

**Polba Mahavidyalaya**

**Departmental Lesson Plan 2018 – 2019**

Name of the Department: Geography

Name of the Programme: B.A. /B.Sc. (Honours/ ~~General~~)

Name of the Course: (Subject) : B.A. /B.Sc. Geography [Honours/ ~~General~~]

Period of the Lesson Plan : 1<sup>st</sup> July 2018 – 30<sup>th</sup> June 2019

Academic Period	Class.	Paper	Topic to be covered		No of Lectures /Practical	Name of the Teachers	Internal Assessment				
			Unit	Topic							
July 2018– January 2019	SEM-I	CC1: GEOTECTIONICS AND GEOMORPHOLOGY	<b>Unit I:</b> Geotectonics	Earth's tectonic and structural evolution with reference to geological time scale	60	BD	3 <sup>rd</sup> Week of December				
				Earth's interior with special reference to seismology.		BD					
				Concept of Isostasy : Theories of Airy and Pratt		BD					
				Plate Tectonics: Processes at constructive, conservative, destructive boundariesand hotspots: resulting landforms		BD					
			<b>Unit II</b> Geomorphology	Degradational processes: Weathering, mass wasting and resultant landforms		AB					
				Models of landscape evolution: Views of Davis, Penck, and Hack		AB					
				Slope Development: Concept of Wood		AB					
				Development of river network and landforms on uniclinal and folded structures		AB					
				Types of rocks, mineralogical composition of igneous rocks; Landforms on igneous rockswith special reference to Granite and Basalt		AB					
				Karst landforms: Surface and sub-surface		AB					
				Glacial and fluvio-glacial processes and landforms		AB					
				Aeolian and fluvio-aeolian processes and landforms		AB					
				CC2: CARTOGRAPH		Theory		Maps: Classification and Types. Components of a Map	60	BD	3 <sup>rd</sup> Week of December

	IC TECHNIQUES AND GEOLOGICAL MAP STUDY		Concept of Scales: Plain, Comparative, Diagonal and Vernier		B D						
			Coordinate Systems: Polar and Rectangular. Concept of Geoid and Spheroid. Map Projections: Classification, Properties and Uses. Concept and Significance of UTM Projection		A B						
			Concept of Generating Globe, Grids: Angular and Linear Systems of Measurement		A B						
			Survey of India Topographical Maps: Reference scheme of Old and Open series		A B						
			Delineation of Drainage Basin from Survey of India Topographical Map. Concept of Relief, Slope and Stream Order.		B D						
			Types of rocks and minerals. Characteristics of Granite, Basalt, Dolerite, Pegmatite, Gneiss, Shale, Sandstone, Slate, Marble, Quartzite, Quartz, Feldspar, Mica, Limestone, Calcite, Bauxite, Magnetite, Hematite, Galena		AB						
			Concept of Bedding Plane, Unconformity and Non-conformity, thickness of Bed, Dip, Throw, Hade, heave		B D						
			Practical		Construction of Scales: Plain, Comparative, Diagonal and Vernier		B D				
					Construction of Projections: Polar Zenithal Stereographic, Simple Conic with two Standard Parallels, Bonne's and Mercator's		A B				
					Construction and Interpretation of Relief Profiles (Superimposed, Projected and Composite), Preparation of Relative Relief Map, Slope map (Wentworth), and Stream Ordering (Strahler) on a Drainage Basin.		AB+BD				
					Geological Map (Problems related to Horizontal, Uniclinal, Folded and Faulted structure); Drawing of Geological section and Interpretation of the Map.		BD				
							<b>Unit 1:</b>	Nature, composition and layering of the atmosphere,	60	BD	2 <sup>nd</sup> Week of December

SEM-III	CC5: CLIMATOLOG Y	Elements of the Atmosphere	Insolation: controlling factors. Heat budget of the atmosphere.	60	BD	2 <sup>nd</sup> Week of December
			Temperature: horizontal and vertical distribution. Inversion of temperature: types, causes and consequences.		BD	
			Greenhouse effect and importance of ozone layer		AB	
		Unit II Atmospheric Phenomena, Climate Change and Climatic Classification	Condensation: Processes and forms. Mechanism of precipitation: Bergeron-Findeisen theory, collision and coalescence. Forms of precipitation.		BD	
			Air mass: Typology, origin, characteristics and modification.		BD	
			Fronts: warm and cold; frontogenesis and frontolysis.		BD	
			Weather: stability and instability; barotropic and baroclinic conditions.		BD	
			Circulation in the atmosphere: Planetary winds, jet stream and monsoons		AB	
			Tropical and mid-latitude cyclones		AB	
			Evidences and causes of climate change		AB	
	Climatic classification after Köppen, Thornthwaite (1948)	AB				
	CC6: STATISTICAL METHODS IN GEOGRAPHY	Unit-1:Theory	Importance and significance of Statistics in Geography. Discrete and continuous data, population and samples, scales of measurement (nominal, ordinal, interval and ratio), sources of data	AB		
			Collection of data and formation of statistical tables	AB		
			Sampling: Need, types, and significance and methods of random sampling	BD		
			Distribution: frequency, cumulative frequency	BD		
		Unit-2:Theory	Central tendency: Mean, median, mode, partition values	AB		
			Measures of dispersion range, mean deviation, standard deviation, coefficient of variation	AB		
			Association and correlation: Rank correlation, product moment correlation	AB		
			Linear Regression and time series analysis	AB		
		Practical	Construction of data matrix with each row representing an aerial unit (districts / blocks / mouzas /	BD		

			towns) and corresponding columns of relevant attributes.			
			Based on the above, a frequency table, measures of central tendency and dispersion would be computed and interpreted.		BD	
			Histograms and frequency curve would be prepared on the dataset.		BD	
			Based on of the sample set and using two relevant attributes, a scatter diagram and regression line would be plotted and residual from regression would be mapped with a short interpretation.		BD	
		<b>CC7: GEOGRAPHY OF INDIA</b>	<b>Unit 1: Geography of India</b>	60	BD	2 <sup>nd</sup> Week of December
			Geology and physiographic divisions		BD	
			Climate, soil and vegetation: Characteristics and classification		AB	
			Population: Distribution, growth, structure and policy		AB	
			Distribution of population by race, caste, religion, language, tribes		BD	
			Agricultural regions, Green revolution and its consequences		BD	
			Mineral and power resources distribution and utilisation of iron ore, coal, petroleum		AB	
			Industrial development since independence.		AB	
			Regionalisation of India: Views of Spate and Bhatt.		BD	
			<b>Unit 1: Geography of West Bengal</b>		AB	
			Physical perspectives: Physiographic divisions, forest and water resources		BD	
			Population: Growth, distribution and human development		BD	
			Resources: Mining, agriculture and industries		AB	
			Regional Development: Darjeeling Hills and Sundarban			
		<b>SEC- 1: COMPUTER BASICS AND COMPUTER APPLICATIONS</b>	Numbering Systems; Binary Arithmetic	40	AB	2 <sup>nd</sup> Week of December
			Data Computation, Storing and Formatting in Spreadsheets: Computation of Rank, Mean, Median, Mode, Standard Deviation, Moving Averages, Derivation of Correlation, Covariance and regression; Selection		AB	

				of technique and interpretation.						
				Preparation of Annotated Diagrams and its interpretation: Scatter diagram and Histogram		BD				
				Internet Surfing: Generation and extraction of information		AB				
February 2019 – June 2019	SEM-2	CC3: HUMAN GEOGRAPHY	<u>Unit I: Nature and Principles</u>	Nature, scope and recent trends of Human Geography	60	BD	3 <sup>rd</sup> Week of May			
				Evolution of humans, concept of race and ethnicity; Major Racial Groups of the world		BD				
				Space, society and cultural regions (language and religion)		BD				
				Concept of Culture, Cultural Diffusion, Convergence, Cultural Realms of the world		BD				
			<u>Unit II Society, Demography and Ekistics</u>	Evolution of human societies: Hunting and gathering, Pastoralnomadism, Subsistence farming, Industrial and urban societies		AB				
			Human-environment relations with special reference to Arctic and hot desert regions	AB						
			Population growth and distribution, composition; demographic transition	AB						
			Population–resource regions (Ackerman)	AB						
			Human, population and environment relations with special reference to Development–environment conflict	AB						
			Social morphology and rural house types in India	BD						
			Types and patterns of rural settlements	BD						
			Functional Classification of urban settlements	BD						
			CC4: CARTOGRAMS, SURVEY AND THEMATIC MAPPING	Theory		Concepts of Cartograms and Thematic Maps		60	BD	3 <sup>rd</sup> Week of May
						Concept and utility of Isopleths and Choropleth,			BD	
						Concept, utility, and interpretation of: Climograph, Hythergraph and Ergograph			BD	
						Preparation and interpretation of demographic charts and diagrams (Age-Sex Pyramid)			BD	
						Concepts of Bearing: magnetic and true, whole-circle and			AB	

				reduced			
				Basic concepts of surveying and survey equipment: Abneys Level, Clinometer		AB	
				Basic concepts of surveying and survey equipment: Prismatic Compass, Dumpy Level, Transit Theodolite		BD	
				Interpretation of Land use and land cover maps		BD	
SEM-4	CC8: Regional Planning and Development	<u>Unit 1: Regional Planning</u>	Concept and Classification of Regions	60	BD	2 <sup>nd</sup> Week of May	
			Types of Planning; Principles and Techniques of Regional Planning		BD		
			Need for Regional Planning; Multilevel Planning in India		BD		
			Metropolitan Concept: Metropolitan Areas, Metropolitan Region		BD		
		<u>Unit II Regional Development</u>	Development: Meaning, Growth versus Development		BD		
			Models for Regional Development: Growth Pole		BD		
			Model for development India		BD		
			Concept of Regional Inequality and Disparity		BD		
			Human Development: Significance, Indicators and Measurement		BD		
		Status of Regional Imbalances in India	BD				
	Strategies for Regional Development in India	BD					
	NITI Aayog and its Functions	BD					
	CC9: Economic Geography	<u>Unit 1: Concepts and Approaches</u>	Meaning and Approaches to Economic Geography	60	AB	2 <sup>nd</sup> Week of May	
			Concepts in Economic Geography		AB		
			Factors Influencing Location of Economic Activity		AB		
			Determining Factors of Transport Cost		AB		
		<u>Unit II Economic Activities</u>	Concept and Classification of Economic Activities		AB		
			Location Theories: Von Thünen and Alfred Weber		AB		
			Primary Activities:		AB		
Secondary Activities: Manufacturing (Iron and Steel in India and Japan, Petrochemical in India and USA)			AB				
Tertiary Activities: Types of Trade and Services	AB						

				<b>Agricultural Systems: Tea Plantation in India and Mixed Farming in Europe</b>		<b>AB</b>	
				<b>Highways: Roles in Economic Development of India since 1990s</b>		<b>AB</b>	
				<b>International Trade Blocs: WTO and OPEC</b>		<b>AB</b>	
		<b>CC10: Environmental Geography</b>	<b>Theory</b>	<b>Geographers' Approach to Environmental Studies</b>	<b>60</b>	<b>BD</b>	<b>2<sup>nd</sup> Week of May</b>
				<b>Changes in Perception</b>		<b>BD</b>	
				<b>Ecosystem: Concept, Structure and Functions</b>		<b>BD</b>	
				<b>Environmental Degradation and Pollution: Water and Air</b>		<b>BD</b>	
				<b>Environmental Issues related to Agriculture</b>		<b>AB</b>	
				<b>Urban Environmental issues related to Waste Management</b>		<b>AB</b>	
				<b>Concept and Issues related to Bio-diversity</b>		<b>BD</b>	
				<b>Environmental Programs and Policies on Forest and Wetland: National and Global</b>		<b>BD</b>	
			<b>Practical</b>	<b>Preparation of questionnaire for perception survey on environmental problems</b>		<b>BD</b>	
				<b>Environmental Impact Assessment: Leopold Matrix</b>		<b>BD</b>	
		<b>Quality assessment of soil using field kit: pH and NPK</b>			<b>BD</b>		
		<b>Interpretation of air quality using CPCB / WBPCB data</b>			<b>AB</b>		
		<b>SEC-2: ADVANCED SPATIAL STATISTICAL TECHNIQUES</b>	<b>Theory</b>	<b>Concept of Probability and Normal Distribution and their Geographical Applications, Skewness (Pearson's Method)</b>	<b>40</b>	<b>BD</b>	<b>2<sup>nd</sup> Week of May</b>
				<b>Differences between Spatial and non-Spatial data, Nearest Neighbour Analysis</b>		<b>BD</b>	
				<b>Correlation and Regression Analysis, t-test, Spearman's Rank Correlation Product Moment Correlation; Linear Regression</b>		<b>BD</b>	
				<b>Time Series Analysis; Smoothing time series by Least Square and/or Moving Average Method</b>		<b>AB</b>	

AB- Ayan Banerjee

BD- Biswajit Dhara