps and ascribing projection (Polyconic/ UTM)	D.B	January- March	
c. Digitisation of point, line and polygon layers; Attachment of appropriate	D.B		
attribute tables.			
d. Preparation of thematic maps from attached data: choropleth, pie chart and bar	D.B		
graphs.	D.B		
	A.D.S	Julv-	
17. Field Report	A.S	March	Project
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Nature of statistical data: discrete, continuous, parametric and non- parametric data.	A.D.S		
2. Tabulation and classification of statistical data.	A.D.S	July-	
3. Frequency distribution: histogram, frequency polygon, ogive, normal and skewed	A.D.S	October	
distribution, measures of skewness.	A.D.S		
4. Measures of central tendency: mean, median, mode, partition values : quartile, decile,	A.D.S	November- December	
	features within this area with preparation of interpretation key.  16. Geographical Information System. (15 marks)  a. Concept of GIS and its applicability: Spatial and attribute data, raster and vector  data structure and concept of information layers in GIS.  b. Georeferencing of scanned maps and ascribing projection (Polyconic/ UTM)  c. Digitisation of point, line and polygon layers; Attachment of appropriate attribute tables.  d. Preparation of thematic maps from attached data: choropleth, pie chart and bar graphs.  17. Field Report  PAPER VIII  1. Nature of statistical data: discrete, continuous, parametric and non-parametric data. 2. Tabulation and classification of statistical data. 3. Frequency distribution: histogram, frequency polygon, ogive, normal and skewed distribution, measures of skewness.  4. Measures of central tendency: mean, median, mode, partition values:	features within this area with preparation of interpretation key.  16. Geographical Information System. (15 marks)  a. Concept of GIS and its applicability: Spatial and attribute data, raster and vector  data structure and concept of information layers in GIS.  b. Georeferencing of scanned maps and ascribing projection (Polyconic/ UTM)  c. Digitisation of point, line and polygon layers; Attachment of appropriate attribute tables.  d. Preparation of thematic maps from attached data: choropleth, pie chart and bar graphs.  D.B  A.D.S  17. Field Report  PAPER VIII  1. Nature of statistical data: discrete, continuous, parametric and non-parametric data. 2. Tabulation and classification of statistical data: 3. Frequency distribution: histogram, frequency polygon, ogive, normal and skewed distribution, measures of skewness.  4. Measures of central tendency: mean, median, mode, partition values:  A.D.S	features within this area with preparation of interpretation key.  16. Geographical Information System. (15 marks)  a. Concept of GIS and its applicability: Spatial and attribute data, raster and vector  data structure and concept of information layers in GIS. b. Georeferencing of scanned maps and ascribing projection (Polyconic/ UTM) c. Digitisation of point, line and polygon layers; Attachment of appropriate attribute tables. d. Preparation of thematic maps from attached data: choropleth, pie chart and bar graphs.  D.B  17. Field Report  PAPER VIII  1. Nature of statistical data: discrete, continuous, parametric and non-parametric data. 2. Tabulation and classification of statistical data. 3. Frequency distribution: histogram, frequency polygon, ogive, normal and skewed distribution, measures of skewness.  4. Measures of central tendency: mean, median, mode, partition values:  A.D.S  November-December

	5. Measures of dispersion: mean deviation, quartile deviation, semi-quartile range, standard deviation and co-efficient of variation.	A.D.S	January- March
	Section-A: Representation of climatic and hydrological data of the Indian Subcontinent.		
	1. a) Preparation and Interpretation of a climatic chart showing relationship between rainfall,	A.S	
	temperature, pressure and relative humidity of a station for three months, preparation and	A.S	July- November
(50Marks	interpretation of Taylor's Climograph and Hythergraph.	A.S	
orary issues in Geography (50Marks)	b) Preparation of station models for different meteorological stations of India with the help of	A.S	
	Synoptic chart.  2. Preparation and interpretation of rating curves, hydrographs and unit hydrographs of rivers flowing through the Indian	A.S	December- March
Group-B: Contemp	Sub-continent.  Section-B: Economic and Human Development in Third World.		
	3. Computation of Human and Gender Development Index and ranking of	A.C	July- October
	countries/states/districts based on HDI and GDI.	A.C	October
	4. Preparation of questionnaire schedule for assessment of development and for perception	A.C	November- December
	5. Measures of Spatial and size-class distribution.	A.C	January- March

6. a) Dominant-distinctive function.	A.C
b) Rank-size rule.	A.C
c) Lorenz curve.	A.C

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Year	(Hons/General)	Syllabu: Module/Ur	I I I I I I I I I I I I I I I I I I I	No. of lectur es (Hours )	Teachers	Distribution	Project/ Student Seminar (if any)
			Paper I				
			1. Structure of the earth		SKD	July- August	
		,	2. Influence of rocks on topography: Limestone and Granite		SKD	July- August	
	te cri	3. Broad outline of plate tectonics and major crustal formations – fold mountains, trenches and island arcs		SKD	September		
art	Part   General	5. fo an lai	4. Evolution of landforms under fluvial process, Normal Cycle of Erosion.		SKD	October- November	
			5. Processes of formation of erosional and depositional landforms: coastal and aeolian		SKD	December - January	
		*	1. Insolation and Heat Budget.		AC	July- August	
		Group B: Climatology	2. Horizontal and Vertical distribution of temperature and pressure.		AC	July- August	
			3. Greenhouse effect.		AC	September	

		4. Atmospheric disturbances: Tropical and Mid-latitude cyclones.	AC	October- November
		5. Characteristics of Monsoonal rainfall	AC	December - January
		6. Climatic classification after Kőppen.	AC	January
		1. Factors of soil formation.	AC	July- August
		2. Development of an ideal soil profile and eluviation and illuviation	AC	July- August
	Group C: Biogeography	3. Properties of soil: Physical (texture, structure) and Chemical (pH, organic matter).	AC	September
	ıp C: Bioջ	4. Concept of zonal, azonal and intrazonal soils	AC	October- November
	Grou	5. Concept of Ecosystem and Biomes – i) Tropical Rainforest, ii) Hot Desert	AC	December - January
		6. Plant types and distribution (Halophite, Xerophytes, Hydrophite, Mesophite)	AC	January
		Paper II		
	Social	1. Factors of growth and distribution of world population.	DB	July- August
Part II General	Group A: Population and Social Geography	2. Fertility, mortality and age-sex structure of population with reference to India.	DB	July- August
Part I	A: Popu Geo	3. Migration: Types, causes and consequences.	DB	September
	Grouk	4. Contemporary Social issues: Literacy and poverty.	DB	October- November

	1. Sectors of the economy: primary, secondary, tertiary and quaternary: Changing emphasis through time	AC	July- August	
	2. Types of agriculture:	AC	July- August	
<u>&gt;</u>	a) Shifting cultivation of India.	AC	September	
graph	b) Intensive subsistence rice farming in India.	AC	October- November	
ic Gec	c) Plantation farming in India:Tea and Coffee	AC	October- November	
Group B: Economic Geography	3. Scales of production: cottage, small scale and large-scale industries — general characteristics and examples	AC	December - January	
Gre	4. Location, problems and prospects of Indian industries	AC	December - January	
	a) Cotton textile industry.	AC	January	
	b) Heavy engineering industry: locomotive.	AC	January	
	c) Petroleum refining industry	AC	January	
	1. Regions of India:	DB		
nenta	a) Concept of regions: formal and functional	DB	July- August	
GROUP-C: Regional Geography And Environme Issues Of India	b) Broad physiographic regions of India: special reference to Deccan Trappe	DB	July- August	
ıl Geography A Issues Of India	c) Agricultural Regions of India: special reference to Punjab- Haryana wheat belt,	DB	September	
: Regional G	d) Industrial Regions of India: special reference to Asansol-Durgapur industrial belt.	DB	October- November	
GROUP-C	2. Indian monsoon and its impact: problem of flood, drought and cyclone.	DB	October- November	

	3. Forest resources of India: issues concerning deforestation and social forestry.  4. Causes and consequences of soil erosion in India.	DB DB	December - January December - January	
	Paper III			
	-			
	1. Scales: Concept of scales, drawing of linear scales.	AC	July- September	
GROUP-A: CARTOGRAPHY	2. Projections: Concept and major classification. Construction may be done graphically or	AS	July- August	
CARTC	a) Simple conic with one standard parallel	AC	August	
Ϋ́	b) Cylindrical Equal Area	SKD	September	
ROUP.	c) Polar Zenithal Gnomonic.	SKD	September	
<b>.</b>	3. Cartograms: Choropleth, pie-graphs and square diagrams with proportional scales.	ОМ	October- November	
	1. Basis of numbering and scale of Survey of India Topographical sheets.	ОМ	October- November	
terpretation	2. Interpretation of 1:50,000 topographical sheets under the following heads:	ОМ	November	
GROUP-B: Map Interpretation	I. Interpretation of relief and drainage from topographical maps with profiles and sketches.	ОМ	December - January	
GR	II. Interpretation of communication and settlement from topographical maps with sketches.	ОМ	December - January	

	III. Relationship between physical and cultural features with the help of transect chart.	ОМ	December - January	
	1. Nature and classification of data.	ОМ	July- September	
GROUP-C: Statistics	2. Process of tabulation and graphical representation: histogram, frequency polygon, cumulative	ОМ	July- August	
חס	frequency curve.	ОМ	August	
GR	3. Measures of central tendency: mean, median and mode.	ОМ	September	
GROUP-D: FIELD REPORT	Field Report on either a rural mouza or an urban ward (to be conducted during field excursion)	AS AC	October- November	Project

		Paper IV			
<b>= 7</b>		Section I: Land use and settlement Geography (30 Marks)			
	ZAL F	1. Concept and attributes of land.	ОМ	July- September	
art	: THEORITICAL GEOGRAPHY	2. Objectives and principles of land use.	ОМ	July- August	
<b>D</b> S	A:	3. Factors influencing land use and land categories:	ОМ	August	
	GROUP- APPLIE	a) Agricultural land use.	ОМ	September	
	GRC	b) Non-agricultural landuse.	ОМ	September	

	4. Rural settlements: evolution, nature and effect of physical environment,  5. Urban settlements: definition, morphology and function.	ОМ	October- November  October- November	
	Section II: Remote Sensing and Geographical Information System	SKD	July- September	
	1. Concept of Remote Sensing, different methods of remote sensing – aerial photo and satellite imagery.	SKD	July- September	
	2. Aerial Photo: Types and interpretation keys; concept of principal point, fudicial marks, flight line, photo	SKD	December - January	
	overlap.  3. IRS images: Sensors, different types of resolution and their applicability.	SKD	December - January	
	4. Concept of GIS and its applicability: Spatial and attribute data, raster and vector data structure and concept of GIS	SKD	December - January	
GROUP- A: PRACTICAL APPLIED GEOGRAPHY	1. Interpretation of Daily Weather Maps published by India Meteorological Department – Monsoon Season	DB	July- January	
GROUP- A: PR/ GEOG	Preparation of thematic maps:     i) Flow diagram and ii)     Determination of Detour Index	AC	September- October	

		3. Aerial photo interpretation for identification of broad physical and cultural features. (7 Marks)		SKD	November- January	
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Semester	(Hons /General)	Internal Assessment	University
		(Tentative time)	Examination
Part II	Hons./ General	Test Exam- 2 <sup>nd</sup> week of January, 2019	May, 2019 (Tentative)
Part II	Hons./ General	Test Exam- 2 <sup>nd</sup> week of January, 2019	April, 2019 (Tentative)
Part III	Hons./ General	Test Exam- 2 <sup>nd</sup> week of January, 2019	March, 2019 (Tentative)

# **ACADEMIC CALENDAR**

### **Department of GEOGRAPHY**

**Session: 2018- 2019** 

Semester	(Hons /Gener al)	Syllabus Module/Unit	Topic	No. of lectures (Hours)	Teachers	Distribution	Project/ Student Seminar (if any)
			For ODI	) Seme	esters		
			Paper	Code: GEOA	COR01T		
		Unit I: Geotectonic	Earth's tectonic and structural evolution with reference to geological time scale.	60	D.B	July- August	
			Earth's interior with special reference to seismology.	9	A.C	July- August	
_	S		Plate Tectonics as a unified theory of global tectonics: Processes and landforms at plate margins and hotspots.		O.M	August- September	
MESTER	Honours Carbon Page 1	Geomorphol	Degradational processes: Weathering, mass wasting and resultant landforms.		A.S	August- September	
S			Development of river network and landforms on folded structures.		A.D.S	September- October	
			Glacial and glacio- fluvial processes and landforms.		M.M	October- November	
			Aeolian and fluvio- aeolian processes and landforms.		A.D.S	October- November	
			Models on landscape evolution: Views of Davis and Hack		S.K	December- January	

	Paper C	ode: GEOAC	OR01P		
Geotect onic& Geomor phology Lab.	Megascopic identification of (a) mineral samples: Bauxite, calcite, chalcopyrite, galena, hematite, mica, quartz, tourmaline; and (b) rock samples: Granite, basalt, laterite, sandstone, conglomerate, slate, phyllite, schist, gneiss,	60	A.D.S	July- Januar y	
	marble Interpretation of geological maps with unconformity and intrusions on uniclinal structure		A.S	July- Januar y	
C	· _	Code: GEOA	COR02T		
Cartogra phic Techniq	Maps: Classification and types. Components of a map	60	M.M	July- August	
ues	Concept and application of scales: Plain, comparative and diagonal		D.B	Septembe rto November	
	Survey of India topographical maps: Reference scheme of old and open series. Information on the margin of maps		A.S	Septembe rto November	
	Coordinate systems: Polar and rectangular		D.B	November -December	
<b>*</b>	Concept of generating globe and UTM projection		A.D.S	December -January	
	Map projections: Classification, properties and uses		S.K & A.C	December -January	
	Paper Code: GEC	DACOR02P			
	Graphical construction of scales: Plain, comparative and diagonal		D.B	Septembe rto November	

Cartographic	Construction of	60		November-
Techniques	projections: Polar			December
	Zenithal		A.C, S.K &	
	Stereographic,		A.D.S	
	Bonne's, Cylindrical		7 11.2.13	
	Equal Area, and			
	Mercator's			
	Delineation of			December-
	drainage basin from			January
	Survey of India			
	topographical map,			
	relative relief map,		A.S	
	slope map			
	(Wentworth), and			
	stream ordering			
	(Strahler) on a			
	drainage basin.			December
	Correlation between			December-
	physical and cultural features from Survey			January
	·		O.M	
	of India topographical			
	maps using transect chart.			

		For EVE	N Sem	esters	5	
		Paper	Code: GEO	ACOR03T		
	Unit I: Nature and Principles	Nature, scope and recent trends. Elements of Human Geography		S.K	February	
		Approaches to Human Geography; Environmental		S.K	February	
		Concept and classification of race		S.K	March	
12		Cultural regions (language and religion)	-	S.K	March	
	Unit II: Society, Demograph y and Ekistics	Evolution of human societies: Hunting and food gathering, pastoral nomadism, subsistence farming and industrial society	90	M.M	February	
		Human adaptation to environment: Masai		M.M	February- March	

			Population growth and distribution, demographic transition		M.M, A.D. S	March
			Types and patterns of rural settlements		O.M	March- April
_			Morphology of urban settlements		O.M	April
7	ર		Paner	Code: GEO	ACORO4T	
ite	3	Cartograms	Concepts of rounding,	Joue. GLO	D.B	February-
Semester	Honours	Cartograms and Thematic Mapping	scientific notation, logarithm and anti- logarithm, natural and log scales		<b>Б.</b> Б	March
			Diagrammatic	-	A.S	March
			representation of data: Line, Bar,	60		
			Isopleths  Representation of		A.S	March-
			socio-economic data:		A.3	April
			Dots and spheres,			7-7-1
			proportional circles			
			and Choropleth			
			Bearing: Magnetic and		A.D.	February
			true, whole-circle and reduced		S	
			Basic concepts of	-	D.B	March-
			surveying and survey		2.2	May
			equipment: Prismatic			
			Compass, Dumpy			
			Level, Theodolite			
			Paper (	Code: GEO	ACOR04P	
	R	Cartograms and Thematic Mapping lab	Thematic maps:			
			Choropleth     showing density of     population		A.S	February
			population  - Dots and Spheres diagram		A.S	March
			showing distribution of rural and urban population.	60		
			<ul> <li>Proportional pie- diagrams representing economic data and land use data</li> </ul>		A.S	March
			4			

			prism Profi	erse survey using natic compass, e survey using by Level		D.B	March- May		
Year	(Hons/G	ieneral)	Syllabus Module/Uni	тор	ic	Teachers	Distribution	Project/ Student Seminar (i any)	
				PAPER III					
				1. Nature, complayering of the a		O.M			
				2. Factors affectinsolation & heather atmosphere	ting at budget of	O.M	July-		
		3. Horizontal and distribution of to inversion of ten	emperature,	O.M	October				
			ΛĐΟ	4. Green house global environm importance of contractions	effect on nent,	M.M			
				GROUP A: CLIMATOLC	5. Planetary wir with special refo cellular model, Waves, Jet Stre	erence to tri- Rossby	M.M	January- March	
$\omega$	S GROUP AS	6. Genesis of M its relation with El Nino and La N	Jet Stream,	M.M					
PART II	AGHONOH			7. Processes of condensation a mechanism of paragereon-Fien Collision-	orecipitation: dison,	S.K.D	November- December		
	I		_	8. Tropical and cyclones.		A.C	January-		
				9. Climatic class after Koppen ar Thornthwaite.		A.C	March		
			GR OU P						

		1. Soil: Definition, factors and processes of formation.	A.S		
		2. Concept of zonal, azonal and intra-zonal soils, profile development under different conditions	A.S	July- October	
		<ul> <li>Podzols, Chernozems and Laterites.</li> </ul>	A.S		
		3. Physical properties of soil: texture, structure, colour and moisture.	D.B	November- December	
		4. Chemical properties of soil: pH and organic matter.	D.B	01	
		5. Soil erosion: types, factors and management.	D.B		
		6. Principles of soil classification: Genetic and Taxonomical – with special reference to India.	D.B	January- March	
		7. Principles of land classification: USDA	D.B		
		1. Definitions of biosphere and biogeography. Concept of ecosystem – basic ecological	A.D.S		
		principles – ecotone, communities, niche, succession, and habitat.		July- October	
	GEOGRAPHY	2. Ecosystem and energy: Energy sources, laws of energy exchange, food chains and food web	A.D.S		
	GROUP C: BIO-GEOGRAP	3. Concept of Biomes: study of Tropical rainforest, Taiga, Savannah, Desert, Tundra and	O.M	November- December	
	5	Temperate grasslands.		-	
		4. Spatial distribution of world fauna.	A.S		
		5. Concept of Biodiversity and wildlife conservation in India, Projects and their importance	A.S	January- March	
		– Project Tiger and Man and	A.S	1	



# APPLIED GEOGRAPHICAL TECHNIQUES

PAPER IV			
1. Scales: Linear, diagonal and vernier, enlargement and reduction of map (10 Marks)	D.B		
2. Megascopic analysis of minerals and rocks: (10 marks)	A.D.S		
a) Rocks – Granite, Basalt, Dolerite, Shale, Sandstone, Limestone, Conglomerate,	A.D.S	July- October	
Slate, Phyllite, Schist, Marble, Quartzite, Gneiss.	A.D.S	01	<b>)</b>
b) Minerals and ores – Talc, Gypsum, Calcite, Mica, Feldspar, Quartz,	A.D.S		
Chalcopyrite, Hematite, Magnetite, Bauxite, Galena.	A.D.S		
3. Interpretation of topographical maps of Plateau region with R.F 1: 50,000: (20 marks)	A.S		
<ul> <li>a) Demarcation of drainage basin (not more than 4th order, based on Strahler)</li> </ul>	A.S		
b) Construction of profiles: superimposed, projected, composite and long profile of	A.S		
river (length of the river not more than 10 km).	A.S	November- December	
c) The morphometric analysis to be done in 10 X 12cm grid	A.S	December	
i Drainage density (to be shown by isopleth)	A.S		
ii Average slope (Wentworth's method to be shown by isopleth)	A.S		
iii Relative Relief (to be shown by isopleth)	A.S		
d) Road density (to be shown gridwise).	A.S		
e) Interpretation of relief, drainage and vegetation characteristics.	A.S	January- March	

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		PAPER V			
		acternination of gradient.			
		point: Drawing of profile and determination of gradient.		March	
		with at least one change	D.B	January-	
		Prismatic Compass. b) Levelling by Dumpy Level			
		a) Closed traverse survey by	D.B	December	
		6. Survey: (20 Marks)		November-	
		Projections.			
		Cylindrical Equal Area and Mercator's	A.S		
		parallel), Bonne's, Sinusoidal, Polyconic,	A C		
		standard			
		Simple Conic (with one		July- October	
		Zenithal Gnomonic and Stereographic (Polar Case),		11	
		properties of:	A.C		
		b) Construction and			
		<ul> <li>a) Concept, classification, constructions and suitability</li> </ul>			
		5. Projections: (20 Marks)			
		c) Proportional pie-diagrams representing economic data and landuse data.	О.М	<b>Y</b>	
		b) Dots and Spheres diagram showing distribution of rural and urban population.	O.M		
		a) Choropleth showing density of population	О.М		
		4. Cartograms and thematic mapping: (10 Marks)			
		than 8 km).			
		physical and cultural elements (Transect Chart, not more	A.S		
		g) Relationship between			
		communication systems.	71.5		
		f) Interpretation of settlement, transport and	A.S		

PART III
HONOURS

GROUP A: SOCIAL, CULTURAL AND POLITICAL GEOGRAPHY (60

PAPER V			
Social and Cultural			
Geography			
1. Concept of culture and its components with special emphasis on India: language, religion and	O.M	July- October	



	ethnicity.			
	2. Social geography of rural India: caste structure and social stratification; tribe – Santhals and Lepcha.	O.M		
	Urban social Geography     Social ecology and social space.	M.M		
	4. Rural settlements – its forms, site and situations.	M.M		
	Urban settlement – morphology and hierarchy.	M.M	00	<b>)</b>
	Political Geography		November- December	
	5. Concept of Political Geography and geo-politics; concept of frontier and boundary	D.B	Jesel i i i i i i i i i i i i i i i i i i i	
	6. Concept of cold war; bipolarisation and unipolarisation.	D.B		
	7. Political geography of India: Administrative settings of India, problem of border states,	A.S	January- March	
	partition and its geo-political implications.	A.S		
40 Marks)	1. Concepts of regions; basis of regionalization with reference to India physical, economic and planning.	A.C	July- October	
GROUP B: REGIONAL GEOGRAPHY (40 Marks)	2. a) Physiographic Regions of India with special reference to Kashmir Himalaya	A.C	November-	
: REGIONAL	b) Agricultural Region of India of India with special reference to Punjab- Haryana		December	
GROUP B:	c) Industrial Region of India with special reference to Mumbai-Pune industrial belt	S.K.D	January-	
	3. Regional disparities in India: causes and implications	S.K.D	March	

	]			
		PAPER VI		
		Definition and nature of Geography.	A.C	
	40 MARKS)	2. Selected contributors in the evolution of geographical thought Humboldt, Vidal de la	A.S	July- October
	<b>АРНУ</b> (	Blache, Carl Sauer and David Harvey	A.C	
	Y OF GEOGRA	3. Major postulates: Determinism, Possibilism, Regional differentiation, location, time and	A.C	November- December
	ЭРН	space.	A.C	
	GROUP A: PHILOSOPHY OF GEOGRAPHY (40 MARKS)	4. Changing approaches and methodology: Positivism, Quantitative Revolution, Welfare-	A.C	
	GROU	Behavioural approach, Structural and radical approach	A.C	January- March
	HY (60 marks)	Section -1: Natural hazards and their management in the Indian Sub-continent:		
	GEOGRAPHY	5. Concept of hazards and disasters: Natural, quasinatural and man-made hazards, different	A.S	July- October
	UES IN	approaches in hazard management.	A.S	
	APORARY ISS	6. Climatic hazards: Flood, drought and cyclone mechanism – environmental impact and	A.S	
*	ITEN	management.	A.S	November-
	GROUP B: CONTEMPORARY ISSUES IN GEOGRAPI	7. Geomorphic hazards: landslide, river bank erosion, coastal erosion environmental impact	A.S	December
	פֿ	and management.		

	ı	·		1 1	
		8. Edaphic and biotic hazards: Deforestation, desertification, loss of biodiversity — environmental impact and management.	M.M	January- March	
		Section-2: Economic and human development in the Third World			
		9. Concept of third world, concept of development and under development: Basic indicators of	A.C	July- October	
		economic, human and gender development.  10. Problems of third world			
		- Problems of third world - Poverty, Population explosion, food security and hunger, unemployment, malnutrition and child labour.	A.C	November- December —	
		<ul><li>11. Globalization and sustainable development.</li><li>12. Problem of urbanization.</li></ul>	A.C	January- March	
		PAPER VII			
Q A P	APPLIED GEOGRAPHICAL TECHNIQUES	13. Interpretation of geological maps and drawing of sections: Uniclinal, folds with	A.S		
	PHICAL	unconformity and igneous intrusions (20 marks)			
	ED GEOGRAI	14. Interpretation of Indian Daily Weather Maps – Monsoon and Post Monsoon. (15 marks)	D.B	July- October	
	ΙΙΔΑΝ	15. Remote Sensing (15 marks)			
	*	a. Basic concept of remote sensing, EMR, Band	S.K.D		

	b. Types of satellites and sensors with special reference to IRS series of satellites;	S.K.D		
	types of resolutions and their applicability	S.K.D		
	c. Principles of preparing standard false colour composite, landuse and land cover	S.K.D		
	mapping from standard FCC with header information.	S.K.D		
	d. Interpretation of aerial photograph – basic principles of aerial photography, side	D.B		
	lap, end lap, flight line, air base, fudicial marks, .Principle Point, Nadir Point,	D.B		
	Conjugate Principal Point,	D.B	November-	
	e. Preparation of aerial photo mosaics, demarcation of effective area, extraction of	D.B	December	
	cultural and physiographic features within this area with preparation of	D.B	_	
	interpretation key.  16. Geographical Information System. (15 marks)	D.B		
	a. Concept of GIS and its applicability: Spatial and attribute data, raster and vector	D.B		
20 K	data structure and concept of information layers in GIS.	D.B		
	b. Georeferencing of scanned maps and ascribing projection (Polyconic/ UTM)	D.B	January- March	
	c. Digitisation of point, line and polygon layers; Attachment of appropriate attribute tables.	D.B	_	
	d. Preparation of thematic maps from attached data:	D.B		

		choropleth, pie chart and bar			
		graphs.	D.B		
		17. Field Report	A.D.S A.S	July- March	Project
		PAPER VIII			
		Nature of statistical data: discrete, continuous, parametric and non-parametric data.	A.D.S		
	Marks)	2. Tabulation and classification of statistical data.	A.D.S	July- October	
	hniques (50	3. Frequency distribution: histogram, frequency polygon, ogive, normal and skewed	A.D.S	- October	
	al Tecl	distribution, measures of skewness.	A.D.S		
	Group-A: Statistical Techniques (50 Marks)	4. Measures of central tendency: mean, median, mode, partition values: quartile, decile, percentile.	A.D.S	November- December	
		5. Measures of dispersion: mean deviation, quartile deviation, semi-quartile range, standard	A.D.S	January- March	
		deviation and co-efficient of variation.	A.D.S		
2 PAR	n Geography	Section-A: Representation of climatic and hydrological data of the Indian Subcontinent.			
	Group-B: Contemporary issues in Geography (50Marks)	1. a) Preparation and Interpretation of a climatic chart showing relationship between rainfall,	A.S		
	-B: Contemp (5	temperature, pressure and relative humidity of a station for three months, preparation and	A.S	July- November	
	Group	interpretation of Taylor's Climograph and Hythergraph.	A.S		

b) Preparation of station models for different meteorological stations of India with the help of Synoptic chart.	A.S	
2. Preparation and interpretation of rating curves, hydrographs and unit hydrographs of rivers	A.S	December- March
flowing through the Indian Sub-continent.		
Section-B: Economic and Human Development in Third World.		011
3. Computation of Human and Gender Development Index and ranking of	A.C	July- October
countries/states/districts based on HDI and GDI.	A.C	October
4. Preparation of questionnaire schedule for assessment of development and for perception survey.	A.C	November- December
5. Measures of Spatial and size-class distribution.	A.C	
6. a) Dominant-distinctive function.	A.C	January- March
b) Rank-size rule.	A.C	
c) Lorenz curve.	A.C	

		Paper II		
	Social	1. Factors of growth and distribution of world population.	DB	July- August
	Group A: Population and Social Geography	2. Fertility, mortality and age-sex structure of population with reference to India.  3. Migration: Types,	DB	July- August
	A: Popu Geo	3. Migration: Types, causes and consequences.	DB	September
	Group	4. Contemporary Social issues: Literacy and poverty.	October- November	
		1. Sectors of the economy: primary, secondary, tertiary and quaternary: Changing emphasis through time	AC	July- August
_   _		2. Types of agriculture:	AC	July- August
t   set	<u>&gt;</u>	a) Shifting cultivation of India.	AC	September
Part II Genera	Group B: Economic Geography	b) Intensive subsistence rice farming in India.	AC	October- November
		c) Plantation farming in India:Tea and Coffee	AC	October- November
		3. Scales of production: cottage, small scale and large-scale industries — general characteristics and examples	AC	December - January
		4. Location, problems and prospects of Indian industries	AC	December - January
		a) Cotton textile industry.	AC	January
		b) Heavy engineering industry: locomotive.	AC	January
		c) Petroleum refining industry	AC	January
	۲. 0	1 Degions of India	55	
	GROUP- C:REGIO NAL	Regions of India:     a) Concept of regions:     formal and functional	DB DB	July- August

		b) Broad physiographic regions of India: special reference to Deccan Trappe		DB	July- August	
		c) Agricultural Regions of India: special reference to Punjab- Haryana wheat belt,		DB	September	
		d) Industrial Regions of India: special reference to Asansol-Durgapur industrial belt.		DB	October- November	
		2. Indian monsoon and its impact: problem of flood, drought and cyclone.		DB	October- November	
		3. Forest resources of India: issues concerning deforestation and social forestry.	Ö	DB	December - January	
		4. Causes and consequences of soil erosion in India.		DB	December - January	
		Paper III				
		1. Scales: Concept of scales, drawing of linear scales.		AC	July- September	
GROUP-A:CARTOGRAPHY	2. Projections: Concept and major classification. Construction may be done graphically or		AS	July- August		
	a) Simple conic with one standard parallel		AC	August		
	b) Cylindrical Equal Area		SKD	September		
	c) Polar Zenithal Gnomonic.		SKD	September		
	3. Cartograms: Choropleth, pie-graphs and square diagrams with proportional scales.		ОМ	October- November		
GROUP- B:MAP	INTERPRET	1. Basis of numbering and scale of Survey of India Topographical sheets.		ОМ	October- November	

			2. Interpretation of 1:50,000 topographical sheets under the following heads: I. Interpretation of relief and drainage from topographical maps with profiles and	ОМ	November  December - January	
			II. Interpretation of communication and settlement from topographical maps with sketches.	ОМ	December - January	
			III. Relationship between physical and cultural features with the help of transect chart.	ОМ	December - January	
		_	1. Nature and classification of data.	ОМ	July- September	
		GROUP-C: STATISTICS	2. Process of tabulation and graphical representation: histogram, frequency polygon, cumulative	ОМ	July- August	
		JUC	frequency curve.	ОМ	August	
		GRC	3. Measures of central tendency: mean, median and mode.	ОМ	September	
		GROUP-D: FIELD REPORT	Field Report on either a rural mouza or an urban ward (to be conducted during field excursion)	AS AC	October- November	Project
	_		Paper IV			
Part III	Genera		Section I: Land use and settlement Geography (30 Marks)			

1. Concept and attributes of land.	ОМ	July- September	
2. Objectives and principles of land use.	ОМ	July- August	
3. Factors influencing land use and land categories:	ОМ	August	
a) Agricultural land use.	ОМ	September	
b) Non-agricultural landuse.	ОМ	September	
4. Rural settlements: evolution, nature and effect of physical environment,	ОМ	October- November	
5. Urban settlements: definition, morphology and function.	ОМ	October- November	
Section II: Remote Sensing and Geographical Information System	SKD	July- September	
1. Concept of Remote Sensing, different methods of remote sensing – aerial photo and satellite imagery.	SKD	July- September	
2. Aerial Photo: Types and interpretation keys; concept of principal point, fudicial marks, flight line, photo	SKD	December - January	
overlap.			
3. IRS images: Sensors, different types of resolution and their applicability.	SKD	December - January	
4. Concept of GIS and its applicability: Spatial and attribute data, raster and vector data structure and concept of GIS	SKD	December - January	

ED GEOGRAPHY	1. Interpretation of Daily Weather Maps published by India Meteorological Department – Monsoon Season	DB	July- January
APPLI	2. Preparation of thematic maps:		
PRACTICAL APPLIED	i) Flow diagram and ii) Determination of Detour Index	AC	September- October
GROUP- A: PR	3. Aerial photo interpretation for identification of broad physical and cultural features. (7 Marks)	SKD	November- January

Semester	(Hons /General)	Internal Assessment	University
		(Tentative time)	Examination
		<b>6</b>	
ı	Hons.	1 <sup>st</sup> Internal Assessment-2 <sup>nd</sup>	January, 2022
•		Week of September,2018	(Tentative)
		2 <sup>nd</sup> Internal Assessment-2 <sup>nd</sup> Week of November, 2018	
II	Hons.	1st Internal Assessment-3rd Week of April, 2019	July, 2022 (Tentative)
		2nd Internal Assessment-2nd Week of May, 2019	
Part II	Hons./ General	Test Exam- 2 <sup>nd</sup> week of January, 2019	April, 2019 (Tentative)

Part III	Hons./ General	Test Exam- 2 <sup>nd</sup> week of January, 2019	March, 2019 (Tentative
			18/1
		O <sub>K</sub>	
A P			

# **ACADEMIC CALENDAR**

### **DEPARTMENT OF GEOGRAPHY**

Session: 2019- 2020

Semester	(Hons /Gener al)	Syllabus Module/Unit	Торіс	No. of lectures (Hours)	Teachers	Distribution	Project/ Student Seminar (if any)
			For ODI	) Seme	sters		
			Paper	Code: GEOA	COR01T		
		Unit I: Geotectonic	Earth's tectonic and structural evolution with reference to geological time scale.	60	D.B	July- August	
			Earth's interior with special reference to seismology.		A.C	July- August	
_	S		Plate Tectonics as a unified theory of global tectonics: Processes and landforms at plate margins and hotspots.		O.M	August- September	
SEMESTER	Honours	Unit II: Geomorphol ogy	Degradational processes: Weathering, mass wasting and resultant landforms.		A.S	August- September	
			Development of river network and landforms on folded structures.		A.D.S	September- October	
			Glacial and glacio- fluvial processes and landforms.		M.M	October- November	
			Aeolian and fluvio- aeolian processes and landforms.		A.D.S	October- November	
			Models on landscape evolution: Views of Davis and Hack		S.K	December- January	



	Paper C	ode: GEOAC	OR01P		
Geotect onic& Geomor phology Lab.	Megascopic identification of (a) mineral samples: Bauxite, calcite, chalcopyrite, galena, hematite, mica, quartz, tourmaline; and (b) rock samples: Granite, basalt, laterite, sandstone, conglomerate, slate, phyllite, schist, gneiss, marble	60	A.D.S & O.M	July- Januar y	
	Interpretation of geological maps with unconformity and intrusions on uniclinal structure		A.S	July- Januar y	
	Paner (	Code: GEOA	COROST		
Cartogra	Maps: Classification	60			
phic Techniq	and types. Components of a map		M.M	July- August	
ues	Concept and application of scales: Plain, comparative and diagonal		D.B	Septembe rto November	
	Survey of India topographical maps: Reference scheme of old and open series. Information on the margin of maps		A.S	Septembe rto November	
	Coordinate systems: Polar and rectangular		D.B	November -December	
*	Concept of generating globe and UTM projection		A.D.S	December -January	
	Map projections: Classification, properties and uses		S.K & A.C	December -January	
	Paper Code: GEC	DACOR02P			
	Graphical construction of scales: Plain, comparative and diagonal		D.B	Septembe rto November	

			Zenithal Stereographic, Bonne's, Cylindrical Equal Area, and Mercator's		A.C, S.K & A.D.S		
			Delineation of drainage basin from Survey of India topographical map, relative relief map, slope map (Wentworth), and stream ordering (Strahler) on a drainage basin.		A.S	December- January	
			Correlation between physical and cultural features from Survey of India topographical maps using transect chart.		O.M	December- January	
			Paper Code: G	EOACOR05T	•		
		Unit I: Elements of the Atmosphere	Nature, composition and layering of the atmosphere		O.M	July-August	
		Authosphere	Insolation: controlling factors. Heat budget of the atmosphere		O.M	August- September	
SEMESTER	Honours	RIII	Temperature: horizontal and vertical distribution. Inversion of temperature: types, causes and consequences		D.B	September- October	
SEN	H		Greenhouse effect and importance of ozone layer		A.C	November- December	
		Unit II: Atmospheric Phenomena and Climatic Classification	Condensation: Process and forms. Mechanism of precipitation: Bergeron-Findeisen theory		S.K	July-August	

Cartographic

Techniques

Construction of

projections: Polar

60

November-

December

Air mass: Typology, origin, characteristics and modification		A.S	August- September
Weather: stability and instability; barotropic and baroclinic conditions		A.D.S	September- October
Circulation in the atmosphere: Planetary winds, jet stream, index cycle		A.D.S	November- December
Tropical and mid- latitude cyclones		M.M	November- December
Monsoon circulation and mechanism with reference to India		M.M	December - January
Climatic classification after Köppen		A.S	December - January
Danas	Code: CEOA	COPOED	
	Code: GEOA	CORUSP	
weather map of India: Monsoon		D.B	July- December
Construction and interpretation of hythergraph and climograph (G. Taylor)		A.S	September- November
Construction and interpretation of wind rose		A.D.S	December- January
	0 1 0501	20025	
Paper	Code: GEOA	CORUBI	
Physiographic divisions			
Climate and soil: Characteristics and classification		A.S	July-August
Population: Distribution, growth, structure and policy		A.S	August- September
Tribes of India with special reference to Toda and Jarwa		O.M	September- October
Agricultural regions. Green revolution and its consequences		A.D.S	November- December
	origin, characteristics and modification Weather: stability and instability; barotropic and baroclinic conditions Circulation in the atmosphere: Planetary winds, jet stream, index cycle Tropical and mid-latitude cyclones Monsoon circulation and mechanism with reference to India Climatic classification after Köppen  Paper Interpretation of daily weather map of India: Monsoon Construction and interpretation of hythergraph and climograph (G. Taylor) Construction and interpretation of wind rose  Paper Physiographic divisions Climate and soil: Characteristics and classification Population: Distribution, growth, structure and policy Tribes of India with special reference to Toda and Jarwa Agricultural regions. Green revolution and	origin, characteristics and modification Weather: stability and instability; barotropic and baroclinic conditions Circulation in the atmosphere: Planetary winds, jet stream, index cycle Tropical and mid-latitude cyclones Monsoon circulation and mechanism with reference to India Climatic classification after Köppen  Paper Code: GEOA  Interpretation of daily weather map of India: Monsoon Construction and interpretation of hythergraph and climograph (G. Taylor) Construction and interpretation of wind rose  Paper Code: GEOA  Physiographic divisions Climate and soil: Characteristics and classification Population: Distribution, growth, structure and policy Tribes of India with special reference to Toda and Jarwa Agricultural regions. Green revolution and	origin, characteristics and modification  Weather: stability and instability; barotropic and baroclinic conditions  Circulation in the atmosphere: Planetary winds, jet stream, index cycle  Tropical and midlatitude cyclones  Monsoon circulation and mechanism with reference to India  Climatic classification after Köppen  Paper Code: GEOACOR05P  Interpretation of daily weather map of India: Monsoon  Construction and interpretation of hythergraph and climograph (G. Taylor)  Construction and interpretation of wind rose  Paper Code: GEOACOR06T  Physiographic divisions  Climate and soil: Characteristics and classification Population: Distribution, growth, structure and policy Tribes of India with special reference to Toda and Jarwa Agricultural regions. Green revolution and A.D.S



	Mineral and power resources distribution and utilisation of iron ore, coal and petroleum		A.D.S	December- January
	Industrial development: Automobile and information technology		A.C	December- January
	Regionalisation of India: Economic (P. Sengupta)		M.M	July-August
	T	T		
Unit II: Geography of West Bengal	Physical perspectives: Physiographic divisions, forest and water resources		A.D.S	November- December
	Resources: Agriculture, mining, and industry		M.M	November- December
	Population: Growth, distribution and human development		S.K	December - January
	Regional Issues: Darjeeling Hills and Sundarban		A.C	December - January
	Paper	Code: GEOA	COR07T	1
Unit I: Frequency Distribution and	Importance and significance of statistics in Geography		M.M	July-August
Sampling	Discrete and continuous data, population and samples, scales of measurement (nominal, ordinal, interval and ratio)		M.M	August- September
	Sources of geographical data for statistical analysis		S.K	September- October
	Collection of data and formation of statistical tables		D.B	November- December



	Sampling: Need, types, and significance and methods of random sampling		D.B	December- January
	Theoretical distribution: frequency, cumulative frequency, normal and probability		A.D.S	December- January
Unit II: Numerical Data Analysis	Central tendency: Mean, median, mode, partition values		A.S	July-August
	Measures of dispersion range, mean deviation, standard deviation, coefficient of variation		A.S	August- September
	Association and correlation: Rank correlation, product moment correlation		A.D.S	September- October
	Regression: Linear and non-linear		A.D.S	November- December
	Time series analysis: Moving average		S.K	December - January
		Code: GEOA	COR07P	
Statistical Methods in Geography (Lab)	Construction of data matrix with each row representing an areal unit (districts / blocks / mouzas / towns) and corresponding columns of relevant attributes		O.M	July- August
	Based on the above, a frequency table, measures of central tendency and dispersion would be computed and interpreted using histogram and frequency curve		O.M	August- October



Based on of 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		A.D.S	November- December	
Paper	Code: GEOS	SEC01M		
Principles of Remote Sensing (RS): Classification of RS satellites and sensors		D.B	July- December	Students prepare a project report
Sensor resolutions and their applications with reference to IRS image referencing schemes and data acquisition.	<u> </u>	D.B		

D.B

D.B

		For EVEN Semesters						
		Paper Co	ode: GEOACO	R03T				
	Unit I: Nature and Principles	Nature, scope and recent trends. Elements of Human Geography Approaches to Human Geography; Environmental		S.K S.K	February February			
		Concept and classification of race		S.K	March			
		Cultural regions (language and religion)		S.K	March			

Concept of False
Colour Composite

from IRS LISS-3
Principles of image interpretation and feature extraction.
Preparation of

inventories of land use land cover features from satellite images.





			<ul> <li>Choropleth showing density of population</li> <li>Dots and Spheres diagram showing distribution of rural and urban population.</li> <li>Proportional piediagrams representing economic data and land use data</li> <li>Traverse survey using prismatic compass,</li> </ul>	60	A.S A.S D.B	February  March  March  March- May
			Profile survey using dumpy Level			
	T	T				
		Unit I:		code: GEO	ACOR08T A.C	Echruany
		Regional Planning	Concept of regions: Types of regions and their delineation		A.C	February
<b>≥</b>	မှ	<u>S</u>	Regional Planning: Types, principles, objectives	5	A.C	February- March
STE	Honours		Multi- level planning in India		A.C	March
SEMESTER IV	Hor		Metropolitan concept and urban agglomerations	90	A.C	April
		Unit-II: Regional Developmen t	Concepts of growth and development		A.D. S	February
			Economic, social and environmental		O.M	March
			Human development: Concept		O.M	April
			Cumulative causation model for regional development (Myrdal)		D.B	March
			Concept and causes of underdevelopment		D.B	April
			Regional development in India: Disparity and		D.B	June
			diversity			



Unit-I:	Concepts in Economic		O.M	February
Concepts	Geography: Goods and			
	services, production,			
	exchange and			
	consumption			
	Concept of economic man		O.M	March
	Economic distance and transport costs		O.M	April
Unit-II:	Concept and		A.C	February
Economic Activities	classification of economic activities			
	Factors affecting		A.C	February
	location of economic			
	activity with special			
	reference to industry			
	(Weber). Secondary activities:	60	A.C	March
	Concept of		A.C	IVIdiCII
	manufacturing			
	regions, special			
	economic zones and			
	technology parks			
	Tertiary activities:		M.M	March
	Transport and services			
	Agricultural systems:		A.D.	April
	Case studies of tea		S	
	plantation in India and			
	mixed farming in			
	Europe		NA NA	N.A
	International trade and economic blocks:		M.M	May
	WTO, GATT and BRICS:			
	Evolution, structure			
	and functions			
		GEOACOR:		
Unit-I:	Concept of holistic		A.S	February
Concepts	environment and			
	systems approach		A C	N.A. a. a.la
	Ecosystem: Concept, structure and		A.S	March
	functions			
Unit-II:	Urban environmental		S.K	March
Environment	issues with special			
al problems	reference to waste			
and policies	management			

	Environmental policies  - National Environmental Policy, 2006, Earth Summits (Stockholm, Rio, Johannesburg) Global initiatives for environmental management (special reference to Montreal Protocol, Kyoto Protocol, Paris Climate Summit)	60	S.K S.K	April	
		 GEOACOR:	10P		
Environment al Geography Lab	Preparation of questionnaire for perception survey on environmental problems		A.S	February- March	
	Preparation of check- list for Environmental Impact Assessment of an urban / industrial project	60	A.C	March- April	
	Interpretation of air quality using CPCB / WBPCB data		D.B	April- May	
		GEOSSEC02	2M		
Advance Spatial Statistical Techniques	Probability theory, probability density functions with respect to Normal, Binomial and Poisson distributions and their	30	S.K	February- April	Project prepared by the students
	geographical applications.				
	Sampling: Sampling plans for spatial and non-spatial data, sampling distributions. Sampling estimates for large and small samples tests involving means and proportions.		S.K		



	Correlation and Regression Analysis: Rank order correlation and product moment correlation; linear regression, residuals from regression, and simple curvilinear regression. Introduction to multivariate analysis. Time Series Analysis: Time Series processes; Smoothing time series; Time series components.	S.K S.K	
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Semester						
			PAPER V			
			Social and Cultural Geography			
		components with special	emphasis on India: language, religion and	O.M		
<b>=</b>	= S	GROUP A: SOCIAL, CULTURAL AND POLITICAL GEOGRAPHY	2. Social geography of rural India: caste structure and social stratification; tribe – Santhals and Lepcha.	July- October		
PART	HONOURS	ONOO.	Urban social Geography     Social ecology and social space.	M.M		
	Ī	יר' כחר	4. Rural settlements – its forms, site and situations.	M.M		
		SOCIA	Urban settlement – morphology and hierarchy.	M.M	November-	
		P A:	Political Geography		December —	
		GROU	5. Concept of Political Geography and geo-politics; concept of frontier and boundary	D.B		
			6. Concept of cold war; bi- polarisation and unipolarisation.	D.B	January- March	

	7. Political geography of India: Administrative settings of India, problem of border states, partition and its geo-political implications.	A.S		
чрну	1. Concepts of regions; basis of regionalization with reference to India physical, economic and planning.	A.C	July- October	
GROUP B: REGIONAL GEOGRAPHY	2. a) Physiographic Regions of India with special reference to Kashmir Himalaya b) Agricultural Region of India of India with special reference to Punjab-Haryana	A.C	November- December	
GRO	c) Industrial Region of India with special reference to Mumbai-Pune industrial belt  3. Regional disparities in India: causes and implications	S.K.D	January- March	
	Implications			
	PAPER VI			
N. P.	Definition and nature of Geography.	A.C		
GEOGRAPH	2. Selected contributors in the evolution of geographical thought Humboldt, Vidal de la	A.S	July- October	
₩ 0	Blache, Carl Sauer and David Harvey	A.C		
GROUP A: PHILOSOPHY OF GEOGRAPHY	3. Major postulates: Determinism, Possibilism, Regional differentiation, location, time and	A.C	November- December	
JUP	space.	A.C		
GRC	4. Changing approaches and methodology: Positivism, Quantitative Revolution, Welfare-	A.C	January- March	

		Behavioural approach, Structural and radical approach	A.C		
		Section -1: Natural hazards and their management in the Indian Sub-continent:			
		5. Concept of hazards and disasters: Natural, quasinatural and man-made hazards, different	A.S	July- October	
		approaches in hazard management.	A.S		·
		6. Climatic hazards: Flood, drought and cyclone mechanism – environmental impact and	A.S		
	主	management.	A.S	November-	
	IN GEOGRAP	7. Geomorphic hazards: landslide, river bank erosion, coastal erosion environmental impact	A.S	December	
	JES	and management.			
	CONTEMPORARY ISSUES IN GEOGRAPHY	8. Edaphic and biotic hazards: Deforestation, desertification, loss of biodiversity — environmental impact and	M.M	January- March	
	GROUP B: CONT	management.  Section-2: Economic and human development in the Third World			
OPP	GRO	9. Concept of third world, concept of development and under development: Basic indicators of	A.C	July- October	
		economic, human and gender development.			
		10. Problems of third world  - Poverty, Population explosion, food security and hunger,	A.C	November-	
		unemployment, malnutrition and child labour.		December	
		<ul><li>11. Globalization and sustainable development.</li><li>12. Problem of urbanization.</li></ul>	A.C	January- March	



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		PAPER VII			
		13. Interpretation of geological maps and drawing of sections: Uniclinal, folds with unconformity and igneous	A.S		
		intrusions (20 marks)  14. Interpretation of Indian Daily Weather Maps – Monsoon and Post	D.B		
		Monsoon. (15 marks)  15. Remote Sensing (15 marks)			
		a. Basic concept of remote sensing, EMR, Band	S.K.D	July- October	
	INIQUES	b. Types of satellites and sensors with special reference to IRS series of satellites;	S.K.D		
	AL TECH	types of resolutions and their applicability	S.K.D		
	APPLIED GEOGRAPHICAL TECHNIQUES	c. Principles of preparing standard false colour composite, landuse and land cover	S.K.D		
	LIED GI	mapping from standard FCC with header information.	S.K.D		
	APP	d. Interpretation of aerial photograph – basic principles of aerial photography, side	D.B		
OPI	•	lap, end lap, flight line, air base, fudicial marks, .Principle Point, Nadir Point,	D.B		
		Conjugate Principal Point,	D.B	November-	
		e. Preparation of aerial photo mosaics, demarcation of effective area, extraction of	D.B	December	
		cultural and physiographic features within this area with preparation of	D.B		
		interpretation key.  16. Geographical Information System. (15 marks)	D.B	January- March	



		i i	Ì	
	<ul> <li>a. Concept of GIS and its applicability: Spatial and attribute data, raster and vector</li> </ul>	D.B		
	data structure and concept of information layers in GIS.	D.B		
	b. Georeferencing of scanned maps and ascribing projection (Polyconic/ UTM)	D.B		
	c. Digitisation of point, line and polygon layers; Attachment of appropriate attribute		OH	
	tables.	D.B		
	maps from attached data: choropleth, pie chart and bar	D.B		
	graphs.	D.B		
	17. Field Report	A.D.S A.S	July- March	Project
	PAPER VIII			
S	1. Nature of statistical data: discrete, continuous, parametric and non-parametric data.	A.D.S		
Technique	2. Tabulation and classification of statistical data.	A.D.S	July- October	
: Statistical ·	3. Frequency distribution: histogram, frequency polygon, ogive, normal and skewed	A.D.S	October	
roup-A	distribution, measures of skewness.	A.D.S		
ט	4. Measures of central tendency: mean, median, mode, partition values: quartile, decile, percentile.	A.D.S	November- December	
	Group-A: Statistical Techniques	applicability: Spatial and attribute data, raster and vector  data structure and concept of information layers in GIS.  b. Georeferencing of scanned maps and ascribing projection (Polyconic/ UTM)  c. Digitisation of point, line and polygon layers; Attachment of appropriate attribute  tables.  d. Preparation of thematic maps from attached data: choropleth, pie chart and bar graphs.  17. Field Report  PAPER VIII  1. Nature of statistical data: discrete, continuous, parametric and non-parametric data. 2. Tabulation and classification of statistical data. 3. Frequency distribution: histogram, frequency polygon, ogive, normal and skewed distribution, measures of skewness.  4. Measures of central tendency: mean, median, mode, partition values: quartile, decile,	applicability: Spatial and attribute data, raster and vector  data structure and concept of information layers in GIS.  b. Georeferencing of scanned maps and ascribing projection (Polyconic/ UTM)  c. Digitisation of point, line and polygon layers; Attachment of appropriate attribute  D.B  tables.  d. Preparation of thematic maps from attached data: choropleth, pie chart and bar graphs.  D.B  17. Field Report A.S  PAPER VIII  1. Nature of statistical data: discrete, continuous, parametric and non-parametric data. 2. Tabulation and classification of statistical data: discrete, continuous, parametric data. 3. Frequency distribution: histogram, frequency polygon, ogive, normal and skewed distribution, measures of skewness.  4. Measures of central tendency: mean, median, mode, partition values: quartile, decile,	applicability: Spatial and attribute data, raster and vector  data structure and concept of information layers in GIS.  b. Georeferencing of scanned maps and ascribing projection (Polyconic/ UTM)  c. Digitisation of point, line and polygon layers; Attachment of appropriate attribute  D.B  tables.  d. Preparation of thematic maps from attached data: choropleth, pie chart and bar graphs.  D.B  17. Field Report  PAPER VIII  1. Nature of statistical data: discrete, continuous, parametric and non-parametric data. 2. Tabulation and classification of statistical data: 3. Frequency distribution: histogram, frequency polygon, ogive, normal and skewed distribution, measures of skewness. 4. Measures of central tendency: mean, median, mode, partition values: quartile, decile,  November-December

	5. Measures of dispersion: mean deviation, quartile deviation, semi-quartile range, standard deviation and co-efficient of variation.	A.D.S	January- March
	Section-A: Representation of climatic and hydrological data of the Indian Subcontinent.		
	1. a) Preparation and Interpretation of a climatic chart showing relationship between rainfall,	A.S	
	temperature, pressure and relative humidity of a station for three months, preparation and	A.S	July- November
ography	interpretation of Taylor's Climograph and Hythergraph.	A.S	
Contemporary issues in Geography	b) Preparation of station models for different meteorological stations of India with the help of	A.S	
Group-B: Contempora	Synoptic chart.  2. Preparation and interpretation of rating curves, hydrographs and unit hydrographs of rivers flowing through the Indian Sub-continent.	A.S	December- March
Ū	Section-B: Economic and Human Development in Third World.		
	3. Computation of Human and Gender Development Index and ranking of	A.C	July-
	countries/states/districts based on HDI and GDI.	A.C	October
	4. Preparation of questionnaire schedule for assessment of development and for perception	A.C	November- December
	survey.		



	5. Measures of Spatial and size-class distribution.	A.C		
	6. a) Dominant-distinctive function.	A.C	January- March	
	b) Rank-size rule.	A.C		
	c) Lorenz curve.	A.C		

# Part III General

	Paper IV			
	Section I: Land use and settlement Geography (30 Marks)			
	1. Concept and attributes of land.	ОМ	July- September	
	2. Objectives and principles of land use.	ОМ	July- August	
	3. Factors influencing land use and land categories:	ОМ	August	
	a) Agricultural land use.	ОМ	September	
PHY	b) Non-agricultural landuse.	ОМ	September	
ED GEOGRA	4. Rural settlements: evolution, nature and effect of physical environment,	ОМ	October- November	
CAL APPLII	5. Urban settlements: definition, morphology and function.	ОМ	October- November	
JP- A: THEORITICAL APPLIED GEOGRAPHY	Section II: Remote Sensing and Geographical Information System	SKD	July- September	
GROUP	1. Concept of Remote Sensing, different methods of remote sensing – aerial photo and satellite imagery.	SKD	July- September	
	2. Aerial Photo: Types and interpretation keys; concept of principal point, fudicial marks, flight line, photo	SKD	December - January	
	overlap.			



	di re	IRS images: Sensors, ferent types of solution and their plicability.	SKD	December - January
	ap an ra str	Concept of GIS and its plicability: Spatial d attribute data, ster and vector data ructure and concept GIS	SKD	December - January
	GEOGRAPH	Interpretation of nily Weather Maps blished by India eteorological epartment – Monsoon ason	DB	July- January
	CTICAL APPL	Preparation of ematic maps: Flow diagram and ii)	AC	September- October
	GROUP- A: PRA	Aerial photo terpretation for entification of broad sysical and cultural atures. (7 Marks)	SKD	November- January
Semester	(Hons /Gene	ral) Internal Assess (Tentative time		niversity

Semester	(Hons /General)	Internal Assessment	University
		(Tentative time)	Examination

Г		<del></del>	Т
l	Hons.	1 <sup>st</sup> Internal Assessment- 2 <sup>nd</sup> Week of September,	January, 2022 (Tentative)
		2021	(Tentative)
		and but a mark A account	
		2 <sup>nd</sup> Internal Assessment- 2 <sup>nd</sup> Week of November,	
		2021	
II	Hons.	1st Internal Assessment-	July, 2022 (Tentative)
		3rd Week of April, 2021	
		2nd Internal Assessment-	
		2nd Week of May, 2021	
III	Hons.	1st Internal Assessment-	January, 2022
""		2nd Week of September,	(Tentative)
		2021	
		2nd Internal Assessment-	
		2nd Week of November,	
		2021	
IV	Hons.	1st Internal Assessment-	July, 2022 (Tentative)
IV		3rd Week of April, 2021	
		2nd Internal Assessment-	
		2nd Week of May, 2021	

# **ACADEMIC CALENDAR**

## **DEPARTMENT OF GEOGRAPHY**

Session: 2020- 2021

Semester	(Hons /Gener al)	Syllabus Module/Unit	Topic	No. of lectures (Hours)	Teachers	Distribution	Project/ Student Seminar (if any)
			For C	DDD Sei	mesters		
			Paper	Code: GEOA	COR01T		
		Unit I: Geotectonic	Earth's tectonic and structural evolution with reference to geological time scale.		D.B	July- August	
		Earth's interior with special reference to seismology.		A.C	July- August		
_	S		Plate Tectonics as a unified theory of global tectonics: Processes and landforms at plate margins and hotspots.		O.M	August- September	
SEMESTER	Honours	Unit II: Geomorphol ogy	Degradational processes: Weathering, mass wasting and resultant landforms.	60	A.S	August- September	
			Development of river network and landforms on folded structures.		A.D.S	September- October	
			Glacial and glacio- fluvial processes and landforms.		M.M	October- November	
			Aeolian and fluvio- aeolian processes and landforms.		A.D.S	October- November	
			Models on landscape evolution: Views of Davis and Hack		S.K	December- January	

	Pa	per Code: G	EOACOR01P		
Geotect onic& Geomor phology Lab.	Megascopic identification of (a) mineral samples: Bauxite, calcite, chalcopyrite, galena, hematite, mica, quartz, tourmaline; and (b) rock samples: Granite, basalt, laterite, sandstone, conglomerate, slate, phyllite, schist, gneiss, marble Interpretation of geological maps with unconformity and intrusions on uniclinal	60	A.D.S & O.M	July- January July- January	
	structure				
		per Code: G	EOACOR02T		
Cartogra phic Techniq	Maps: Classification and types. Components of a map	60	M.M	July- August	
ues	Concept and application of scales: Plain, comparative and diagonal		D.B	September to November	
R	Survey of India topographical maps: Reference scheme of old and open series. Information on the margin of maps		A.S	September to November	
	Coordinate systems: Polar and rectangular		D.B	November- December	
	Concept of generating globe and UTM projection		A.D.S	December- January	
	Map projections: Classification, properties and uses		S.K & A.C	December- January	

	P	PaperCode:GEOACOR02P			·
		Graphical construction of scales: Plain, comparative and diagonal		D.B	September to November
	aphic Techni ques	Construction of projections: Polar Zenithal Stereographic, Bonne's, Cylindrical Equal Area, and Mercator's	6 0	A.C, S.K & A.D.S	November - December
		Delineation of drainage basin from Survey of India topographical map, relative relief map, slope map (Wentworth), and stream ordering (Strahler) on a drainage basin.		A.S	December -January
		Correlation between physical and cultural features from Survey of India topographical maps using transect chart.		O.M	December -January
		p:	aner Code	GEOACOR05T	
	Unit I: Elements of the Atmospher	Of Nature, compositionand		O.M	July-August
SIE	C	atmosphere Insolation: controlling factors. Heat budgetof the atmosphere		O.M	August- Septembe r
		Temperature: horizontal and verticaldistribution. Inversion of temperature: types,causes and consequences		D.B	September -October

importance of ozonelayer  Unit II: Atmospheric Phenomena and Climatic Classification  Classification  Ergeron-Findeisen theory  Importance of ozonelayer  December  July-August  S.K  S.K	importance of ozonelayer December  Unit II: Condensation: July-August Processand forms. Phenomena and Climatic Classification Bergeron-Findeisen		Greenhouse effect	A.C	November
Atmospheric Phenomena and Climatic Classification Bergeron-Findeisen theory	Atmospheric Phenomena and Climatic Classification Classification Processand forms. Mechanismof precipitation: Bergeron-Findeisen theory		importance of	A.C	-
		Atmospheric Phenomena and Climatic	Processand forms. Mechanismof precipitation: Bergeron-Findeisen	S.K	July-August
				KOC!	

		Air mass: Typology,			August-
		origin, characteristics		A.S	September
		and modification			·
		Weather: stability and			September-
		instability; barotropic		_	October
		and baroclinic		A.D.S	000000
		conditions			
	ŀ	Circulation in the			November-
		atmosphere: Planetary			December
		winds, jet stream,		A.D.S	December
		index cycle			
	ŀ	,			November-
		Tropical and mid-		M.M	
		latitude cyclones			December
		Monsoon circulation			December -
		and mechanism with		M.M	January
		reference to India			
		Climatic classification			December -
		after Köppen		A.S	January
ŀ					,
-		Paner	Code: GEOA	COROSP	
-	Climatology	Interpretation of daily	Code. GLOA	COROSE	
	Climatology	,		D.B	July-
Ì		weather map of India:		υ. <sub></sub>	December
		Monsoon			December
Ì		Construction and			
Ì		interpretation of		A.S	0 1
Ì		hythergraph and			September-
		climograph (G. Taylor)			November
		Construction and			
		interpretation of wind		A.D.S	December-
ļ		rose			January
	7(6)	Paper	Code: GEOA	COR06T	
	Unit I:				
	Geography	Physiographic			
	of India	divisions			
		Climate and soil:			
		Characteristics and		A.S	
		classification		A.5	July-August
	ŀ				July-August
		Population:		۸ د	August-
		Distribution, growth,		A.S	_
		structure and policy			September
		Tribes of India with		2.1	0
		special reference to		O.M	September-
		Toda and Jarwa			October
		Agricultural regions.			i
		Green revolution and		A.D.S	November-
		its consequences			December
_				<del></del>	

	Mineral and power resources distribution and utilisation of iron ore, coal and petroleum		A.D.S	December- January
	Industrial development: Automobile and information technology		A.C	December- January
	Regionalisation of India: Economic (P. Sengupta)		M.M	July-August
	<del>_</del>	1		
Unit II: Geography of West Bengal	Physical perspectives: Physiographic divisions, forest and water resources		A.D.S	November- December
	Resources: Agriculture, mining, and industry		M.M	November- December
	Population: Growth, distribution and human development		S.K	December - January
	Regional Issues: Darjeeling Hills and Sundarban		A.C	December - January

	Paper	Code: GEOA	COR07T		
Unit I: Frequency Distribution and Sampling	Importance and significance of statistics in Geography		M.M	July-August	
	Discrete and continuous data, population and samples, scales of measurement (nominal, ordinal, interval and ratio)		M.M	August- September	
	Sources of geographical data for statistical analysis		S.K	September- October	
	Collection of data and formation of statistical tables		D.B	November- December	

	Sampling: Need, types, and significance and methods of random sampling		D.B	December- January
	Theoretical distribution: frequency, cumulative frequency, normal and probability		A.D.S	December- January
Unit II: Numerical Data Analysis	Central tendency: Mean, median, mode, partition values		A.S	July-August
	Measures of dispersion range, mean deviation, standard deviation, coefficient of variation		A.S	August- September
	Association and correlation: Rank correlation, product moment correlation		A.D.S	September- October
	Regression: Linear and non-linear		A.D.S	November- December
	Time series analysis: Moving average		S.K	December - January
	Paner	Code: GEOA	COR07P	
Statistical Methods in Geography (Lab)	Construction of data matrix with each row representing an areal unit (districts / blocks / mouzas / towns) and corresponding columns of relevant attributes	Couc. GEOA	O.M	July- August
	Based on the above, a frequency table, measures of central tendency and dispersion would be computed and interpreted using histogram and frequency curve		O.M	August- October

		Based on of the sample set and using two relevant attributes, a scatter diagram and linear		November- December	
		regression line would be plotted and residual from regression would be mapped with a short interpretation	A.D.S		
		Paper Code:	: GEOSSEC01M		
		Principles of Remote Sensing (RS): Classification of RS satellites and sensors	D.B	July- December	Students prepare a project report
		Sensor resolutions and their applications with reference to IRS image referencing schemes and data acquisition.	D.B		
		Concept of False Colour Composite from IRS LISS-3	D.B		
		Principles of image interpretation and feature extraction. Preparation of inventories of land use land cover features from satellite images.	D.B		
		Paper Code:	GEOACOR11T		
		Research in Geography: Meaning, types and significance	M.M	July-August	
\$ ×	,	Literature review and formulation of research design	A.C	August- September	
SEMESTER V Honours		Defining research problem and objectives	A.C	September- October	
SEN		Research materials and methods	A.C	November- December	
		Techniques of writing scientific reports: Preparing notes, references,	M.M	December- January	

bibliography, abstract and keywords			
Fieldwork in Geographical studies: Role and significance. Selection of study area and objectives. Pre- field academic preparations. Ethics of		A.D.S	July-August
fieldwork  Field techniques and tools: Observation (participant, non participant), questionnaires (open, closed, structured, non-structured).  Interview		A.D.S	August- September
Positioning and collection of samples. Preparation of inventory from field data.	C	D.B	September- October
Post-field tabulation, processing and analysis of quantitative and qualitative data		D.B	November- December
Paner	Code: GEOA	COR11D	
Literature Review	Couc. GLOP	A.D.S & A.C	August- January
Field Report		A.S, D.B, O.M, M.M & S.K	August- January
Paner	Code: GEOA	COP12T	
Classification of hazards and disasters.	Couc. GLOP	A.D.S	July-August
Approaches to hazard study: Risk perception and vulnerability assessment. Hazard paradigms		A.S	August- September

Responses to hazards: Preparedness, trauma and aftermath. Resilience and	A.S	September- October
capacity building.  Hazards mapping: Data and geospatial techniques (for hazards enlisted in Unit II and Core 12P) (Proposed Workshop	Proposed extension lecture	November- December
Earthquake: Factors, vulnerability, consequences and management	O.M	December- January
Tropical Cyclone: Factors, vulnerability, consequences and management	M.M	
Riverbank erosion: Factors, vulnerability, consequences and management	S.K	
Paper Code:	GEOACOR12P	
An individual Project Report is to be prepared and submitted based on any one case study among the following disasters of West Bengal:  1) Cyclone/ Thunderstorm, 2) Landslide, 3) Flood, 4) Coastal/ riverbank erosion, 5) Fire, 6) Industrial accident, 7) Structural collapse.	A.D.S, A.S, D.B, A.C, O.M, M.M & S.K	July- January
Panar Codo	GEOADSE01T	
Factors or soil	GEOADSE01T	July- August
formation. Man as an active agent of soil transformation.	M.M	,

Soil profile. Origin and profile characteristics of Lateritic and Chernozem soils	O.M	July- August
		olly
	0	

	Definition and			August
				August
	significance of soil		Collaboratio	
	properties: Texture,		n class	
	structure and			
	moisturiser			
	Definition and			September
	significance of soil		Collaboratio	
	properties: pH, organic		n class	
	matter and NPK			4
	Soil erosion and			October-
	degradation: Factors,		A.S	November
	processes and		71.5	
	mitigation measures			
	Principles of soil			November-
	classification: Genetic		A.S	December
	and USDA.			
	Concepts of			July- August
	biosphere, ecosystem,			
	biome, ecotone,		A.D.S	
	community, niche,			
	succession and			
_	ecology			
	Concepts of trophic		4.5.6	July- August
	structure, food chain and food web.		A.D.S	
	Geographical extent			August
	and characteristic			August
	features of: Tropical		M.M	
	rain forest and		101.101	
	Grassland biomes			
	Bio-geochemical cycles			September
	with special reference			September
	to carbon dioxide and		A.D.S	
	nitrogen			
	Measures for			October-
	conservation of bio-			November
	diversity in India: Man		A.D.S	INOVERIBEI
	and Biosphere		,	
	Programme			
	1			<u> </u>
	Paper	Code: GEOA	DSE02T	
	Scope and content of			
	Settlement			
	Geography; rural,		M.M	
	urban and peri-urban			
	areas			July- August
	Rural Settlement:			
	- 6	i	A C	i l
	Definition, nature and characteristics		A.C	August

5	Morphology of rural settlements: site and situation, layout-internal and external		A.D.S	September	
1	Rural house types with reference to India, Social segregation in rural areas; Census categories of rural settlements.		A.D.S	October- November	
r	Problems and policies related to rural infrastructure with reference to India		O.M	November- December	
	Urban Settlements: Census definition (Temporal) and categories in India		A.S	July- August	
[ ] [ ]	Urban morphology: Classical models: Burgess, Homer Hoyt, Harris and Ullman Metropolitan concept		A.S	August	
	City-region and Conurbation, Functional classification of cities: Nelson and McKenzie		A.D.S	September	
5	Aspects of urban places: Location, site and situation, Size and spacing of cities: the rank size rule, the law of the primate city		S.K	October- November	
	Urban hierarchies: Central Place Theory		S.K	November- December	

			For EV	'EN Se	mester	'S
			Paper (	Code: GEO	ACOR03T	
		Unit I: Nature and Principles	Nature, scope and recent trends. Elements of Human Geography		S.K	February
			Approaches to Human Geography; Environmental		S.K	February
			Concept and classification of race		S.K	March
			Cultural regions (language and religion)		S.K	March
		Unit II: Society, Demograph y and Ekistics	Evolution of human societies: Hunting and food gathering, pastoral nomadism, subsistence farming and industrial society	90	M.M	February
=			Human adaptation to environment: Masai	O'	M.M	February- March
SEMESTER II	Honours		Population growth and distribution, demographic transition		M.M	March
SEN	I		Types and patterns of rural settlements		O.M	March- April
			Morphology of urban settlements		O.M	April
			Paper	Code: GEO	ACOPOAT	
				code. GLO		T .
	33	Cartograms and Thematic Mapping	Concepts of rounding, scientific notation, logarithm and antilogarithm, natural and log scales		D.B	February- March
			Diagrammatic representation of data: Line, Bar, Isopleths	60	A.S	March
			Representation of socio-economic data: Dots and spheres, proportional circles and Choropleth		A.S	March- April

		Bearing: Magnetic and true, whole-circle and reduced  Basic concepts of	-	D.B D.B	February  March-
		surveying and survey equipment: Prismatic Compass, Dumpy Level, Theodolite		<b>D.</b> В	May
		Paper (	Code: GEO	ACOR04P	
	Cartograms and Thematic Mapping lab	Thematic maps:			
		<ul><li>Choropleth showing density of population</li></ul>		A.S	February
		<ul> <li>Dots and</li> <li>Spheres diagram</li> <li>showing distribution</li> <li>of rural and urban</li> <li>population.</li> </ul>	60	A.S	March
		<ul> <li>Proportional pie- diagrams representing economic data and land use data</li> </ul>		A.S	March
		Traverse survey using prismatic compass, Profile survey using dumpy Level		D.B	March- May
		Danas	Code: CEO	A CODOST	
SEMESTER IV	Unit I: Regional Planning	Concept of regions: Types of regions and their delineation	Code: GEO	A.C	February
EMES.		Regional Planning: Types, principles, objectives		A.C	February- March
S		Multi- level planning in India	00	A.C	March
		Metropolitan concept and urban agglomerations	90	A.C	April

	Unit-II: Regional	Concepts of growth and development		A.C	February	
	Developmen t	and development				
			O'			

	Economic, social and environmental		O.M	March	
	Human development: Concept		O.M	April	
	Cumulative causation model for regional development (Myrdal)		D.B	March	
	Concept and causes of underdevelopment		D.B	April	
	Regional development in India: Disparity and diversity		D.B	June	
		GEOACOR	09T		
Unit-I: Concepts	Concepts in Economic Geography: Goods and services, production,		O.M	February	
	exchange and consumption				
	Concept of economic man		O.M	March	
	Economic distance and transport costs	6	O.M	April	
Unit-II: Economic Activities	Concept and classification of economic activities		A.C	February	
	Factors affecting location of economic activity with special reference to industry (Weber).		A.C	February	
	Secondary activities: Concept of manufacturing regions, special economic zones and technology parks	60	A.C	March	
	Tertiary activities: Transport and services		M.M	March	
	Agricultural systems: Case studies of tea plantation in India and mixed farming in Europe		M.M	April	
	International trade and economic blocks: WTO, GATT and BRICS: Evolution, structure and functions		M.M	May	

	(	GEOACOR1	ĐΤ		
Unit-I: Concepts	Concept of holistic environment and systems approach		A.S	February	
	Ecosystem: Concept, structure and functions		A.S	March	
Unit-II: Environment al problems and policies	Urban environmental issues with special reference to waste management		S.K	March	
	Environmental policies  - National Environmental Policy, 2006, Earth Summits (Stockholm, Rio, Johannesburg)	60	S.K	April	
	Global initiatives for environmental management (special reference to Montreal Protocol, Kyoto Protocol, Paris Climate Summit)		S.K	May	
		GEOACOR1	0P		
Environment al Geography Lab	Preparation of questionnaire for perception survey on environmental problems		A.S	February- March	
	Preparation of check- list for Environmental Impact Assessment of an urban / industrial project	60	A.C	March- April	
	Interpretation of air quality using CPCB / WBPCB data		D.B	April- May	
		GEOSSEC02	М		
Advance Spatial Statistical Techniques	Probability theory, probability density functions with respect to Normal, Binomial and Poisson distributions and their	30	S.K	February- April	Project prepared by the student

	geographical applications.				
	Sampling: Sampling plans for spatial and		S.K		
	non-spatial data, sampling distributions. Sampling estimates for large and small samples tests involving means and proportions.			OH	
	Correlation and Regression Analysis: Rank order correlation and product moment correlation; linear regression, residuals from regression, and simple curvilinear regression. Introduction to multi-		S.K		
	variate analysis.  Time Series Analysis: Time Series processes; Smoothing time series; Time series components.		S.K		
		GEOACOR:	13T		
Pre M	re of Geography:		A.C	February- March	
EMES H	Impact of 'Dark Age' in Geography and Arab contributions		A.C	March	
S	Geography during the age of 'Discovery' and 'Exploration' (contributions of Columbus, Vasco da Gama, Magellan)	90	A.C	March- April	

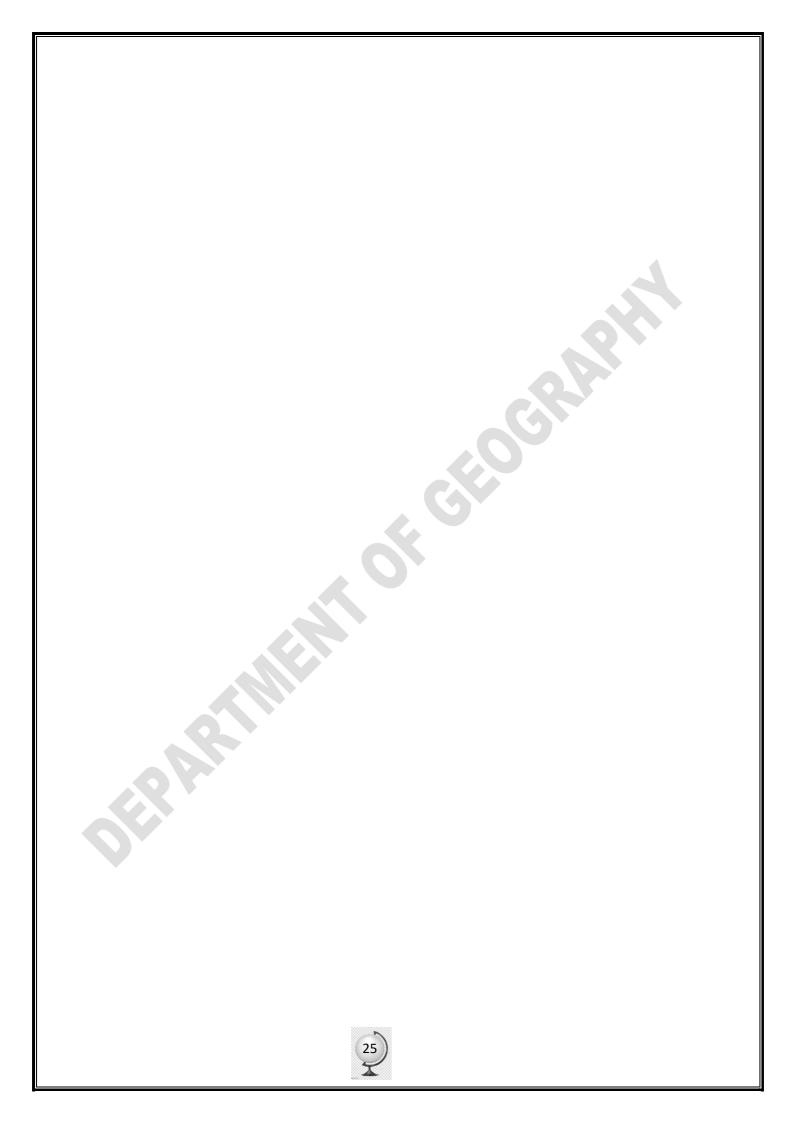
Dualism and Dichotomies (Ideographic vs. Nomothetic, Physical	A.C	April	
	L		<b>&gt;</b>

	vs. Human, Determinism vs. Possibilism,)			
Unit-II: Foundations	Evolution of Geographical thoughts		A.C	February- March
of Modern Geography	in Britain and United States of America			
and Recent Trends	Contributions of Humboldt and Ritter		A.C	March- April
	Contributions of Ratzel and Vidal deLaBlaché		A.C	March- April
	Trends of geography in the post-World War-II period: Quantitative Revolution, systems		A.C	April
	approach.  Evolution of Critical Geography: Behavioural, humanistic and radical.		A.C	May
		GEOACOR1	L4T	
Unit I: Remote Sensing	Principles of Remote Sensing (RS): Types of RS satellites and sensors		D.B	February
	Sensor resolutions and their applications with reference to IRS and Landsat missions		D.B	March
	Preparation of False Colour Composites from IRS LISS-3 and Landsat TM and OLI data.	60	D.B	March
	Principles of image correction and interpretation. Preparation of inventories of landuse land cover (LULC) features from satellite images.		D.B	April
	iiiages.			

Unit II: Geographical Information System and Global Navigation	Concept of GIS and its applicability; GIS data structures: types: spatial and non-spatial, raster and vector		D.B	February
Satellite System	Principles of preparing attribute tables and data manipulation and overlay analysis		D.B	March
	Principles of GNSS positioning		D.B	April
		GEOACOR:	14P	01,
Remote Sensing and GIS	Preparation of land use and land cover map from standard FCC and its interpretation		D.B	February
	Representation of raster and vector data format.	60	O.M	March
	Area and length calculations from GNSS data.		D.B	April
	GI	OACORDS	E04T	
Unit I: Hydrology	Systems approach in hydrology. Global hydrological cycle: Its physical and biological role		O.M	February
	Run off: controlling factors. Infiltration and evapotranspiration.		O.M	February
	Drainage basin as a hydrological unit. Principles of watershed management	90	O.M	March
	Groundwater: Occurrence and storage. Factors controlling recharge, discharge and movement		O.M	April

Unit II: Oceanograph y	Major relief features of the ocean floor: characteristics and origin according to plate tectonics		M.M	February
	Physical and chemical properties of ocean water		M.M	February- March
	Water mass, T–S diagram		M.M	March
	Ocean temperature and salinity: Distribution and determinants		M.M	April
	Gi	EOACORDS	SE06T	
Unit I: Resource and Developmen t	Approaches to Resource Utilization: Utilitarian, Conservational, Community based adaptive		S.K	February
	Significance of Resources: Backbone of Economic growth and development	O,	S.K	February- March
	Problems of resource depletion—global scenario (forest, water, fossil fuels).		S.K	March
	Conservation of Natural Resources	90	S.K	April
Unit II: Resource Conflict and Management	Distribution, Utilisation, Problems and Management of Mineral Resources: Bauxite and Iron Ore.		A.S	February
	Distribution, Utilisation, Problems and Management of Energy Resources: Conventional and Non- Conventional		A.S	February- March
	Concept of Resource sharing: Water		D.B	March

Semester	(Hons /General)	Internal Assessment	University
Jennester .	(rions / ceneral)	(Tentative time)	Examination
		,	
	Hons.	1 <sup>st</sup> Internal Assessment-	January, 2022
•		2 <sup>nd</sup> Week of September,	(Tentative)
		2021	
		2 <sup>nd</sup> Internal Assessment-	
		2 <sup>nd</sup> Week of November,	
		2021	
ll ll	Hons.	1st Internal Assessment-	July, 2022 (Tentative)
11		3rd Week of April, 2021	
		2nd Internal Assessment-	
		2nd Week of May, 2021	
		Zild Week of Way, 2021	
III	Hons.	1st Internal Assessment-	January, 2022
•••		2nd Week of September,	(Tentative)
		2021	
		2nd Internal Assessment-	
		2nd Week of November,	
		2021	
IV	Hons.	1st Internal Assessment-	July, 2022 (Tentative)
IV		3rd Week of April, 2021	
		2nd Internal Assessment	
		2nd Internal Assessment- 2nd Week of May, 2021	
		Zilu Week of May, 2021	
V	Hons.	1st Internal Assessment-	January, 2022
		2nd Week of September,	(Tentative)
		2021	
		2nd Internal Assessment-	
		2nd Week of November,	
		2021	
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Hons.	1st Internal Assessment-	July, 2022 (Tentative)
VI	110113.	3rd Week of April, 2021	July, 2022 (Telliative)
		2.2	
		2nd Internal Assessment-	
		2nd Week of May, 2021	



## **ACADEMIC CALENDAR**

## **DEPARTMENT OF GEOGRAPHY**

**Session: 2021- 2022** 

Semester	(Hons /Gener al)	Syllabus Module/Unit	Topic	No. of lectures (Hours)	Teachers	Distribution	Project/ Student Seminar (if any)
			For C	DDD Se	mesters		
			Paper	Code: GEOA	COR01T		
		Unit I: Geotectonic	Earth's tectonic and structural evolution with reference to geological time scale.		D.B	July- August	
			Earth's interior with special reference to seismology.		A.C	July- August	
_	S		Plate Tectonics as a unified theory of global tectonics: Processes and landforms at plate margins and hotspots.		O.M	August- September	
SEMESTER	Honours	Geomorphol p ogy V	Degradational processes: Weathering, mass wasting and resultant landforms.	60	A.S	August- September	
			Development of river network and landforms on folded structures.		M.N	September- October	
			Glacial and glacio- fluvial processes and landforms.		M.M	October- November	
			Aeolian and fluvio- aeolian processes and landforms.		M.N	October- November	
			Models on landscape evolution: Views of Davis and Hack		S.K	December- January	

	Paper	Code: GEOA	COR01P	
Geotectonic & Geomorphol ogy Lab.	Megascopic identification of (a) mineral samples: Bauxite, calcite, chalcopyrite, galena, hematite, mica, quartz, tourmaline; and (b) rock samples: Granite, basalt, laterite, sandstone, conglomerate, slate, phyllite, schist, gneiss,	60	M.N & O.M	July- January
	marble Interpretation of geological maps with unconformity and intrusions on uniclinal structure		A.S	July- January
	Paper	Code: GEOA	COR02T	
Cartographic Techniques	Maps: Classification and types. Components of a map	60	M.M	July- August
	Concept and application of scales: Plain, comparative and diagonal		D.B	September to November
	Survey of India topographical maps: Reference scheme of old and open series. Information on the margin of maps		A.S	September to November
	Coordinate systems: Polar and rectangular		D.B	November- December
	Concept of generating globe and UTM projection		M.N	December- January
	Map projections: Classification, properties and uses		S.K & A.C	December- January
	Graphical construction of scales: Plain, comparative and diagonal		D.B	September to November

I	1			ode: GEOA	COR02P	
		Cartographic Techniques	Construction of projections: Polar Zenithal Stereographic,	60	A.C, S.K & M.N	November- December
			Bonne's, Cylindrical Equal Area, and Mercator's Delineation of		IVI.IN	December-
			drainage basin from Survey of India topographical map, relative relief map,		A.S	January
			slope map (Wentworth), and stream ordering (Strahler) on a drainage basin.			
			Correlation between physical and cultural features from Survey of India topographical maps using transect chart.		O.M	December- January
			Down C		COROLL	
		Unit I:	Paper C	Code: GEOA	CORUST	<del></del>
		Elements of the Atmosphere	Nature, composition and layering of the atmosphere		O.M	July-August
			Insolation: controlling factors. Heat budget of the atmosphere		O.M	August- September
SEMESTER III	Honours		Temperature: horizontal and vertical distribution. Inversion of temperature: types, causes and		D.B	September- October
SEMI	5		consequences Greenhouse effect and importance of ozone layer		A.C	November- December
		Unit II: Atmospheric Phenomena and Climatic Classification	Condensation: Process and forms. Mechanism of precipitation: Bergeron-Findeisen theory		S.K	July-August

F

	Air mass: Typology,			August-
	origin, characteristics		A.S	September
	and modification			
	Weather: stability and			September-
	instability; barotropic			October
	and baroclinic		M.N	
	conditions			
	Circulation in the			November-
	atmosphere: Planetary			December
	winds, jet stream,		M.N	Describer
	index cycle			
	Tropical and mid-			November-
	latitude cyclones		M.M	December
	Monsoon circulation			December -
	and mechanism with		M.M	January
	reference to India		101.101	January
			<del></del>	Dasambar
	Climatic classification		A.S	December -
	after Köppen			January
		Code: GEOA	COR05P	I I
Climatology	Interpretation of daily			
	weather map of India:		D.B	July-
	Monsoon			December
	Construction and			
	interpretation of		A.S	
	hythergraph and			September-
	climograph (G. Taylor)			November
	Construction and			
	interpretation of wind		M.N	December-
	rose			January
	Paper	Code: GEOA	COR06T	
Unit I:				
Geography	Physiographic			
of India	divisions			
	Climate and soil:			
	Characteristics and		A.S	
	classification			July-August
	Population:			
	Distribution, growth,		A.S	August-
	structure and policy			September
	Tribes of India with			
	special reference to		O.M	September-
	Toda and Jarwa			October
	Agricultural regions.			
	Green revolution and		M.N	November-
	its consequences			December
•	•			

	Mineral and power resources distribution and utilisation of iron ore, coal and petroleum		M.N	December- January		
	Industrial development: Automobile and information technology		A.C	December- January		
	Regionalisation of India: Economic (P. Sengupta)		M.M	July-August		
	<del>,</del>					
Unit II: Geography of West Bengal	Physical perspectives: Physiographic divisions, forest and water resources		M.N	November- December		
	Resources: Agriculture, mining, and industry		M.M	November- December		
	Population: Growth, distribution and human development		S.K	December - January		
	Regional Issues: Darjeeling Hills and Sundarban		A.C	December - January		
	Paner	Code: GFOA	COROTT			

	Paper Code: GEOACOR07T								
Unit I: Frequency Distribution and Sampling	Importance and significance of statistics in Geography		M.M	July-August					
	Discrete and continuous data, population and samples, scales of measurement (nominal, ordinal, interval and ratio)		M.M	August- September					
	Sources of geographical data for statistical analysis		S.K	September- October					
	Collection of data and formation of statistical tables		D.B	November- December					



	Sampling: Need, types,			
	and significance and methods of random sampling		D.B	December- January
	Theoretical distribution: frequency, cumulative frequency, normal and probability		M.N	December- January
		1		
Unit II: Numerical Data Analysis	Central tendency: Mean, median, mode, partition values		A.S	July-August
	Measures of dispersion range, mean deviation, standard deviation, coefficient of variation		A.S	August- September
	Association and correlation: Rank correlation, product moment correlation	S</td <td>M.N</td> <td>September- October</td>	M.N	September- October
	Regression: Linear and non-linear		M.N	November- December
	Time series analysis: Moving average		S.K	December - January
		Code: GEOA	COR07P	T.,
Statistical Methods in Geography (Lab)	Construction of data matrix with each row representing an areal unit (districts / blocks / mouzas / towns) and corresponding columns of relevant attributes		O.M	July- August
	Based on the above, a frequency table, measures of central tendency and dispersion would be computed and interpreted using histogram and frequency curve		O.M	August- October

	I	Based on of the	1		November-	ı
		sample set and using			December	
		two relevant				
		attributes, a scatter				
		diagram and linear				
		regression line would		M.N		
		be plotted and				
		residual from				
		regression would be				
		mapped with a short				
		interpretation				
						·
		Principles of Remote	Code: GEOSS	SEC01M	July-	Students
		-			December	
		Sensing (RS): Classification of RS		D.B	December	prepare a
						project
		satellites and sensors				report
		Sensor resolutions and				
		their applications with		5.5		
		reference to IRS image		D.B		
		referencing schemes				
		and data acquisition.				
		Concept of False				
		Colour Composite from IRS LISS-3		D.B		
		Principles of image				
		interpretation and				
		feature extraction.				
		Preparation of		D.B		
		inventories of land use				
		land cover features				
		from satellite images.				
		Paper	Code: GEOA(	COR11T		
		Research in				
		Geography: Meaning,		M.M		
		types and significance			July-August	
		Literature review and				
>		formulation of		A.C	August-	
S S		research design			September	
		Defining research				
S		problem and		A.C	September-	
SEMESTER V Honours		objectives			October	
≥   ∓		Research materials		A.C.	November-	
SE		and methods		A.C	December	
		Techniques of writing				
		scientific reports:		M.M		
		Preparing notes,			December-	
		references,			January	

bibliography, abstract and keywords			
Fieldwork in Geographical studies: Role and significance. Selection of study area and objectives. Pre- field academic preparations. Ethics of		M.N	July-August
fieldwork  Field techniques and tools: Observation (participant, non participant), questionnaires (open, closed, structured, non-structured).  Interview	25	M.N	August- September
Positioning and collection of samples. Preparation of inventory from field data.		D.B	September- October
Post-field tabulation, processing and analysis of quantitative and qualitative data		D.B	November- December
Paner Co	ode: GEOA	COR11P	
Literature Review	AC. GEOF	M.N & A.C	August- January
Field Report		A.S, D.B, O.M, M.M & S.K	August- January
Panor Co	do: GEOA	COP12T	
Classification of hazards and disasters.	ode: GEOA	M.N	July-August
Approaches to hazard study: Risk perception and vulnerability assessment. Hazard paradigms		A.S	August- September



1	Responses to hazards:			September-
	Preparedness, trauma			October
	and aftermath.		A.S	October
	Resilience and		A.3	
Ļ	capacity building.			
	Hazards mapping:			November-
	Data and geospatial		Proposed	December
	techniques (for		extension	
	hazards enlisted in			
	Unit II and Core 12P)		lecture	
	(Proposed Workshop			
f	` ' '			
F	Earthquake: Factors,			December-
	-			
	vulnerability,		O.M	January
	consequences and			
Ļ	 management		$\Delta V$	
	Tropical Cyclone:			
	Factors, vulnerability,		M.M	
	consequences and		IVI.IVI	
	 management			
ſ	 Riverbank erosion:			
	Factors, vulnerability,		6.14	
	consequences and		S.K	
	management			
F				l
	Paper	Code: GEOA	COR12P	
-	An individual Project			
	Report is to be			
	prepared and			
	submitted based on			
	any one case study			
	among the following		M.N, A.S,	
	disasters of West		D.B, A.C,	July-
L	Bengal:		O.M, M.M &	January
	1) Cyclone/		S.K	,
	Thunderstorm, 2)		3.IX	
	Landslide, 3) Flood, 4)			
1	Coastal/ riverbank			
	erosion, 5) Fire, 6)			
	Industrial accident, 7)			
	Structural collapse.			
F		1		<u> </u>
ľ	 Paper	Code: GEOA	DSE01T	
ſ	 Factors or soil			July- August
	formation. Man as an		M.M	
	active agent of soil		IVI.IVI	
1	transformation.			
	Soil profile. Origin and			July- August
		1		
	profile characteristics		O.M	
			O.M	



I	1 - 6	I	Ī	1
	Definition and			August
	significance of soil		Collaboratio	
	properties: Texture,		n class	
	structure and		II class	
	moisturiser			
	Definition and			September
	significance of soil		Collaboratio	
	properties: pH, organic		n class	
	matter and NPK			
	Soil erosion and			October-
	degradation: Factors,			November
	processes and		A.S	November
	•			
	mitigation measures			N. L.
	Principles of soil			November-
	classification: Genetic		A.S	December
	and USDA.			<u> </u>
	Concepts of			July- August
	biosphere, ecosystem,			
	biome, ecotone,		M.N	
	community, niche,		IVI.IN	
	succession and			
	ecology			
	Concepts of trophic			July- August
	structure, food chain		M.N	, , ,
	and food web.			
	Geographical extent			August
	and characteristic			, tagast
	features of: Tropical		M.M	
	rain forest and		101.101	
	Grassland biomes			
				Contombor
	Bio-geochemical cycles			September
	with special reference		M.N	
	to carbon dioxide and			
	nitrogen			
W.	Measures for			October-
	conservation of bio-			November
	diversity in India: Man		M.N	
	and Biosphere			
	Programme			
				<u>.</u>
	Paper	Code: GEO/	ADSE02T	
	Scope and content of			
	Settlement			
	Geography; rural,		M.M	
	urban and peri-urban			
	areas			July- August
	Rural Settlement:			34.7 / 14gust
	CULAL SELLICIDENT			
			۸.	
	Definition, nature and characteristics		A.C	August

Morphology of rural		
settlements: site and		
situation, layout-	M.N	
internal and external		September
Rural house types with		
reference to India,		
Social segregation in		
	M.N	
rural areas; Census		October-
categories of rural		November
settlements.		November
Problems and policies		
related to rural	O.M	
infrastructure with		November-
reference to India		December
Urban Settlements:		
Census definition		
(Temporal) and	A.S	
categories in India		July- August
Urban morphology:		
Classical models:		
Burgess, Homer Hoyt,	A.S	
Harris and Ullman	71.3	
Metropolitan concept		August
City-region and		August
Conurbation,	NA NI	
Functional	M.N	
classification of cities:		
Nelson and McKenzie		September
Aspects of urban		
places: Location, site		
and situation, Size and	S.K	
spacing of cities: the	5.10	
rank size rule, the law		October-
of the primate city		November
Urban hierarchies:	6.17	November-
Central Place Theory	S.K	December
	I	

			For EV	'EN Se	mestei	rs	
			Paper (	Code: GEO	ACOR03T		
		Unit I: Nature and Principles	Nature, scope and recent trends. Elements of Human Geography		S.K	February	
			Approaches to Human Geography; Environmental		S.K	February	
			Concept and classification of race		S.K	March	
			Cultural regions (language and religion)		S.K	March	
=	Unit II: Society, Demograph y and Ekistics	Evolution of human societies: Hunting and food gathering, pastoral nomadism, subsistence farming and industrial society	90	M.M	February		
			Human adaptation to environment: Masai		M.M	February- March	
SEMESTERII			Population growth and distribution, demographic transition		M.M, M.N	March	
SEN	I	<b>T</b>	Types and patterns of rural settlements		O.M	March- April	
			Morphology of urban settlements		O.M	April	
		Paper Code: GEOACOR04T					
	2	Cartograms and Thematic Mapping	Concepts of rounding, scientific notation, logarithm and antilogarithm, natural and log scales		D.B	February- March	
			Diagrammatic representation of data: Line, Bar, Isopleths	60	A.S	March	
			Representation of socio-economic data: Dots and spheres, proportional circles and Choropleth		A.S	March- April	

			Bearing: Magnetic and true, whole-circle and reduced		M.N	February
			Basic concepts of surveying and survey equipment: Prismatic Compass, Dumpy Level, Theodolite		D.B	March- May
			Paper (	Code: GEO	ACOR04P	
		Cartograms and Thematic	Thematic maps:			61
		Mapping lab	<ul><li>Choropleth showing density of population</li></ul>		A.S	February
			<ul> <li>Dots and</li> <li>Spheres diagram</li> <li>showing distribution</li> <li>of rural and urban</li> <li>population.</li> </ul>	60	A.S	March
			<ul> <li>Proportional pie- diagrams representing economic data and land use data</li> </ul>		A.S	March
			Traverse survey using prismatic compass, Profile survey using dumpy Level		D.B	March- May
				Code: GEO		
		Unit I: Regional Planning	Concept of regions: Types of regions and their delineation		A.C	February
%	ş		Regional Planning: Types, principles, objectives		A.C	February- March
STE	no Ino		Multi- level planning in India		A.C	March
SEMESTER IV	Honours		Metropolitan concept and urban agglomerations	90	A.C	April
		Unit-II: Regional Developmen t	Concepts of growth and development		M.N	February

		Economic, social and environmental		O.M	March
		Human development: Concept		O.M	April
		Cumulative causation model for regional development (Myrdal)		D.B	March
		Concept and causes of underdevelopment		D.B	April
		Regional development in India: Disparity and diversity		D.B	June
			GEOACOR	пот	
	Unit-I:	Concepts in Economic	SEOMEON	0.M	February
	Concepts	Geography: Goods and services, production, exchange and consumption			
		Concept of economic man		O.M	March
		Economic distance and transport costs		O.M	April
	Unit-II: Economic Activities	Concept and classification of economic activities		A.C	February
		Factors affecting location of economic activity with special reference to industry (Weber).		A.C	February
		Secondary activities: Concept of manufacturing regions, special economic zones and technology parks	60	A.C	March
	¥	Tertiary activities: Transport and services		M.M	March
		Agricultural systems: Case studies of tea plantation in India and mixed farming in Europe		M.N	April
		International trade and economic blocks: WTO, GATT and BRICS: Evolution, structure and functions		M.M	May



	(	GEOACOR1	.OT		
Unit-I: Concepts	Concept of holistic environment and systems approach		A.S	February	
	Ecosystem: Concept, structure and functions		A.S	March	
Unit-II: Environment al problems and policies	Urban environmental issues with special reference to waste management		S.K	March	
	Environmental policies  - National Environmental Policy, 2006, Earth Summits (Stockholm, Rio, Johannesburg)	60	S.K	April	
	Global initiatives for environmental management (special reference to Montreal Protocol, Kyoto Protocol, Paris Climate Summit)		S.K	May	
		GEOACOR1	.0P		
Environment al Geography Lab	Preparation of		A.S	February- March	
	Preparation of check- list for Environmental Impact Assessment of an urban / industrial project	60	A.C	March- April	
	Interpretation of air quality using CPCB / WBPCB data		D.B	April- May	
		GEOSSEC02	:M		
Advance Spatial Statistical Techniques	Probability theory, probability density functions with respect to Normal, Binomial and Poisson distributions and their	30	S.K	February- April	Project prepared by the student

		geographical applications.				
		Sampling: Sampling plans for spatial and non-spatial data, sampling distributions. Sampling estimates for		S.K		٨
		large and small samples tests involving means and proportions.  Correlation and Regression Analysis: Rank order correlation		S.K		
		and product moment correlation; linear regression, residuals from regression, and simple curvilinear regression. Introduction to multivariate analysis.				
		Time Series Analysis: Time Series processes; Smoothing time series; Time series components.		S.K		
			GEOACOR1	13T		
	Unit I: Nature of Pre Modern Geography	Development of Geography: Contributions of Greek and Chinese geographers		A.C	February- March	
R VI		Impact of 'Dark Age' in Geography and Arab contributions		A.C	March	
SEMESTER VI		Geography during the age of 'Discovery' and 'Exploration' (contributions of Columbus, Vasco da Gama, Magellan)	90	A.C	March- April	
		Dualism and Dichotomies (Ideographic vs. Nomothetic, Physical		A.C	April	

	vs. Human, Determinism vs. Possibilism,)				
Unit-II: Foundations of Modern Geography	Evolution of Geographical thoughts in Britain and United States of America		A.C	February- March	
and Recent Trends	Contributions of Humboldt and Ritter		A.C	March- April	
	Contributions of Ratzel and Vidal deLaBlaché		A.C	March- April	
	Trends of geography in the post-World War-II period: Quantitative Revolution, systems		A.C	April	
	approach.  Evolution of Critical Geography: Behavioural, humanistic and radical.		A.C	May	
		GEOACOR:	14T		
Unit I: Remote Sensing	Principles of Remote Sensing (RS): Types of RS satellites and sensors		M.N	February	
	Sensor resolutions and their applications with reference to IRS and Landsat missions		M.N	March	
O STATE	Preparation of False Colour Composites from IRS LISS-3 and Landsat TM and OLI data.	60	M.N	March	
	Principles of image correction and interpretation. Preparation of inventories of landuse land cover (LULC) features from satellite images.		M.N	April	

	Unit II: Geographical Information System and Global Navigation	Concept of GIS and its applicability; GIS data structures: types: spatial and nonspatial, raster and vector		M.N	February	
	Satellite System	Principles of preparing attribute tables and data manipulation and overlay analysis		D.B	March	
		Principles of GNSS positioning		D.B	April	
			GEOACOR1	L4P		
	Remote Sensing and GIS	Preparation of land use and land cover map from standard FCC and its interpretation		D.B	February	
		Representation of raster and vector data format.	60	O.M	March	
		Area and length calculations from GNSS data.		D.B	April	
		GE	EOACORDSE04T			
	Unit I: Hydrology	Systems approach in hydrology. Global hydrological cycle: Its physical and biological role		O.M	February	
		Run off: controlling factors. Infiltration and evapotranspiration.		O.M	February	
		Drainage basin as a hydrological unit. Principles of watershed management	90	O.M	March	
		Groundwater: Occurrence and storage. Factors controlling recharge, discharge and movement		O.M	April	

Unit II: Oceanograp Y	Major relief features of the ocean floor: characteristics and origin according to plate tectonics		M.M	February
	Physical and chemical properties of ocean water	-	M.M	February- March
	Water mass, T–S diagram		M.M	March
	Ocean temperature and salinity: Distribution and determinants		M.M	April
	G	EOACORDS	SE06T	
Unit I: Resource and Development	Approaches to Resource Utilization: Utilitarian, Conservational, Community based adaptive		S.K	February
	Significance of Resources: Backbone of Economic growth and development		S.K	February- March
	Problems of resource depletion—global scenario (forest, water, fossil fuels).		S.K	March
	Conservation of Natural Resources	90	S.K	April
Unit II: Resource Conflict and Managemen	•		A.S	February
	Distribution, Utilisation, Problems and Management of Energy Resources: Conventional and Non- Conventional		A.S	February- March
	Concept of Resource sharing: Water		M.N	March

Semester	(Hons /General)	Internal Assessment	University
		(Tentative time)	Examination
I	Hons.	1 <sup>st</sup> Internal Assessment- 2 <sup>nd</sup> Week of September,	January, 2022 (Tentative)
		2021	(remative)
		2 <sup>nd</sup> Internal Assessment-	
		2 <sup>nd</sup> Week of November,	
		2021	
II	Hons.	1st Internal Assessment-	July, 2022 (Tentative)
		3rd Week of April, 2021	
		2nd Internal Assessment-	
		2nd Week of May, 2021	
111	Hons.	1st Internal Assessment-	January, 2022
•••		2nd Week of September,	(Tentative)
		2021	
		2nd Internal Assessment-	
		2nd Week of November,	
		2021	
IV	Hons,	1st Internal Assessment-	July, 2022 (Tentative)
		3rd Week of April, 2021	
		2nd Internal Assessment-	
		2nd Week of May, 2021	
V	Hons.	1st Internal Assessment-	January, 2022
V		2nd Week of September,	(Tentative)
		2021	
OY		2nd Internal Assessment-	
		2nd Week of November,	
		2021	
VI	Hons.	1st Internal Assessment-	July, 2022 (Tentative)
<b>V</b> •		3rd Week of April, 2021	
		2nd Internal Assessment-	
		2nd Week of May, 2021	

