

UNIVERSITY OF JAMMU

Notification

Syllabus of Entrance/Screening Test for the post of Laboratory Assistant in the Department of Geography

S.No.	Examination Type	Units	No. of Questions	Marks	Duration
1.	Multiple Choice Questions	Geographic Thought and Geography of India	20	20	2 Hours
2.		Physical Geography	20	20	
3.		Human Geography	20	20	
4.		Geographical Techniques	40	40	

I. Geographic Thought and Geography of India

- 1.1 Contributions of Greek, Roman, Arab, Chinese and Indian Scholars; Impact of Darwinian Theory on Geographical Thought.
- 1.2 Dualisms in Geographic Studies (physical vs. human, regional vs. systematic, qualitative vs. quantitative, ideographic vs. nomothetic), Paradigm Shift, Perspectives in Geography (Positivism, Behaviouralism and Humanism).
- 1.3 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.
- 1.4 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.

II. Physical Geography

- 2.1 Continental Drift, Plate Tectonics, Endogenetic and Exogenetic forces, Denudation and Weathering, Geomorphic Cycle (Davis and Penck), Theories and Process of Slope Development, Earth Movements (seismicity, folding, faulting and vulcanicity), Landform Occurrence and Causes of Geomorphic Hazards (earthquakes, volcanoes, landslides and avalanches).
- 2.2 Composition and Structure of Atmosphere: Insolation, Heat Budget of Earth, Temperature, Pressure and Winds, Atmospheric Circulation (air-masses, fronts and upper air circulation), cyclones and anticyclones (tropical and temperate).
- 2.3 Relief of Oceans, Composition: Temperature, Density and Salinity, Circulation: Warm and Cold Currents, Waves, Tides, Sea Level Changes, Hazards: Tsunami and Cyclone.
- 2.4 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 and Land Degradation).

III. Human Geography

- 3.1 World Population Distribution (measures, patterns and determinants), World Population Growth (prehistoric to modern period), Demographic Transition and Theories of Population Growth (Malthus, Sadler, and Ricardo).
- 3.2 Rural Settlements (types, patterns and distribution), Contemporary Problems of Rural Settlements (rural-urban migration; land use changes; land acquisition and transactions), Theories of Origin of Towns (Gordon Childe, Henri Pirenne, Lewis Mumford), Characteristics and Processes of Urbanization in Developed and Developing Countries.
- 3.3 Factors affecting spatial organisation of economic activities (primary, secondary tertiary and quaternary), Natural Resources (classification, distribution and associated problems), Natural Resources Management, World Energy Crises in Developed and Developing Countries.
- 3.4 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 and Determinants of Electoral Behaviour.

IV. Geographical Techniques

- 4.1 Remote Sensing: Meaning, Definition, Significance and Utility; History and Development of Remote Sensing; Aerial Photography and its Geometry; Classification of Aerial Photographs and their Utility and GPS Components (space, ground control and receiver segments) and Applications
- 4.2 GIS- Definition, History and Development; Functions and Advantages of GIS; Concept of DBMS; Sources of Geographic Information and Data (spatial and non-spatial), GIS Database (raster and vector data formats and attribute data formats); GIS Applications (thematic cartography, spatial decision support system).
- 4.3 Applications of Measures of Central Tendency, Dispersion and Inequalities. Sampling. Sampling Procedure. Time Series Analysis. Correlation and Regression Analysis. Measurement of Indices. Making Indicators Scale Free. Computation of Composite Index. Principal Component Analysis and Cluster Analysis.
- 4.4 Cartography- nature. History and Recent Trends: Types of Map, Data and Symbols: Techniques of Map Making (Choropleth, Isarithmic, Dasymetric, Chorochromatic. Flow Maps) Profiles. Slope Analysis. Clinographic Curve, Hypsographic Curve and Altimetric Frequency Graph: Computer Assisted Cartography and Choice of Projections.

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Dated:- 06-04-2022

M. S. S. S.
REGISTRAR
S. S. S. S.
06/04/22