

**B.A. /B.Sc. 3-Year (General) Degree Course  
Module in Geography**

## Part-I

### PAPER-I

#### PHYSICAL GEOGRAPHY

Full Marks: 100

Examination Time: 3 Hours

#### 1.0 GEOTECTONICS [20 MARKS]

- 1.1 Geological Time-scale and Geological History of the Earth ##
- 1.2 Internal Structure of the Earth ##
- 1.3 Continental Drift: Evidences and Mechanisms ##
- 1.4 Origin of Fold Mountains with special reference to Plate Tectonics ##

#### 2.0 GEOMORPHOLOGY [20 MARKS]

- 2.1 Processes of Denudation: Weathering, Erosion and Mass-wasting #
- 2.2 Fluvial Processes and Landforms #
- 2.3 Theories of Landscape Evolution (Concepts of Davis and Hack) #
- 2.4 Glacial and Aeolian Processes and Landforms #

#### 3.0 CLIMATOLOGY [20 MARKS]

- 3.1 Thermal Structure, Chemical Composition and Layering of Atmosphere; Horizontal distribution of Temperature \*\*
- 3.2 Origin and Classification of Air masses and their Characteristics \*\*
- 3.3 Forms of Precipitation and Types of Rainfall \*\*
- 3.4 Koppen's Classification of Climate of the World and India \*\*

#### 4.0 SOIL GEOGRAPHY [20 MARKS]

- 4.1 Definition of Soil, Physical and Chemical Properties of Soil with special reference to Texture, Colour and pH \*
- 4.2 Soil Forming Factors, Soil Types: Zonal, Azonal and Intrazonal \*
- 4.3 Soil Formation: Podsolisation and Laterisation \*
- 4.4 Causes of Soil Erosion; Methods of Soil Conservation \*

#### 5.0 BIOGEOGRAPHY [20 MARKS]

- 5.1 Definition of Biosphere and Biogeography, Meaning of Ecology, Ecosystem, Environment, Ecotone, Communities, Habitats and Biotopes \*
- 5.2 Impact of climate and soil on distribution of plants and animals ##
- 5.3 Biomes: Tropical Rainforest and Temperate Grassland #
- 5.4 Problems of deforestation and conservation of forest \*\*

No. of Lectures
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N.B. : \*KG, #PC,\*\*BM,##MM

## Part-II

### PAPER-II

## GEOGRAPHICAL THOUGHT, ECONOMIC AND SOCIAL GEOGRAPHY

**Full Marks: 100**

**Examination Time: 3Hours**

	No. of Lectures
<b>1.0 GEOGRAPHICAL THOUGHT [20 MARKS]</b>	
1.1 Definition, Scope and Content of Geography ##	05
1.2 Contributions of Humboldt and Ritter to the Discipline of Geography ##	05
1.3 Concepts of Determinism and Possibilism ##	05
1.4 Concept of Region and <i>Method</i> of Regionalisation ##	05
<b>2.0 ECONOMIC GEOGRAPHY [20 MARKS]</b>	
2.1 Agriculture in Tropical Region: Intensive Subsistence Agriculture (Rice) and Plantation Agriculture (Tea) *	05
2.2 Agriculture in Extra-Tropical Regions: Mixed Farming (NW Europe) and Mediterranean Agriculture *	05
2.3 Major Industrial Regions of the World: Industrial Characteristics of the Great Lakes and Asansol – Durgapur Regions **	05
2.4 Growth and Development of Iron and Steel Industry in USA and Cotton Textile Industries in India. **	05
<b>3.0 POPULATION GEOGRAPHY [20 MARKS]</b>	
3.1 Growth, Distribution and Density of Population on the World #	05
3.2 Concepts of Optimum Population, Overpopulation and Under-Population #	05
3.3 Types of Population Migration with reference to India #	05
3.4 Population Explosion and Food Crisis #	05
<b>4.0 HABITAT, SOCIETY AND ECONOMY [20 MARKS]</b>	
4.1 Major Racial Groups and their World Distribution ##	05
4.2 Major Linguistic Groups of India and their Distribution #	05
4.3 Pygmies and Bushmen of Africa **	05
4.4 Bhils and Santals of India **	05
<b>5.0 SETTLEMENT GEOGRAPHY [20 MARKS]</b>	
5.1 Criteria of Classification of Settlements into Rural and Urban types in India *	05
5.2 Types and Patterns of Rural Settlements and Factors responsible for their Growth *	05
5.3 Definition and Characteristics of Urban Agglomeration, Metropolis and Megalopolis ##	05
5.4 Functional Classification of Towns ##	05
<b>N.B. : *KG, #PC,**BM,##MM</b>	<b>05</b>

# PAPER-III (PRACTICAL)

## CARTOGRAPHY TECHNIQUES IN GEOGRAPHY

Full Marks: 100

Examination Time: 5 hours

	No. of Lectures
<b>1.0 SCALE AND CARTOGRAMS [20 MARKS]</b>	
1.1 Linear and Comparative Scales #	05
1.2 Proportional Diagrams: Circles and Squares *	05
1.3 Composite Bar Diagrams and Age-Sex Pyramids *	05
1.4 Taylor's Climograph **	05
<b>2.0 MAPPING TECHNIQUES AND MAP PROJECTION [20 MARKS]</b>	
2.1 Isoleth Method: Rainfall Distribution and Temperature Zones *	05
2.2 Choropleth Method: Population Density * and Cropping Intensity (Based on Ratio between Net Sown Area and Gross Cropped Area) **	05
2.3 Drawing of Graticule on Cylindrical Equal Area Projection #	05
2.4 Drawing of Graticule on Simple Conical Projection with One Standard Parallel #	05
<b>3.0 MAP INTERPRETATION [20 MARKS]</b>	
3.1 Interpretation of Relief and Drainage from Topographical Maps ##	05
3.2 Interpretation of Communication and Settlement from Topographical Maps ##	05
3.3 Relationship between Physical and Cultural Features in Plateau and Plain Regions on the basis of Topographical Maps Published by Survey of India ##	05
3.4 Interpretation of Daily Weather Maps Published by India Meteorological Department **	05
<b>4.0 SURVEYING [20 MARKS]</b>	
4.1 Definition and Classification of Surveying ##	05
4.2 Plane Table Survey by Radial Method #	05
4.3 Open and Closed Traverse Survey by Prismatic Compass ##	05
4.4 Drawing of Profile by Dumpy / Precision Level ##	05
<b>5.0 FIELD REPORT AND LABORATORY NOTEBOOK *,##</b>	15

### **5.1 FIELD REPORT ON EITHER A RURAL MOUZA OR AT LEAST ONE WARD OF AN URBAN AREA**

(TO BE CONDUCTED DURING FIELD EXCURSION). [10 MARKS]

#### **5.1.1 Guidelines for field report on rural mouza**

The following methods are to be followed before the preparation of field report:

- Plot-to-Plot Land Use Survey
- Collection of Socio-Economic and Physical Data
- Classification and Tabulation of Data
- Preparation of Land Use Map on Cadastral Plan
- Preparation of Maps and Diagrams showing Physiography, Drainage, Soil, Forest, Settlement, Irrigation, Cropping Pattern, Demographic Characteristics *etc.*

- (f) Interrelation and Analysis of Data, Maps and Diagrams The Report is to be Prepared under the following sections:
- (a) Introduction: Objective, Extent and Space Relations, Sources of Information, Methodology *etc.*
  - (b) Physical Components: Lithology, Drainage, Surface Condition, Slope, Climate, Soil Vegetation, *etc.*
  - (c) Population: Number, FMR, Literacy, Occupational Structure, Ethnic and Religious Composition, Language, Mobility, Media Exposure, Per Capita Income *etc.*
  - (d) Settlement: Number of Houses, Building Materials, Number and Size of Rooms, Amenities *etc.*
  - (e) Agriculture: Soil Properties, Irrigational Facilities, General Land Use, Cropping Intensity, Crop-Combination, Use of Fertilisers, Production and Marketing *etc.*
  - (f) Other Economic Activities: Fishing, Horticulture, Brick-Kiln Industries
  - (g) Problems, Prospects, Suggestions and Conclusion
  - (h) Bibliography##\*\*

### **5.1.2 Guidelines for Field Report on Urban Area (At least One Ward)**

The following methods are to be followed before the preparation of Field Report:

- (a) Plot-to-Plot Land Use Survey
- (b) Collection of Socio-Economic Data
- (c) Classification and Tabulation of Data
- (d) Preparation of Urban Land Use Map
- (e) Preparation of Maps and Diagrams showing Urban Morphology, Drainage and Sewage Networks, Communication Networks, Traffic Flow and Travel-Time, Demographic Characteristics, Cultural and Economic Zonation *etc.*
- (f) Interrelation and Analysis of Data, Maps and Diagrams The Report is to be Prepared under the Following Sections:
  - (a) Introduction: Objective, Extent and Space Relations, Sources of Information, Methodology *etc.*
  - (b) Physical Components: Surface Conditions, Slope, Drainage, Climate, *etc.*
  - (c) Demography: Spatial Analyses of Population Density, FMR, Literacy, Occupational Structure, Ethnic and Religious Composition, Language, Mobility, Media Exposure, *etc.*
  - (d) Town Morphology: Activity Zones, Sectors of Land Use, Linkages between different Zones and Sectors
  - (e) Economy: Economic Individuality of the Town, Production and Marketing Patterns, Spatial differences in Occupation and Per Capita Income Characteristics *etc.*
  - (f) Urban Waste and its Management: Types of Wastes Generated, Network of Drains, Efficiency of Waste Removal and Sewage Treatment, Peoples' Perception of Pollution Problem
  - (g) Bibliography

**5.2** Field Report is to be **Hand-Written**

**5.3** Text of the Report should not Exceed 4,000 words

**5.4** Maps and Diagrams Excluding Photo-Plates should not Exceed 20

**6.0** LABORATORY NOTEBOOK AND VIVA-VOCE [6+4 MARKS]

**N.B. : \*KG, #PC,\*\*BM,##MM**

## Part-III

### PAPER-IV

#### GEOGRAPHY OF INDIA AND ANALYTICAL TECHNIQUES IN GEOGRAPHY

#### Group-A (Theoretical)

#### GEOGRAPHY OF INDIA

Full Marks: 60

Examination Time: 3 Hours

	No. of Lectures
<b>1.0 PHYSICAL ASPECTS [20 MARKS]</b>	
1.1 Structure and Relief & their Interrelationship ##	05
1.2 Characteristics of River Systems of Peninsular and Extra-Peninsular India **	05
1.3 Climatic Characteristics: Seasonality, Unevenness and Unreliability of Rainfall **	05
1.4 Distribution of Natural Vegetation, Soil and their Interrelationship *	05
<b>2.0 SOCIO-ECONOMIC ASPECTS [20 MARKS]</b>	
2.1 Distribution and Production of Principal Crops (Rice, Wheat, Cotton and Tea) ##	05
2.2 Power Resources: Coal, Petroleum and Hydroelectricity ##	05
2.3 Locational Factors and Growth of Iron and Steel and Aluminium Industries #	05
2.4 Population Growth and Distribution, Population Problems, Trends of Urbanisation #	05
<b>3.0 REGIONAL ASPECTS [20 MARKS]</b>	
3.1 Kashmir Himalaya ##	05
3.2 Deccan Trap ##	05
3.3 Bengal Delta ##	05
3.4 Marusthali ##	05

N.B. : \*KG, #PC, \*\*BM, ##MM

# PAPER-IV

## GEOGRAPHY OF INDIA AND ANALYTICAL TECHNIQUES IN GEOGRAPHY

### Group-B (Practical)

#### ANALYTICAL TECHNIQUES IN GEOGRAPHY

Full Marks: 40

Examination Time: 3 hours

#### 1.0 STATISTICAL TECHNIQUES [15 MARKS]

- 1.1 Methods of Collection, Classification and Tabulation of Data \*
- 1.2 Frequency Distribution: Graphical Representation and Interpretation of Histogram, Frequency Polygon, Curves and Ogives \*
- 1.3 Measures of Central Tendency: Mean, Median and Mode \*
- 1.4 Simple Correlation: Scatter Diagram and Fitting of Trend-Line by Eye-Estimation \*

#### 2.0 LABORATORY WORK [20 MARKS]

- 2.1 Reading of Barometer, Hygrometer and Maximum and Minimum Thermometer #
- 2.2 Determination of Soil Texture by Feel Method and Soil pH by Soil Kit \*
- 2.3 Measurement of Area by Graphical Method and Length by Rotameter #\*\*
- 2.4 Megascopic Identification of Common Minerals and Rocks & their Characteristics: Quartz, Mica, Feldspar, Bauxite, Haematite, Granite, Basalt, Conglomerate, Sandstone, Shale, Gneiss, Schist, Phyllite and Marble \*

#### 3.0 LABORATORY NOTEBOOK AND VIVA-VOCE

[3+2 = 5]

No. of Lectures
02
02
02
02
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02

N.B. : \*KG, #PC,\*\*BM,##MM

**B.A. /B.Sc.(Hons.) Course in Geography**  
**Course Module**



## PAPER-II (PRACTICAL)

### CARTOGRAPHIC TECHNIQUES IN GEOGRAPHY

Full Marks: 100

Examination Time: 6 hours

	No. of Lectures
<b>1.0 SCALES AND CARTOGRAMS [20 MARKS]</b>	
1.1 Geographical Scales: Linear (including comparative), Vernier, Diagonal#	05
1.2 Proportional Diagrams: Circles, Pies and Squares*	05
1.3 Ternary Diagram*	05
1.4 Taylor's Climograph, Hythergraph, Wind Rose and Ergograph **	05
<b>2.0 DIAGRAMS AND MAPPING TECHNIQUES [20 MARKS]</b>	
2.1 Maps showing Population Density by Choropleth and Distribution by Dots and Spheres*	05
2.2 Population Growth Rates: Annual and Decadal (Line graph and Choropleth), Age-sex Pyramid and Dependency Ratio*	05
2.3 Cropping Intensity Maps (on the basis of Net-Sown and Gross-Sown Area)**	05
2.4 Flow-chart based on Transport and Migration**	05
<b>3.0 MAP PROJECTION [20 MARKS]</b>	
3.1 Base of Classification and Suitability of Projections ##	05
3.2 Cylindrical Equal-Area Projection ##	05
3.3 Conical Group of Projections: Simple Conic ## (one standard Parallel) and Bonne's and Polyconic	05
3.4 Gnomonic, Stereographic, Orthographic Projections (Polar Case) ##	05
<b>4.0 SURVEYING AND MAPPING [30 MARKS]</b>	
4.1 Preparation of Land Use Map of a Small Area by Plane Table Survey (Radiation and Intersection Methods)#	07
4.2 Preparation of Land Use Map of a Small Area by Prismatic Compass Survey (Traversing and Intersection Methods)#	07
4.3 Preparation of Contour Map of a Small Area by Prismatic Compass and Levelling Instruments ##	08
4.4 Determination of Height (with Accessible and Inaccessible Bases) by Theodolite ##	08
<b>5.0 PRACTICAL NOTEBOOK AND VIVA-VOCE [6+4 MARKS]</b>	

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## Part-II

### PAPER-III

#### CLIMATOLOGY, SOIL GEOGRAPHY AND BIOGEOGRAPHY

Full Marks: 100

Examination Time: 4 Hours

	No. of Lectures
<b>1.0 CLIMATOLOGY-I [20 MARKS]</b>	
1.1 Insolation and Heat Budget, Horizontal and Vertical Distribution of Temperature with particular reference to Normal Distribution and Types of Inversion**	05
1.2 Forms and Processes of Condensation, Mechanism of Precipitation, Distribution of Rainfall**	05
1.3 Planetary Wind System with Special reference to Tri-Cellular Model,**	05
1.4 Genesis of Monsoon with particular reference to Jet Stream**	05
<b>2.0 CLIMATOLOGY-II [20 MARKS]</b>	
2.1. Origin and Classification of Air Mass, Frontogenesis and Frontolysis**	05
2.2 Origin and Characteristics of Tropical and Temperate Cyclones**	05
2.3 Classification of World Climate: Schemes of Köppen and Thornthwaite (1948)**	05
2.4 Climatic Change, Evidences and Causes**	05
<b>3.0 SOIL GEOGRAPHY [20 MARKS]</b>	
3.1 Soil: Definition, Factors of Formation and Development of Soil Profiles*	05
3.2 Physical and Chemical Properties of Soil with special reference to Texture, Structure, Organic Carbon and pH*	05
3.3 Concept of Zonal, Azonal and Intrazonal Soil, Formation and Profile Characteristics of Podsol, Laterite and Chernozem*	05
3.4 Soil Erosion and Conservation*	05
<b>4.0 BIOGEOGRAPHY-I [20 MARKS]</b>	
4.1 Definitions of Biosphere and Biogeography, Meaning of Ecology, Ecosystem, Environment, Ecotone, Communities, Habitats, Niche, Biotopes and Biomes#	05
4.2 Biosphere and Energy: Energy Sources, Laws of Energy Exchange, Food Chains and Flow of Energy#	05
4.3 Factors of Plant Ecology: Light, Heat, Moisture, Wind and Topography*	05
4.4 Biomes: Tropical Rainforest and Temperate Grassland#	05
<b>5.0 BIOGEOGRAPHY-II [20 MARKS]</b>	
5.1 Impact of Climate and Soil on Distribution of Flora and Fauna*	05
5.2 Bio-Climatic Regions in India and their Characteristics*	05
5.3 Wildlife Conservation in India: Projects and their Importance with Special Reference to Tiger and Crocodile*	05
5.4 Biodiversity and its Importance with reference to Sundarbans#	05

N.B. : N.B. : \*KG, #PC,\*\*BM,##MM

## PAPER IV (PRACTICAL)

### ANALYTICAL TECHNIQUES IN GEOGRAPHY

**Full Marks: 100**

**Examination Time: 6 hours**

	No. of Lectures
<b>1.0 DATA COLLECTION AND REPRESENTATION [20 MARKS]</b>	
1.1 Geographical Data Management: Collection (Sampling Techniques- Significance and Types), Classification, Tabulation, Interpretation and Analysis of Geographical Data*	05
1.2 Frequency Distribution: Attribute and Variable, Discrete and Continuous, Graphical Representation of Frequency Distribution (Histogram, Frequency Polygon, Curve and Ogives)*	05
1.3 Measures of Central Tendencies: Mean, Median and Mode; Skewness	05
1.4 Measures of Dispersion: Range, Quartile Deviation, Mean* Deviation and Standard Deviation*	05
<b>2.0 DATA ANALYSIS AND INTERPRETATION [20 MARKS]</b>	
2.1 Scatter Diagram, Simple Correlation and Regression*	05
2.2 Time Series Analysis: Actual Trend, Semi Average, Moving Average, Linear Trend by Least Square Method ##	05
2.3 Standard Error of Estimate and Standard Scores*	05
2.4 Absolute Residual Mapping*	05
<b>3.0 DATA RECORDING, AREA MEASUREMENT AND SPECIMEN IDENTIFICATION [20 MARKS]</b>	
3.1 Reading, Recording and Analysis of Data Obtained from Barometer, Hygrometer and Maximum-Minimum Thermometer#	05
3.2 Determination of Soil Texture by Feel Method; Soil pH and Organic Carbon by Soil Kit*	05
3.3 Measurement of Area by Graphical Method and Planimeter#	05
3.4 Identification of Common Minerals and Rocks with their Characteristics: Quartz, Feldspar, Mica, Haematite, Magnetite, Chalcopryrite, Galena, Calcite, Gypsum, Bauxite, Granite, Basalt, Dolerite, Pegmatite, Conglomerate, Sandstone, Shale, Limestone, Gneiss, Schist, Phyllite, Quartzite and Marble.*	05
<b>4.0 MORPHOMETRIC ANALYSIS AND INTERPRETATION OF TOPOGRAPHIC MAPS: PLATEAU AND PLAIN REGIONS [30 MARKS]</b>	
4.1 Construction of Profiles: Superimposed, Projected and Composite**	05
4.2 Stream Frequency and Drainage Density**	05
4.3 Average Slope (Wentworth's method)**	05
4.4 Interpretation of Relief, Drainage and Vegetation Characteristics**	05
4.5 Interpretation of Settlement, Transport and Communication Systems**	05
4.6 Relationship between Physical and Cultural Elements**	05
<b>5.0 PRACTICAL NOTEBOOK AND VIVA-VOCE [6 + 4 MARKS]</b>	

**N.B. : \*KG, #PC,\*\*BM,##MM**

## Part-III

### PAPER - V

#### NATURE OF GEOGRAPHY

Full Marks: 100

Examination Time: 4 Hours

*Number of lectures to be delivered for each Unit 20*

	No. of Lectures
<b>1.0 DEVELOPMENT OF GEOGRAPHY [20 MARKS]</b>	<b>05</b>
1.1 Definition, Scope and Content of Geography**	<b>05</b>
1.2 Development of Geography in the Ancient and Mediaeval Periods (up to 19th Century)**	<b>05</b>
1.3 Development of Modern Scientific Geography in the 19th Century with particular reference to the Contributions of Humboldt and Ritter**	<b>05</b>
1.4 Development of Geography in the 20th Century (upto 1970)**	
<b>2.0 DEVELOPMENT OF SCHOOLS OF THOUGHT IN MODERN GEOGRAPHY [20 MARKS]</b>	<b>05</b>
2.1 German School ##	<b>05</b>
2.2 French School ##	<b>05</b>
2.3 American School ##	<b>05</b>
2.4 Indian School ##	
<b>3.0 CONCEPTS AND TRENDS IN GEOGRAPHY [20 MARKS]</b>	<b>05</b>
3.1 Concepts of Determinism, Possibilism and Neo-Determinism#	<b>05</b>
3.2 Concepts of Empiricism and Positivism**	<b>05</b>
3.3 Approaches to Geographic Studies: Systematic vs Regional and Ecological#	<b>05</b>
3.4 Critique of Quantitative Revolution in Geography**	
<b>4.0 APPROACHES TO REGIONAL STUDIES [20 MARKS]</b>	<b>05</b>
4.1 Concepts and Types of Region ##	<b>05</b>
4.2 Bases and Methods of Regionalisation ##	<b>05</b>
4.3 Scale and Hierarchy of Region ##	<b>05</b>
4.4 Region and Regionalism ##	
<b>5.0 ENVIRONMENT AND DEVELOPMENT [20 MARKS]</b>	<b>05</b>
5.1 Relationship among Population Growth, Economic Development and Environmental Conservation**	<b>05</b>
5.2 Environmental Issues Related to Urban and Industrial Expansion**	<b>05</b>
5.3 Environmental issues of Large Dams#	<b>05</b>
5.4 Sustainable Development#	

**N.B. : \*KG, #PC,\*\*BM,##MM**

**PAPER - VI**  
**ECONOMIC AND SOCIAL GEOGRAPHY**

**Full Marks: 100**

**Examination Time: 4 Hours**

	<b>No. of Lectures</b>
<b>1.0 RESOURCE [20 MARKS]</b>	
1.1 Resource: Concept and Classification, Economic and Environmental Approaches of Resource Utilisation*	<b>05</b>
1.2 Different sources of Energy Resources, their Relative Importance, Production and Consumption ##	<b>05</b>
1.3 Problems of Resource Depletion - Global Scenario (Forest, Water, Fossil Fuels), ##	<b>05</b>
1.4 Necessity and Methods of Resource Conservation; Expanding Oceanic Resource Horizon. ##	<b>05</b>
<b>2.0 ECONOMIC ACTIVITY [20 MARKS]</b>	
2.1 Agricultural Systems: Plantation Agriculture and Mixed Farming*	<b>05</b>
2.2 Models of Economic Activities: Von-Thunen, Weber, Losch#	<b>05</b>
2.3 Industrial Regions: Great Lakes, Mumbai-Pune, Asansol-Durgapur**	<b>05</b>
2.4 International Trade with Special Reference to WTO, EEC and SAARC#	<b>05</b>
<b>3.0 SOCIETY AND CULTURE [20 MARKS]</b>	
3.1 Nature and Content of Social Geography, Evolution of Social Geography ##	<b>05</b>
3.2 Races and Ethnicity: Major Racial Groups of the World ##	<b>05</b>
3.3 Concept of Culture and Its Components; Innovation, Diffusion and Convergence of Culture ##	<b>05</b>
3.4 Cultural Realms of the World and their Characteristics#	<b>05</b>
<b>4.0 SETTLEMENT [20 MARKS]</b>	
4.1 Concept of Rural and Urban Settlement, Problems of Definition and Classification of Urban Settlement*	<b>05</b>
4.2 Types and Patterns of Rural Settlement*	<b>05</b>
4.3 Theories of Urban Structure Propounded by E.W. Burgess, Harris Ullman and Homer Hoyt#	<b>05</b>
4.4 Functional Hierarchy of Urban Settlement with Special Reference to Christaller's Central Place Theory ##	<b>05</b>
<b>5.0 POPULATION [20 MARKS]</b>	
5.1 Determinants and Dynamics of Population Growth **	<b>05</b>
5.2 Growth of World Population; Demographic Transition Model**	<b>05</b>
5.3 Migration: Types and Impact on Place of Origin and Destination**	<b>05</b>
5.4 Population Policy: India and China**	<b>05</b>

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**PAPER - VII**  
**GEOGRAPHY OF INDIA**

**Full Marks: 100**

**Examination Time: 4 Hours**

	<b>No. of Lectures</b>
<b>1.0 INDIA: PHYSICAL ASPECTS [20 MARKS]</b>	
1.1 Geology and Structure with Special Reference to Himalayan Structure and Evolution of the Peninsular India ##	<b>05</b>
1.2 Drainage Systems: Evolution and Characteristics of Peninsular and Extra-Peninsular Rivers ##	<b>05</b>
1.3 Climatic Characteristics: Seasonality, Unevenness and Unreliability of Rainfall, Drought and Floods*	<b>05</b>
1.4 Classification and Characteristics of Soils, Causes and Consequences of Deforestation*	<b>05</b>
<b>2.0 ECONOMIC ASPECTS</b>	
2.1 Agricultural Policy and Development since Independence ##	<b>05</b>
2.2 Agro-Climatic Regions in India and Impact of Green Revolution ##	<b>05</b>
2.3 Industrial Policy and Development since Independence ##	<b>05</b>
2.4 Recent Trends of Industrialization with Special Reference to SEZs#	
<b>3.0 SOCIO - CULTURAL ASPECTS [20 MARKS]</b>	
3.1 Population Growth and Human Development since Independence**	<b>05</b>
3.2 Languages Groups: Characteristics and Spatial Distribution*	<b>05</b>
3.3 Caste and Social Morphology in Rural India*	<b>05</b>
3.4 Characteristics and Recent Trends of Urbanisation**	
<b>4.0 WEST BENGAL [20 MARKS]</b>	
4.1 Physiographic Region of West Bengal#	<b>05</b>
4.2 Problems of Flood and Drought and their Management#	<b>05</b>
4.3 Regional Problems of Darjeeling Hill Region and Sundarbans#	<b>05</b>
4.4 Population Growth and Human Development#	
<b>5.0 REGIONAL ASPECTS [20 MARKS]</b>	
5.1 Bases and Schemes of Regionalization of India into Geographical Regions ##	<b>05</b>
5.2 Chotoanagpur Plateau ##	<b>05</b>
5.3 West Bengal Delta ##	<b>05</b>
5.4 Malabar Coast ##	

**N.B. : \*KG, #PC,\*\*BM,##MM**

**PAPER-VIII (PRACTICAL)**  
**APPLIED GEOGRAPHICAL TECHNIQUES AND FIELD REPORT**

**Full Marks: 100**

**Examination Time: 6 hours**

	<b>No. of Lectures</b>
<b>1.0 ANALYSIS OF GEOLOGICAL MAPS [20 MARKS]</b>	
1.1 Construction of Geological Section of Horizontal, Uniclinal, Folded and Faulted Structures Along with Igneous Intrusions and Line of Unconformity*	<b>05</b>
1.2 Succession and Relation with Rock Groups*	<b>05</b>
1.3 Topography and its Relation with Underlying Structures*	<b>05</b>
1.4 Interpretation of Geological History*	<b>05</b>
<b>2.0 ANALYSIS OF CLIMATIC DATA AND MAPS [20 MARKS]</b>	
2.1 Rainfall Dispersion Diagram*	<b>05</b>
2.2 Construction of Station Model (Indian Context)**	<b>05</b>
2.3 Preparation of Synoptic Chart and Interpretation (Indian Context)**	<b>05</b>
2.4 Interpretation of Daily Weather Maps Prepared by Indian Meteorological Department#	<b>05</b>
<b>3.0 COMPUTER APPLICATION, REMOTE SENSING AND GIS [30 MARKS]</b>	
3.1 Data Entry: Arrangement into Ascending and Descending Order; Cartograms Using Excel: Bar, Pie, Line Graph and Doughnut Chart ##	<b>05</b>
3.2 Calculation of Central Tendency and Standard Deviation Using Fomula ##	<b>05</b>
3.3 Bivariate Techniques: Scatter Diagram and Fitting of Trend Lines ##	<b>05</b>
3.4 Basic Concepts of Remote Sensing, GIS and GPS ##	<b>05</b>
3.5 Location of a Place Using GPS; Georeferencing of Scanned Maps and Images (Using Software) ##	<b>05</b>
3.6 Principles of Preparing and Interpretation of Standard FCC of Images; Digital Classification and Extraction of Physiographic and Cultural Features (Using Software) ##	<b>05</b>
<b>4.0 FIELD REPORT ON EITHER A RURAL MOUZA OR AT LEAST ONE WARD OF AN URBAN AREA TO BE CONDUCTED DURING FIELD EXCURSION [ 20 MARKS] #, **</b>	<b>20</b>

**4.1.1 Guidelines for field report on rural mouza**

The following methods are to be followed before the preparation of field report:

- (a) Plot-to-Plot Land Use Survey
- (b) Collection of Socio-Economic and Physical Data
- (c) Classification and Tabulation of Data
- (d) Preparation of Land Use Map on Cadastral Plan
- (e) Preparation of Maps and Diagrams showing Physiography, Drainage, Soil, Forest, Settlement, Irrigation, Cropping Pattern, Demographic Characteristics *etc.*
- (f) Interrrelation and Analysis of Data, Maps and Diagrams The Report is to be Prepared under the following sections:
  - (a) Introduction: Objective, Extent and Space Relations, Sources of Information, Methodology *etc.*
  - (b) Physical Components: Lithology, Drainage, Surface Condition, Slope, Climate, Soil Vegetation, *etc.*
  - (c) Population: Number, FMR, Literacy, Occupational Structure, Ethnic and Religious Composition, Language, Mobility, Media Exposure, Per Capita Income *etc.*

- (d) Settlement: Number of Houses, Building Materials, Number and Size of Rooms, Amenities *etc.*
- (e) Agriculture: Soil Properties, Irrigational Facilities, General Land Use, Cropping Intensity, Crop-Combination, Use of Fertilisers, Production and Marketing *etc.*
- (f) Other Economic Activities: Fishing, Horticulture, Brick-Kiln Industries
- (g) Problems, Prospects, Suggestions and Conclusion
- (h) Bibliography\*\*\*

#### **4.1.2 Guidelines for Field Report on Urban Area (At least One Ward)**

The following methods are to be followed before the preparation of Field Report:

- (a) Plot-to-Plot Land Use Survey
- (b) Collection of Socio-Economic Data
- (c) Classification and Tabulation of Data
- (d) Preparation of Urban Land Use Map
- (e) Preparation of Maps and Diagrams showing Urban Morphology, Drainage and Sewage Networks, Communication Networks, Traffic Flow and Travel-Time, Demographic Characteristics, Cultural and Economic Zonation *etc.*
- (f) Interrelation and Analysis of Data, Maps and Diagrams The Report is to be Prepared under the Following Sections:
  - (a) Introduction: Objective, Extent and Space Relations, Sources of Information, Methodology *etc.*
  - (b) Physical Components: Surface Conditions, Slope, Drainage, Climate, *etc.*
  - (c) Demography: Spatial Analyses of Population Density, FMR, Literacy, Occupational Structure, Ethnic and Religious Composition, Language, Mobility, Media Exposure, *etc.*
  - (d) Town Morphology: Activity Zones, Sectors of Land Use, Linkages between different Zones and Sectors
  - (e) Economy: Economic Individuality of the Town, Production and Marketing Patterns, Spatial differences in Occupation and Per Capita Income Characteristics *etc.*
  - (f) Urban Waste and its Management: Types of Wastes Generated, Network of Drains, Efficiency of Waste Removal and Sewage Treatment, Peoples' Perception of Pollution Problem
  - (g) Bibliography

4.2 Field Report is to be **Hand-Written**

4.3 Text of the Report should not Exceed 4,000 words

4.4 Maps and Diagrams Excluding Photo-Plates should not Exceed 20

#### **5.0 LABORATORY NOTEBOOK AND VIVA-VOCE [6+4 MARKS]**

**N.B. : \*KG, #PC,\*\*BM,##MM**