

P.G. Geography
Entrance
Physical Geography

Meaning, Scope and branches of Geography, Earth Origin Theories: Classic and Modern, Origin of the Continent, Ocean and Atmosphere, Geological Time Scale. Nature, Scope & Branches of Physical Geography; Earth's Interior: Structure; Isostasy; Continental drift; Concept of Plate Tectonics. Folding & Faulting, Earthquakes and Volcanoes types; Denudation; Fluvial Landforms; Composition and structure of atmosphere; Vertical & Horizontal distribution of Temperature; Air Pressure and Winds. Koppen's Climatic Classification; Major relief features of Ocean Basin; Temperature; Salinity and Major oceanic current; Coral Reefs & Atolls, Tide.

Human Geography

Meaning & Scope; Evolution; Principles and Approaches of Human Geography; Elements of Human Geography with Special Reference to Jean Brunhes and Huntington; Man and Environment Relationships- Determinism, Possibilism, Neo-determinism, Evolution of Man, Man's Spread Over Globe During Pleistocene; Human Races; World Tribes- Pygmies, Kirghiz, Eskimos, Bushmen, Indian Tribes- Gond, Gaddi, Tharu and Santhal; Distribution of population, global migration causes and consequences, concept of over, under, and optimum population; Population Growth Theories: Malthus and Demographic Transition Theory; Human Settlements: - Rural Settlements- Types and Patterns with Special Reference to India; Urban Settlements- Trend & Pattern of Urbanization in the World.

Environment, Disaster Management and Climate Change

Environment: Concept and component; Ecosystem: Concepts, types & components, Trophic level and Energy flow, Concept of Biogeochemical Cycle; Environmental Degradation; Causes and consequences of Deforestation, soil erosion; Pollution: Air & water pollution; Environmental Hazard: Concept & typology; Earthquake, Flood, Cyclone & Drought; Concept of Disaster Management; Climate Change, Green house effects & Global warming, Ozone depletion.



Economic Geography

Meaning, concepts and approaches of Economic Geography; Resources: meaning, concept and classification; Types of Economic Activities; Distribution and Production of Major Crops: Wheat, Rice, and Tea; Agricultural region of the world of Derwent Whittlesey. Agricultural and land use model of J.H.VonThunen; Distribution and Production of Minerals: Iron ore, Coal and Petroleum. Theory of industrial location (Alfred Weber), Types of industries; Distribution of Iron & steel industry and Cotton textiles with reference to USA, Western Europe and Japan; WTO and International trade: Patterns and trends; Effect of globalization on developing countries.

Regional Geography

Definition of Region, Formal, Functional and Planning Region Criteria for the delineation of Region; Concept of Regional planning. Types of Regional planning Need for regional planning in India; Theories and Models for Regional Planning: Growth Pole Model of Perroux; Myrdal and Rostow; Concept of development and under development; Indicators of development: Economic, Social and Environmental. Sustainable Development.

Remote Sensing and GIS

Meaning, Definition & History of Remote Sensing, Types of sensor; Remote Sensing Mechanism; Principles of Remote Sensing, EMR Interaction with Atmosphere and Earth Surface; GIS Introduction, Definition and Components, Data Types of spatial and Non-spatial, Raster, Vector Data and Attribute data; History of Aerial Photography, Principle, Types and Geometry of Aerial photograph; Introduction of Satellite derived Data.

Concepts of Aerial-photogrammetry; Introduction to Elements of Photographic System: Scale, Concept of Relief Displacement, Image Parallax, Ortho Photo; Introduction of GIS; Data Types: spatial and Non-spatial, GPS: Fundamentals, Types and Uses; Image Processing (Digital/ Manual) and Data Analysis; Geo-Referencing Radiometric and Geometric Correction, Classification: Supervised and Un-supervised; Topology: concept and type; Interpretation of satellite derived data and Application of Remote Sensing and GIS: Land use/ Land Cover Analysis.



Geography of India

Physiography; Drainage; Origin and mechanism of Indian Monsoon; Koppen's Climatic Classification; Soils & Natural Vegetation; Population Growth, Distribution and Pattern; Major Agricultural Crops- Paddy, Wheat, Cotton and Tea, Agricultural Region; Green Revolution; Industry: Evolution of industries;; Major Industries: Iron & steel, Cotton Textiles, Industrial regions, Mineral Resources – Iron-ore, and Power Resources - Coal, Petroleum, Non-conventional power resource; Settlements: rural/ & urban settlements Types and pattern; Functional classification of Indian town; Urbanization in India- Problems and Prospects.

Evolution of Geographical Thought

Development of Geography in ancient period, Indian Geographical Knowledge during Vedic, Epic and Puranic Period. Contributions Indian Geographer; Contributions of Greek and Roman Geographers; Contribution of Arab geographers; Renaissance and Period of Geographical Discoveries; German School of Geography; Contribution of Humboldt, K. Ritter, F. Ratzel, French School of Geography, Contribution of VDL Blache and J. Brunhes; Contribution of Soviet Geographers, American School- Contribution of Davis, Semple, Huntington, Carl Sauer; British School- Contribution of Mackinder, Herbertson and L.D.Stamp; Nature and Scope of Geography, Dualism in Geography, Recent Trends of Geography, Progress of Geography of India.

Practical Geography

Cartography – Nature and Scope; Scales-Comparative; Diagonal & Vernier Scale; Study and interpretation of Topographical Map (Mountain, Plateau & Plain) with the help of Cross and Longitudinal Profiles; Map Projections- Classification and their Properties- Conical with Two Standard Parallel, Bonne's; Cylindrical Equal Area, Mercator's, Polar Zenithal Equal Area.

Maps – Classification and Types; Principles of Map Design; Diagrammatic Data Presentation – Line diagram, Bar diagram and Circle diagram, Pie diagram; Thematic Mapping Techniques – Properties, Uses and Limitations; Maps Preparation- Isopleths, Choropleth, Dot; Weather Maps, Study and Interpretation of Indian Weather Map, Weather Forecasting; Geological Maps: Types, Signs, Bed and Bedding plane, Rock Outcrop, Dip, Strike etc. Construction of Geological Sections- Horizontal, Inclined and Folded.

Types & Sources Data in Geography; Significance of Statistical Methods in Geography; Scales of Measurement (Nominal, Ordinal, Interval, Ratio); Tabulation and Illustration: Frequency Distribution Table, Cross Tabulation, Graphical Presentation of Data; Histograms, Frequency Curve and Cumulative Frequency Curves; Measurement of Central Tendencies ; Mean, Median Mode and Standard Deviation, Z score; Correlation: Rank Correlation and Simple Regression.

Surveying - Plane Tables Survey; Prismatic Compass Survey; Indian Clinometer; Sextant.