

DEPARTMENT OF GEOGRAPHY
BINOD BIHARI MAHTO KOYALANCHAL UNIVERSITY,
DHANBAD

Syllabus for Ph.D. Entrance Test

The questions will be set from the topics contained in the core (compulsory) papers of master's degree level course of this university.

Module I (Geographical Thought and Research Methodology)

Developmental History of Geography: Contribution of different scholars during Ancient, Medieval, and Modern period; Dualism in Geography: Systematic vs. Regional Geography, Physical vs. Human Geography, and Determinism vs. Possibilism; Quantitative Revolution in Geography; Behaviouralism; Regional Geography; Radical Geography; Feminist Geography; Methods of Geographical Studies; Research methods Vs Research Methodology; Hypothesis; Theories; Laws and Models; Research Design: Data Collection and Analysis, Determining Sample Design, Research Approaches.

Module II (Geomorphology)

Earth Movements: Epeirogenic and Orogenic, Isostasy, Plate Tectonics, Seismicity, Volcanicity; Landform Occurrence and Causes of Geomorphic Hazards (Earthquakes, Volcanoes, Landslides, and Avalanches); Denudation and Weathering; Dynamics of Fluvial, Glacial, Aeolian, Marine, and Karst Processes and Resulting Landforms.

Module III (Climatology and Oceanography)

Composition and Structure of the Atmosphere; Insolation; Heat Balance of the Earth; Greenhouse Effect; Local Winds; Jet Streams; General Circulation in the Atmosphere; El Nino; Southern Oscillation (ENSO) and La Nina; Monsoon Winds; Norwesters; Global Warming; Environmental Impacts and Society's Response; Climatic Classification of Koppen and Thornthwaite; Coral Reefs; Impacts of Human on the marine Environment; Ocean Currents; Wave and Tides; Origin of Ocean Basins; Major Features of Ocean Basin.

Module IV (Population and Settlement Geography)

Sources of Population Data; Census Process of Major Countries; Migration: National and International Patterns; Population Distribution and the Growth Pattern of the World and India; Occupational Structure in India; Rural and Urban Structure of Population in India; Concepts

of Under Population, Over Population and Optimum Population; India's Population Policies; Population and Environment.

Rural Settlements (Types, Patterns and Distributions); Theoretical Models (Nearest Neighbour and Gravitational Model); Processes and Patterns of Urbanization; Origin and Evolution of Urban Settlements; Geographical Approaches to the Study of Urbanization; Functional Classification of Towns; National Urban Policy; Components of Urban Planning; Spatiality and Models: Size and Spacing of Cities, Rank Size Rule, Law of Primate city, Nearest Neighbour Analysis; City region; Rural Urban Fringe; Central Place Theory of Christaller and Losch; Theories of Internal Structure of Cities (Burgess, Hoyt and Harris and Ullman).

Module V (Geography of India and Jharkhand)

INDIA: Physical Framework and Geological Formations; Climatic and Vegetation Regions; Agro-Climatic Regions and Industrial Regions; Mineral and Power Resources, Geopolitical Significance of Indian Ocean, Stability & Instability; Interstate issues (like Water Disputes & Riparian Claims) and Conflict Resolutions, Insurgency in Border States; Emergence of New States; Federal India: Module in Diversity, Reorganization of State, Urbanization, Tourism, Problems of Planning and Development.

JHARKHAND: Physical Basis of Regionalization and Human Resources, Economic and Inter-Linkages- Mineral Resources, Agriculture Landscape and Industrial Region.

Module VI (Regional Planning and Development: India)

Regional Concept in Geography; Merits and Limitations for Application to Regional Planning and Development Approaches to Delineation of Different Types of Regions and their Utility in Planning; Measuring Levels of Regional Development and Disparities – A Case Study of Jharkhand; Regional Development in India – Problem and Prospects. Regions Hierarchy; Multilevel Planning in National Context; De-centralised Planning; People Participation in Planning.

Types of Region: Formal and Functional, Uniform and Model, Single Purpose and Composite Regions in the Context of Planning; Physical Regions; Resource Regions; Special Purpose Regions- River Valley Regions, Metropolitan Regions.

Module VII (Geography of Environment, Ecosystem and Resource Management, and Biogeography)

Ecosystem: Structure and Function, Ecological Concepts, Food Chain and Food Webs; Energy Flow; Major Terrestrial Ecosystem of the World (Forests, Grassland and Desert); Biotic Succession and Regions; Biodiversity and its Conservation; Environmental Hazards and Disasters (Global Warming, Urban Heat Island, Atmospheric Pollution, Water Pollutions, Land Degradation); National Environment Programmes and Policies; International Environment Programmes and Policies; International Treaties (Brundtland Commission, Kyoto Protocol, Agenda 21, Sustainable Development Goals, Paris Agreement).

Problems of Resources Utilization; Pollution; Resources Appraisal and Policy Making; Man-Environment Relationship.

Environment, Habitat, and Plant-Animal Association; Biome Types; Elements of Plant Geography; Distribution of Forests and Major Communities; National Forest Policy of India; Conservation of Biotic Resources.

Module VIII (Geography of Tourism and Transport)

Role of Foreign Capital and Impact of Globalization on Tourism; Growth and Problems of Urban Transportation; Transport and Environment Degradation; Vehicular Pollution and Congestion; Factors Influencing Tourism: Historical, Natural, Social, Cultural and Economical; Tourism Types: Eco-Ethno, Coastal and Adventure Tourism, National and International Tourism; Globalization and Tourism; Tourism Circuits; Environmental Laws and Tourism; Significance and Development of Transport Geography; Factors Associated with the Development of Transport System: Physical, Economic, Social, Cultural and Institutional; Technological and Regional Development and Transport Development.

Module IX (Social and Political Geography)

Social Structure and Processes; Social Wellbeing and Quality of Life; Social Exclusion; Spatial Distribution of Social Groups in India (Tribe, Caste, Religion, and Language); Environment and Human Health; Diseases Ecology; Nutritional Status (Etiological Conditions, Classification and Spatial and Seasonal Distributional Patterns with Special Reference to India); Healthcare Planning and Policies in India.

Boundaries and Frontiers (With Special Reference to India); Heartland and Rimland Theories; Trends and Developments in Political Geography; Geography of Federalism; Geopolitics of World Resources; Geopolitics of Indian Ocean; Regional Organisations of Cooperation (SAARC, ASEAN, OPEC, EU).

Module X (Geographical Techniques)

Types of Map; Scale; Methods of Representation of Relief Features; Interpretation of Topological Sheets; Types of Projection; Methods of Representing and Mapping of Population Data; Use of Remote Sensing Data and GIS, GPS; Statistical Analysis- Central Tendency, Standard Deviation.