



Shri Sangameshwar Education Society, Solapur

Kannada Linguistic Minority Institute

Sangameshwar College, Solapur

Autonomous

The Written Test – the First Phase of the Selection Process
for the Post(s) of Assistant Professor

Syllabus

Subject: Geography

Unit 1: Geomorphology:

Factors controlling landform development; endogenetic and exogenetic forces; Origin and evolution of the earth's crusts; Fundamentals of geomagnetism; Physical conditions of the earth's interior; Geosynclines; Continental drift; Isostasy; Plate tectonics; Recent views on mountain building; Volcanicity; Earthquakes and Tsunamis; Concepts of geomorphic cycles and Landscape development; Denudation chronology; Channel morphology; Erosion surfaces; Slope development; Applied Geomorphology; Geomorphology, economic geology and environment.

Unit 2: Climatology and Oceanography:

Temperature and pressure belts of the world; Heat budget of the earth; Atmospheric circulation; Atmospheric stability and instability; Planetary and local winds; Monsoons and jet streams; Air masses and front; Temperate and tropical cyclones; Types and distribution of precipitation; Weather and Climate; Koppen's, Thornthwaite's and Trewartha's classification of world climate; Hydrological cycle; Global climatic change, and role and response of man in climatic changes; Applied climatology and Urban climate.

Bottom topography of the Atlantic, Indian and Pacific Oceans; Temperature and salinity of the oceans; Heat and salt budgets; Ocean deposits; Waves, currents and tides; Marine resources; Biotic, mineral and energy resources; Coral reefs and coral bleaching; Sea-level changes; Law of the sea and marine pollution.

Unit 3: Human Geography and Economic Geography:

Areal differentiation; Regional synthesis; Dichotomy and dualism; Environmentalism; Quantitative revolution and locational analysis; Radical, behavioral, human and welfare approaches; Languages, religions and secularization; Cultural regions of the world; Human Development Index. System analysis in Human Geography; Malthusian, Marxian and demographic transition models; Central Place

theories of Christaller and Losch; Perroux and Boudeville; Von Thunen's model of agricultural location; Weber's model of industrial location; Rostow's model of stages of growth; Heartland and Rimland theories; Laws of international boundaries and frontiers.

World economic development: measurement and problems; World resources and their distribution; Energy crisis; The limits to growth; World agriculture: typology of agricultural regions; Agricultural inputs and productivity; Food and nutrition problems; Food security; Famine: causes, effects and remedies; World industries: location patterns and problems; Patterns of world trade.

Unit 4: Regional Development and Geographic Thought:

Experience of regional planning in India; Five-Year Plans; Integrated rural development programmes; Panchayati Raj and decentralized planning; Command area development; Watershed management; Planning for backward area, desert, drought-prone, hill tribal area development; Multi-level planning; Regional planning and development of island territories.

Contributions of Greek, Roman, Arab, Chinese and Indian Scholars, Modern Contributions of (German, French, American and British) Geographers. Impact of Darwinian Theory on Geographical Thought. Contemporary trends in Indian Geography: Cartography, Thematic and Methodological contributions. Major Geographic Traditions (Earth Science, man-environment relationship, area studies and spatial analysis), Dualisms in Geographic Studies (physical vs. human, regional vs. systematic, qualitative vs. quantitative, ideographic vs. nomothetic)

Unit 5: Geography of India:

Major Physiographic Regions and their Characteristics; Drainage System (Himalayan and Peninsular), Climate: Seasonal Weather Characteristics, Climatic Divisions, Indian Monsoon (mechanism and characteristics), Jet Streams and Himalayan Cryosphere, Types and Distribution of Natural Resources: Soil, Vegetation, Water. Mineral and Marine Resources. Population Characteristics (spatial patterns of distribution), Growth and Composition (rural-urban, age, sex, occupational, educational, ethnic and religious), Determinants of Population. Population Policies in India, Agriculture (Production, Productivity and Yield of Major Food Crops). Major Crop Regions, Regional Variations in Agricultural Development, Environmental, Technological and Institutional Factors affecting Indian Agriculture: Agro-Climatic Zones, Green Revolution, Food Security and Right to Food. Industrial Development since Independence, Industrial Regions and their characteristics. Industrial Policies in India. Development and Patterns of Transport Networks (railways, roadways, waterways, airways and pipelines), Internal and External Trade (trend, composition and directions), Regional Development Planning in India. Globalisation and its impact on Indian Economy, Natural Disasters in India (Earthquake, Drought, Flood, Cyclone, Tsunami, Himalayan Highland Hazards and Disasters.)

Unit 6: Geography of Environment:

Components: Ecosystem (Geographic Classification) and Human Ecology, Functions: Trophic Levels, Energy Flows, Cycles (geo-chemical, carbon, nitrogen and oxygen), Food Chain, Food Web and Ecological Pyramid, Human Interaction and Impacts, Environmental Ethics and Deep Ecology. Environmental Hazards and Disasters (Global Warming. Urban Heat Island, Atmospheric Pollution, Water Pollution, Land Degradation), National Programmes and Policies: Legal Framework, Environmental Policy, International Treaties, International Programmes and Policies (Brundtland Commission, Kyoto Protocol, Agenda 21, Sustainable Development Goals, Paris Agreement)

Unit 7: Cultural, Social and Political Geography:

Concept of Culture, Cultural Complexes, Areas and Region, Cultural Heritage. Cultural Ecology. Cultural Convergence, Social Structure and Processes, Social Well-being 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) Health Care Planning and Policies in India, Medical Tourism in India

Boundaries and Frontiers (with special reference to India), Heartland and Rimland Theories. Trends and Developments in Political Geography, Geography of Federalism. Electoral Reforms in India, Determinants of Electoral Behaviour. Geopolitics of Climate Change, Geopolitics of World Resources. Geo-politics of India Ocean, Regional Organisations of Cooperation (SAARC, ASEAN, OPEC, EU). Neopolitics of World Natural Resources.

Unit 8: Geographical Techniques:

Sources of Geographic Information and Data (spatial and non-spatial). Types of Maps, Techniques of Map Making (Choropleth, Isarithmic, Dasymetric, Chorochromatic, Flow Maps) Data Representation on Maps (Pie diagrams, Bar diagrams and Line Graph, GIS Database (raster and vector data formats and attribute data formats). Functions of GIS (conversion, editing and analysis), Digital Elevation Model (DEM), Georeferencing (coordinate system and map projections and Datum), GIS Applications (thematic cartography, spatial decision support system), Basics of Remote Sensing (Electromagnetic Spectrum, Sensors and Platforms, Resolution and Types, Elements of Air Photo and Satellite Image Interpretation and Photogrammetry). Types of Aerial Indicators Scale Free. Computation of Composite Index, Principal Component Analysis and Cluster Analysis, Morphometric Analysis: Ordering of Streams, Bifurcation Ratio, Drainage Density and Drainage Frequency, Basin Circularity Ratio and Form Factor, Profiles, Slope Analysis, Clinographic Curve, Hypsographic Curve and Altimetric Frequency Graph

Unit 9: Teaching Methodology and NAAC