



The Indian Geographical Society
Department of Geography, University of Madras
GUINDY, CHENNAI – 600 025, INDIA

15th Talent Test - Young Geographer-2025

General Information

1. Talent Test **will be conducted through online mode in English language only for PG & UG students** for 1.00 hour duration consisting of 75 Multiple Choice Questions.
2. Syllabi for UG and PG talent tests are provided in the [IGS Website](#)
3. **Only Final year UG and PG** students of Geography are eligible to participate the Talent Test.
4. The students should register their names individually by **online on or before 06th January, 2025**
5. The Head of the Departments is requested to share the registration link to the students to provide the necessary information (*Students' Name, WhatsApp Number and Email ID*).
6. Talent Test is scheduled on **07 January, 2025 (Tuesday) between 11.00 a.m. and 12.00 Noon**
7. **No Registration Fee** will be collected from the students for participating the online talent test. However, e-certificate will be provided to the eligible participating students
8. If the mobile phones are not allowed inside the college campus, the Departments can conduct the Test through computers with the support of Computer Science or any other Department in their college.

Details of Award and Rank Certificate

Award and Rank Certificate	
UG	PG
The IGS Founder Prof. N. Subrahmanyam Award	Prof. A. Ramesh Award
I	I
II	II
III	III

The toppers will be awarded during the IGS Annual General Body Meeting. All other eligible participants will be given e - Certificate for participation. Please visit IGS website for registration forms and further information: <http://www.igschennai.org/>

Dates to Remember

Last Date for the Enrolment : 06 January, 2025 (Monday)

Date of the Talent Test : 07 January, 2025 (Tuesday)

**Name of the Universities and Colleges which are likely to participate the 15th
IGS Talent Test (for final year UG and PG students)**

Participating Departments

1.	Department of Geography, University of Madras, Chepauk, Chennai – 600 025
2.	Department of Geography, Madurai Kamaraj University, Madurai - 625 021.
3.	Department of Geography, Bharathidasan University, Tiruchirappalli - 620 024.
4.	Department of Geography, Central University of Tamil Nadu, Thiruvarur – 610 005
5.	Department of Environmental Remote Sensing and Cartography, Madurai Kamaraj University, Madurai - 625 021
6.	Department of Geography, Presidency College (Autonomous), Chennai – 600 005.
7.	Department of Geography, Queen Mary's College (Autonomous), Chennai - 600 004.
8.	Department of Geography, Bharathi Women's College (Autonomous), 85, Prakasam Salai, Chennai - 600 108.
9.	Department of Geography, Tourism and Travel Management, Madras Christian College (Autonomous), Tambaram, Chennai - 600 059.
10.	Department of Geography, Government Arts College (Autonomous), Salem – 636 007.
11.	Department of Geography, Arignar Anna Government Arts College, Namakkal – 637 002.
12.	Department of Geography, Sri Vijay Vidyalaya College of Arts and Science, Nallampalli, Dharmapuri – 636 807.
13.	Department of Geography, PSA College of Arts and Science for Women, Sollaikottai, Naickanahalli, Dharmapuri - 636704.
14.	Department of Geography, Government Arts College (Autonomous), Coimbatore - 641 018.
15.	Department of Geography, Nirmala College for Women (Autonomous), Coimbatore – 641 018.
16.	Department of Geography, Bharathiar University Arts & Science College, Amaikulam, Puliam Parai (P.O.), Gudalur - 643 212.
17.	Department of Geography, Government Arts College (Autonomous), Karur – 639 005.
18.	Department of Geography, Periyar E.V.R. College (Autonomous), Tiruchirappalli – 620 023.
19.	Department of Geography, Government Arts College, Thiruverumbur, Tiruchirappalli – 620 022.
20.	Department of Geography, Kundavai Nachiar Government Arts College for Women (Autonomous), Thanjavur -613 007.
21.	Department of Geography, A.V.V.M Sri Pushpam College (Autonomous), Poondi, Thanjavur - 613 503.
22.	Department of Geography, Government Arts College for Women (Autonomous), Kumbakonam - 612 002.
23.	Department of Geography, Sri Meenakshi Government Arts College for Women (Autonomous), Madurai – 624 002.
24.	Department of Geography, MVM Government Arts College for Women, Dindigul - 624 008.
25.	Department of Geography, Government Arts College for Women, Nilakottai, Dindigul - 624 208.
26.	Department of Geography, Government Arts and Science College for Women, Orathanadu, Thanjavur - 614 625.
27.	Department of Geography, Vellalar College For Women (Autonomous), Thindal, Erode - 638 012

Registration Link :

<https://forms.gle/ngt9TePJWLiHAbTZ8>

Website: <http://igschennai.org>





The Indian Geographical Society
Department of Geography, University of Madras
CHENNAI – 600 025, INDIA
Established in 1926: Registration Number - 256/72

15th Talent Test-Young Geographer-2025

Prof. N. Subrahmanyam Award

Syllabus for Under Graduate Students

Geomorphology: Fundamental concepts; Factors controlling landform development; Endogenetic and Exogenetic forces; Continental drift and plate tectonics - Denudation process: weathering, mass movement and erosion - Landforms associated with fluvial, glacial, arid, coastal and karst.

Climatology: Composition and structure of the atmosphere; Insolation; Heat budget of the earth; Distribution of temperature, atmospheric pressure and general circulation of winds; Monsoons and jet streams; Air-masses; Fronts, temperate and tropical cyclones; Types and distribution of precipitation; Classification of world climates; Koppen's and Thornthwaite's schemes; Global warming.

Oceanography: Bottom relief of Indian, Atlantic and Pacific Oceans; Ocean deposits; Coral reefs; Temperature and salinity of the Oceans; Density of sea water; Tides and ocean currents; Sea-level changes.

Settlement Geography: Site, situation, types, size, rural and urban settlements; Settlement systems.

Economic Geography: Sectors of Economy: primary, secondary, tertiary and quaternary; Natural resources -Renewable and non-renewable; Conservation of resources; Classification of industries; Modes of transportation.

Geography of India: Physiographic divisions; Climate : Its regional variations; Vegetation types and vegetation regions; Major soil types; Coastal and Marine resources; Water resources; Irrigation; Agriculture; Agro-climatic regions; Mineral and power resources; Major industries and industrial regions; Population distribution and growth; Settlement patterns.

Cartography: Types of maps – Projections – Scale; Types - General purpose and Thematic maps; Choropleth, Isopleth and Chorochromatic maps and pie diagrams; Accessibility and flow maps; Remote sensing - Geographic Information System (GIS) - Global Positioning System (GPS).

Statistical Methods: Data sources and types of data; Statistical diagrams; study of frequency distribution and cumulative frequency; Measures of central tendency; Selection of class intervals for mapping; Measures of dispersion; Standard deviation.

Annexure – II



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15th Talent Test-Young Geographer-2025

Prof. A. Ramesh Award

Syllabus for Post Graduate Students

UNIT-I

Geomorphology

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)

UNIT –II

Climatology

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), Climatic Classification of Koppen & Thornthwaite, ENSO Events (El Nino, La Nina and Southern Oscillations), Meteorological Hazards and Disasters (Cyclones, Thunderstorms, Tornadoes, Hailstorms, Heat and Cold waves Drought and Cloudburst , Glacial Lake Outburst (GLOF), Climate Change: Evidences and Causes of Climatic Change in the past, Human impact on Global Climate.

UNIT-III

Oceanography

Relief of Oceans, Composition: Temperature, Density and Salinity, Circulation: Warm and Cold Currents, Waves, Tides, Sea Level Changes, Hazards: Tsunami and Cyclone

UNIT –IV

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 Polices (Brundtland Commission, Kyoto Protocol, Agenda 21, Sustainable Development Goals, Paris Agreement)

UNIT –V

Population and Settlement Geography

Population Geography

Sources of population data (census, sample surveys and vital statistics, data reliability and errors). World Population Distribution (measures, patterns and determinants), World Population Growth (prehistoric to modern period). Demographic Transition, Theories of Population Growth (Malthus, Sadler, and Ricardo). Fertility and Mortality Analysis (indices, determinants and world patterns). Migration (types, causes and consequences and models), Population Composition and Characteristics (age, sex, rural-urban, occupational structure and educational levels), Population Policies in Developed and Developing Countries.

Settlement Geography

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 (factors of urban growth, trends of urbanisation, size, structure and functions of urban areas). Urban Systems (the law of the primate city and rank size rule) Central Place Theories (Christaller and Losch), Internal Structure of the City, Models of Urban Land Use (Burgess, Harris and Ullman , and Hoyt), Concepts of Megacities, Global Cities and Edge Cities, Changing Urban Forms (peri-urban areas, rural-urban fringe, suburban , ring and satellite towns), Social Segregation in the City, Urban Social Area Analysis, Manifestation of Poverty in the City (slums, informal sector growth, crime and social exclusion).

UNIT–VI

Geography of Economic Activities and Regional Development

Economic Geography

Factors affecting spatial organisation of economic activities (primary, secondary, tertiary and quarternary), Natural Resources (classification, distribution and associated problems), Natural Resources Management. World Energy Crises in Developed and Developing Countries.

Agricultural Geography

Land capability classification and Land Use Planning, Cropping Pattern: Methods of delineating crop combination regions (Weaver, Doi and Rafiullah), Crop diversification, Von Thunen's Model of Land Use Planning. Measurement and Determinants of Agricultural Productivity, Regional variations in Agricultural Productivity, Agricultural Systems of the World.

Industrial Geography

Classification of Industries, Factors of Industrial Location; Theories of Industrial Location (A. Weber, E. M. Hoover, August Losch, A. Pred and D. M. Smith). World Industrial Regions, Impact of Globalisation on manufacturing sector in Less Developed Countries, Tourism Industry, World distribution and growth of Information And Communication Technology (ICT) and Knowledge Production (Education and R & D) Industries.

Geography of Transport and Trade

Theories and Models of spatial interaction (Edward Ullman and M. E. Hurst) Measures and Indices of connectivity and accessibility; Spatial Flow Models: Gravity Model and its variants, World Trade Organisation, Globalisation and Liberalisation and World Trade Patterns. Problems and Prospects of Inter and Intra Regional Cooperation and Trade.

Regional Development

Typology of Regions, Formal and Fictional Regions, World Regional Disparities, Theories of Regional Development (Albert O. Hirschman, Gunnar Myrdal, John Friedman, Dependency theory of Underdevelopment, Global Economic Blocks, Regional Development and Social Movements in India

UNIT – VII

Cultural, Social and Political Geography

Cultural and Social 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.

Political Geography

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 VIII

Geographic Thought

Contributions of Greek, Roman, Arab, Chinese and Indian Scholars, Contributions of Geographers (Bernhardus Varenius, Immanuel Kant, Alexander von Humboldt, Carl Ritter, Scheafer & Hartshorne), 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), Paradigm Shift, Perspectives in Geography (Positivism, Behaviouralism, Humanism, Structuralism, Feminism and Postmodernism).

UNIT IX

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 Photographs, Digital Image Processing: Developments in Remote Sensing Technology and Big Data Sharing and its applications in Natural Resources Management in India, GPS Components (space, ground control and receiver segments) and Applications, Applications of Measures of Central Tendency, Dispersion and Inequalities, Sampling, Sampling Procedure and Hypothesis Testing (chi square test, t test, ANOVA), Time Series Analysis, Correlation and Regression Analysis, Measurement of Indices, Making 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 – X

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.)