

Ph.D. Entrance test syllabus for Geography

Core subject

Unit – I

Geomorphology: Fundamental concepts; Factors controlling land form development; Endogenetic and Exogenetic forces; Denudation process: weathering. and erosion, Geosynclines, mountain building, continental drift and plate tectonics; Concept of Geomorphic Cycle; Landforms associated with fluvial, glacial, arid, coastal and karst cycles, Slope forms and processes; Environmental and Applied Geomorphology.

Unit – II

Climatology: Composition and structure of the atmosphere; Insolation; Heat budget of the earth; Distribution of temperature, atmospheric pressure and general circulation of winds; Monsoons and jet streams; Stability and instability of the atmosphere; Air-masses; Fronts, temperate and tropical cyclones; Types and distribution of precipitation; Classification of world climates; Koppen's and Thornthwaite's schemes; Hydrological Cycle; Global warming.

Unit – III

Oceanography: Origin of ocean basins; Bottom relief of Indian, Atlantic and Pacific Oceans; Ocean deposits; Coral reefs; Temperature and salinity of the Oceans; Density of sea water; Tides and ocean currents; Sea-level changes.

Bio-Geography: Physical factors influencing world distribution of plants and animals; Forms and functions of ecosystem: Forest, grassland, marine and mountain ecosystem; Bio-diversity and its depletion through natural and man

induced causes; Conservation and management of ecosystems; Environmental hazards and problem of pollution; Ozone depletion.

Unit – IV

History of Geographic Thought: General character of Geographic knowledge during the ancient and medieval period; Foundations of Modern Geography: Contribution of German, French, British and American schools; Conceptual and methodological developments during the 20th century; Changing paradigms; Man and Environment, Determinism and Possibilism, areal differentiation and spatial organisation; Quantitative revolution; Impact of positivism, humanism, radicalism and behaviouralism in Geography.

Unit – V

Population Geography: Nature, scope, subject matter and recent trends; Patterns of world distribution, growth and density of population; Policy issues; Patterns and processes of migration; Demographic transition; Population-resource regions.

Settlement Geography: Site, situation, types, size, spacing and internal morphology of rural and urban settlements; Ecological processes of urban growth; Urban fringe; City – region; Settlement systems; Primate city; Rank-Size rule; Settlement hierarchy; Christaller's Central Place theory; August Losch's theory of market centres.

Unit – VI

Economic Geography: Location of economic activities and spatial organization of economies; Classification of economies; Sectors of Economy: primary, secondary,

tertiary and quaternary; Natural resources: Renewable and non – renewable; Conservation of resources.

Agricultural Geography: Concept and techniques of delimitation of agricultural regions; Measurement of agricultural productivity and efficiency; Crop combinations and diversification; Von Thunen’s Model; Agricultural systems of the world.

Industrial Geography: Classification of industries: Weber’s and Losch’s approaches; Resource based and footloose industries.

Geography of Transport and Trade: Models of transportation and transport cost; Accessibility and connectivity: Inter-regional and Intra-regional: Comparative cost advantages.

Unit – VII

Political Geography: Definition and scope of Political Geography; Geopolitics; Global strategic views (Heartland and Rimland theories); Concept of nation, state and Nation-State; Boundaries and frontiers; Politics of world resources; Geography and Federalism.

Social Geography: Nature and scope of social geography; Social structure and social processes; Elements of Social Geography—ethnicity, tribe, dialect, language, caste and religion; Concept of Social well – being.

Cultural Geography: Nature and scope of Cultural Geography; Environment and culture; Concept of culture-areas and cultural regions; Theories of tribal groups; Dwelling places as cultural expressions.

Unit – VIII

Regional Planning: Regional concept in Geography; its application to planning; Concept of planning region; Regional hierarchy; Types of regions and methods of regional delineation; Conceptual and theoretical framework of regional planning; Regional planning in India: Concept of development; Indicators of development; Regional imbalances.

Unit – IX

Geography of India: Physiographic divisions; Climate: Its regional variations; Vegetation types and vegetation regions; Major soil types; Coastal and Marine resources; Water resources; Irrigation; Agriculture; Agro-climatic regions; Mineral and power resources; Major industries and industrial regions; Population distribution and growth; Settlement patterns; Regional disparities in social and economic development.