University of Kashmir, Srinagar-6, J&K
NAAC Accredited Grade "A"
P.G. Department of Geography & Regional Development
(DST-FIST and UGC-SAP Assisted Department)

M. Phil/Ph.D. Entrance Test Syllabus of Geography w.e.f. 2018

Guidelines for the conduct of M.Phil & Integrated Ph.D Entrance Test-2018

- The Entrance Test paper shall have 100 MCQ's with 1 marks each.
- There shall be no negative marking.
- There shall be single Entrance Test paper with three parts as:

PART-I: 20 marks (20 MCQ's)

General Aptitude with emphasis on logical reasoning, graphical analysis, analytical and numerical ability, quantitative comparisons, puzzles etc.

PART- II: 30 marks (30 MCQ's)

Basic (conventional questions) based on core papers covering different aspects of the subject

PART- III: 50 marks (50 MCQ's)

Advanced (higher value questions) based on core papers covering different aspects of the subject

PART- II: 30 marks (30 MCQ's)

Geographical Thought

1. Beginning of Classical Geographical Thought
2. Contribution of Greeks and Romans
3. Geography during medieval period
4. Contribution of Arab and Indian Geographers
5. Foundation of Scientific Geography – Contribution of German, French, British and American schools.

Geomorphology

1. Fundamental Concepts; a. Uniformitarnism, b. Geological Structures,
2. Multicyclic and Polygenic landforms
3. Geosynclines, Mountain building, Sea floor spreading, Plate Tectonics and Isostasy
4. Earth Movements; Orogenic and epirogenic
5. Denudation processes- weathering and erosion

Climatology

1. Composition and Structure of atmosphere, Insolation and Heat Budget,
2. Temperature Inversion, thermal anomaly
3. Distribution of temperature, atmospheric pressure
4. Global Circulation system ; a. Bay Ballet's law b. Coriollis Force, c. Ferrell's Law
5. Jet Streams & Rossby Waves, stability and instability of atmosphere
6. Air masses, Fronts & Frontogenesis
7. Types and distribution of precipitation

Oceanography

1. Importance & Significance of Ocean Studies
2. Evolution of Continent and Ocean Basins
3. Major Features of Ocean Basin: Continental Margin , Deep Ocean Basins & Mid-Oceanic ridges
4. Bottom relief of Pacific, Atlantic and Indian oceans-Marine deposits: Types & Origin
5. Surface Currents and Waves
6. Currents of Indian, Atlantic and Pacific oceans.

Environmental Geography

1. Physical factors influencing world distribution of plants and animals
2. Ecosystem form and functions,
3. Trophical levels, ecological pyramid, ecological niche,
4. Energy flow models (U shaped energy flow model and Y shaped energy flow model),
5. Food chain and food web, ecological adaptations,
6. Major terrestrial ecosystems of the World- Forest, grassland, savannah, marine and mountain,

Population Geography

1. Nature, Scope, subject matter and recent trends in population geography.
2. World distribution and density of population
3. Population Dynamics ; Measurement and Determinants; Fertility, Mortality
4. Migration Population Theories; Malthus, Demographic Transition, Ricardo
5. Major Population Projection Techniques
6. Population Resource Regions of the World

Economic Geography

1. Location of Economic Activities and Spatial Organization of Economies,
2. Classifications of economies: sectors of economies: primary, secondary, tertiary and quaternary.
3. Impact of Globalization on Indian Economy and its Socio-Cultural Environment.
4. Factors affecting Location of Economic Activities: Physical, Social, Economic and Cultural

Social & Cultural Geography

1. Concepts of Space , Process and Pattern and their Social significance
2. Social Structure Geographical basis of Social formation, Problems and Process of Social transformation.
3. Social change and theories of social change – (Theories of progress and evolution by Merton, Bock, Comte and Spencer);
4. Concept of social well-being. Quality of Life
5. Evolution of Culture , Evolution of Socio – Cultural region
6. Major Cultural Realms of the World Economy, Society and diffusion of racial groups in the world.
7. Basics of Cultural Diversity (Race , Religion ,Language)
8. Role of Cultural Diversity in Cultural Regionalization
9. Impact of industrialization and modernization on culture.
10. Concept of Social Wellbeing

Regional Planning

1. Regional Concepts in Geography, Conceptual and Theoretical framework.
2. Concept of Planning Regions; Regional hierarchy.
3. Types of regions: Formal and Functional b. Uniform and Nodal c. Single Purpose and Composite.
4. Approaches to Delineation of Region & their utility in Planning.
5. Relevance of Regional Planning in Regional Development.
6. Planning Processes; a. Sectoral and Spatial, b. Short term and Longterm
7. Concept of Multi-Level Planning & Decentralized Planning

Geography of India

1. Physiographic divisions; Drainage systems;
2. Structure and evolution of Himalayas,
3. Climate and its regional variations.
4. Climate of India & Its controls – Western disturbances
5. Theories of Indian monsoon with special reference to MONEX model.
6. Vegetation types and vegetation regions.
7. Major soil types and their distribution

Cartography

1. Map as a tool in geographical studies
2. Types of maps: single purpose and composite maps
3. Choropleth, isopleths, chorochoromatic and choroschematic maps
4. Techniques for the spatial patterns of distribution, Pie diagrams, accessibility and flow maps,
5. Data sources and types of data
6. Statistical diagrams, frequency distribution and cumulative frequency;

PART- III: 50 marks (50 MCQ's)

Geographical Thought

1. Conceptual and methodological developments during 20 the century.
2. Geographical concepts - Geography as human ecology, Determinism, Possiblism, Areal differentiation, spatial organization, Neo-determinism.
3. Paradigm shift in Geography – Positivism, Pragmatism, Idealism, Realism
4. Radicalism, Behaviouralism and Humanistic approach, Welfare approach.
5. Scientific explanations; Inductive and Deductive
6. Quantitative revolution in Geography
7. Darwin's impact on Geography.

Geomorphology

1. Theories of Landform Evolution: a. Gilbert, b. W. M. Davis, c. W. Penck, d. J.J. Hack
2. Landforms associated with Fluvial, Glacial, Arid, Coastal and Krast cycles.
3. Application of Geomorphic Knowledge in: Hydrology, Mineral Exploration Petroleum exploration, Urbanisation and Civil Engineering.
4. Morphometry of drainage basins-Stream ordering, bifurcation ratio, dissection index, hypsometric analysis and clinographic analysis.
5. Slope Elements and Slope Evolution

Climatology

1. Cyclones: Tropical & Temperate
2. Tri-cellular Meridonial pattern of atmosphere
3. Climatic classification; a. Koppen, b. Thornthwaite
4. Oceanic Atmospheric Interaction- El- Nino Southern Oscillation, La – Nina
5. Global warming: Greenhouse Effect, Ozone depletion & Sea Level change
6. Hydrological cycle.
7. Climatic Changes; a. Evidences & Indicators b. Possible causes

Oceanography

1. Tides and related theories: Equilibrium & Dynamic
2. Temperature and Salinity of oceans, Sea level changes
3. Biozones, Bio- Geochemical Cycle in the Oceans
4. Food and energy resources of the sea
5. Coral Reef: Theories of Formation
6. Impact of Humans on Marine Environment
7. Law of the Sea & Exclusive Economic Zone
8. Impact of Climate Change on Marine Biology

Environmental Geography

1. Biodiversity and its conservation.
2. Man induced environmental and ecological changes (Air pollution, Water pollution and contamination, Acidic rain and ozone depletion, Land degradation); Noise pollution.
3. Environmental management, Environmental impact assessment,
4. International Conventions. Environmental protection Act, Earth summit, Kyoto and Montreal protocol.
5. Wild life act, Forest act and Water act with reference to India.
6. Processes of Soil formation and development, Components of soil,
7. Physical and Chemical properties of soil: Factors affecting soil formation
8. Soil classifications, Soil conservation and its significance
9. Principals of soil conservation –Biological and mechanical.
10. Land capability classification

Population Geography

1. Population Resource Regions of the World;
2. Population problems of developed and developing countries
3. Human Development; Concept of Human Development Index and its Components.
4. Evolution, Size and Growth and internal morphology of rural and urban Settlements. Site and Situation factors in the Development of Settlements;
5. Distribution Pattern; Geographical and Socio-Economic factors affecting Spatial Distribution Pattern of Settlement and Various Types.
6. Origin of Towns; Functional Classification of Towns
7. Theories of the Internal Morphological Structure of cities; Concentric Zone Theory, Sector Theory, Multi-Nuclei theory, Social Area Analysis Model; Exploitative Model; Settlement Hierarchy- Theories of Christaller and Losch.

Economic Geography

1. Concept and Techniques of Delimitation of Agricultural Regions.
2. Agro-Climatic Region
3. Impact of Green Revolution on Indian Economy.
4. Measurement of agricultural productivity and efficiency, crop combination and diversification.
5. Von-Thunen model; Typology and world Agricultural regions
6. World food and nutritional problems.
7. Classification of industries; Accessibility and Connectivity
8. Role of Market in The Development of Trade & Commerce
9. Classification of Industries, Resource Based and foot loose Industries
10. Theories of Industrial Location- Weber and Losch.

Political Geography

1. Geopolitics: Global Strategic views of Heartland and Rimland Theories.
2. Concepts in political Geography; State, Nation, Nation-State and Nation-building; Frontiers and Boundaries; Colonialism, federalism
3. World Powers and alliances: politics of world resources
4. Geopolitical Significance of Indian Ocean
5. Political Geography of SAARC Region International Boundary of India and Related Issues; Disputes of Sharing of Water Resources.

Regional Planning

1. People's Participation in the Planning Processes; Panchayati Raj System,
2. Models of Regional Development ; a. Growth Pole Theory b. Regional Income Inequality c. Core Periphery, d. Rostow's Stage Theory
3. Developmental Strategies for Problem Regions; a. Hilly regions b. Tribal regions c. Regions of drought d. Regions of Flood
4. Measurement of Levels of Regional Development and Disparities;
5. Selection of Indicators and their Significance
6. Construction of Composite Index,
7. Levels of Regional Development and Disparities in India with special Reference to J&K.

Geography of India

1. Agriculture: Institutional and infrastructural aspects, Agro-climatic regions of India; Regional patterns of productivity and proficiency in India
2. Dry zone agriculture and its significance,
3. Green revolution –its impact and consequences; white revolution and its importance.
4. Resources: marine, water, land, mineral, forest and power resources.
5. Land use policy, water policy, mineral policy, forest policy.
6. India: Population distribution and Growth Profile.
7. Population Composition of India; India's Population Policies.
8. Population Growth Dynamics in Jammu& Kashmir
9. Settlement pattern in the light of geo-physical and socio-economic factors.
10. Modes of transport and their significance: road, rail, water and air.

Remote Sensing & GIS

1. Remote Sensing and computer applications in mapping, Digital mapping
2. Stages of Remote sensing data acquisition Aerial Photography and Visual Image Interpretation
3. Concept of Resolution- spatial, spectral, temporal and radiometric
4. Fundamentals of Image Interpretation; Elements of Image Interpretation
5. Definition and development of GIS: Functional requirements of GIS
6. Hardware configuration and software modules: Geographic data: Spatial and Non-spatial
7. Measurement of central tendency, dispersion, standard deviation and Lorenz curve,
8. Simple and multiple co-relation, regression; Nearst neighbor analysis, scaling techniques
9. Sampling and its types.