

## Syllabus for Written Examination for PGT (Geography)

### Topic I: Geography as a discipline-

Geographical ideas in ancient, medieval & modern periods: the contributions of Varenus, Kant, Reine, Humboldt and Ritter. Influence of Richthofen and Darwin. Vidal-da-la Blache, F. Ratzel etc.

**Contemporary geography: Post Second World War, Environmentalism, Areal Differentiation, spatial organization, Behavioural and perceptual Geography. Positivism in Geography. Humanistic Geography. Marxist Geography and critical social theory. Development in Indian Geography.**

### Topic-2 Origin and Evolution of the Earth-

Introduction to the solar system,

Motions of Earth: Rotation, Revolution, Occurrence of Day and Night; change of seasons; Latitudes and Longitudes; Finding time.

Earth's Interior: Origin of continents and ocean basins Wegener's Continental drift theory, Theory of Plate Tectonics Earthquakes and Volcanoes, Folding and faulting

Origin of the Earth: Nebular hypothesis (old Theory) and Big-Bang Theory. Evolution of continents, atmosphere and oceans.

### Topic-3 Interior of the Earth and Distribution of oceans and continents-

Constitution of Earth's interior (based on Seismic Evidences), origin of the continents and ocean basins. Wegner's theory of Continental drift and Plate Tectonics. Plate movements and interactions-Volcanism and seismicity.

### Topic-4 Landforms-

Mineral and rocks- classification of rocks, rock cycle. Important minerals geomorphic process of denudation Endogenic and Exogenic processes. Mass Wasting, Landslide, Work of River, Glacier Wind, Sea Waves etc, processes of soil formation.

### Topic-5 Climate:

Atmosphere: Composition and structure. Insolation and temperature, Atmospheric pressure and winds, Atmospheric moisture, cyclones, classification of climate (Koeppen and Thornthwaite Schemes classification). Global climatic changes: Causes and effects.

### Topic-6 Water (Ocean)

Geomorphology of the ocean floor, submarine relief features of Atlantic, Pacific and Indian Ocean. Movement of ocean water: Currents, tides and waves. Marine deposits and coral reefs.

### Topic -7 Life on the Earth

Approaches in environmental Geography, landscape, ecosystem and perception approaches, Man and the Biosphere: Interactive and dynamic relationship. Human impact on biogeochemical cycles.

### Topic-8 India:

Geographical basis of Indian State-territory; location, extent, shape and size.

### Topic-9 Physiography:

Structure, Physiographic divisions, Drainage system and its evolution.

### Topic-10 Climate, Vegetation and Soil-

Climate: factors controlling climate of India

Origin and mechanism of Indian monsoon; Seasons of India, Classification of climate of India (Koeppen's, Thornthwaite, Triwartha).

Soils: Type and distribution (I.C.A.R.), Soil problems, conservation of soil

Vegetation- Types & Distribution; conservation

Wild Life- its conservation.

### Topic-11 Natural Hazards and disasters-

Causes, Consequences and management in India Environmental Hazards: Floods, droughts, cyclones, earthquakes and landslides; human adjustment to hazards; hazards perception and mitigation; environmental institutions and legislation in India.

### Topic-12 Human Geography: Nature and Scope.

Nature and scope of Human Geography, Approaches to the Human Geography, Determinism, Environmental Determinism, Possibilism, Neo-determinism, ecological and Behaviouralism.

Topic -13 People (World and India)

Trends and patterns of population growth: determinants and patterns of population distribution; theories, demographic transition; Human migration, Patterns of human development.

Topic-14 Human Activities: (World and India)

Primary: -Hunting, gathering, Herding (Nomadic & Commercial) Lumbering fishing, mining and agriculture; Agricultural practices; some major crops.

Secondary: - Industries: Classification, Theories of localization, major Industries, recent trends in industries, world comparisons.

Tertiary:-(Services)

Quaternary:-Quinary activities

Planning in India: target area planning, Idea of sustainable development

Topic-15 Transport, Communication and Trade(World and India)

Transport and communication Roads, railways, waterways and airways; oil and gas pipelines, national electric grids. Communication networking-radio, television, satellite and Internet.

International Trade:Basis and components, trade balance, major trading organizations, changing pattern of India's foreign trade, sea-routes, inland water-ways, sea ports and their hinter-land.

Topic-16 Human settlements (World and India)

Unstable and stable settlements, rural settlements: origin, types and patterns; Urban settlements: Origin and growth of towns; functional classification of towns. Problems of urbanization in the world; urbanization in India; Urban slums and squatters. Morphology of cities; distribution of Mega-cities, problems of human settlements in Developing countries.

Topic -17 Geographical perspective on selected issues and problems

Environmental pollution-Land, Water, Air, Noise, Global Warming, Poverty, Food Security; Sustainable Development.

Topic -18 General Cartography (Practicals)

Elements and classification of maps, scales, map-projections, finding directions, latitudes, longitudes and calculation of local & standard time, Identification & Analysis of relief forms: Topographical Maps and interpretation. Weather-Instruments and interpretation of weather maps. Digital mapping, Remote sensing, Visual interpretation. Processing of Data, Thematic mapping, representing statistical data by various diagrams-Bar, Histogram, Pie etc. Spatial Information technology: GIS, GPS, Computers-Software and Hardware components, Data format, Raster and Vector, editing and topology etc. Spatial Analysis; Overlay, Buffer and Proximity analysis.

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