



# ગુજરાત જાહેર સેવા આયોગ

છ-૩ સર્કલ પાસે, છ રોડ, સેક્ટર-૧૦/એ, ગાંધીનગર-૩૮૨૦૧૦

જાહેરાત ક્રમાંક: ૨૩/૨૦૨૧-૨૨

જગ્યાનું નામ: જુનિયર ટાઉન પ્લાનર, વર્ગ-૨(GMC)

ભાગ-૧ અને ભાગ-૨ ના ૧૮૦ મિનિટના સંયુક્ત પ્રશ્નપત્રની પ્રાથમિક કસોટીનો અભ્યાસક્રમ

ભાગ-૧ પ્રાથમિક કસોટીનો સામાન્ય અભ્યાસક્રમ		
માધ્યમ : ગુજરાતી	કુલ પ્રશ્નો : ૧૦૦	કુલ ગુણ : ૧૦૦
૧	ભારતની ભૂગોળ - ભૌગોલિક, આર્થિક, સામાજિક, કુદરતી સંસાધન અને વસ્તી અંગેની બાબતો - ગુજરાતના ખાસ સંદર્ભ સાથે	
૨	ભારતનો સાંસ્કૃતિક વારસો - સાહિત્ય, કલા, ધર્મ અને સ્થાપત્યો- ગુજરાતના ખાસ સંદર્ભ સાથે	
૩	ભારતનો ઇતિહાસ - ગુજરાતના ખાસ સંદર્ભ સાથે	
૪	ભારતની અર્થવ્યવસ્થા અને આયોજન	
૫	ભારતીય રાજનીતિ અને ભારતનું બંધારણ : (૧) આમુખ (૨) મૂળભૂત અધિકારો અને ફરજો (૩) રાજ્યનીતિના માર્ગદર્શક સિદ્ધાંતો (૪) સંસદની રચના (૫) રાષ્ટ્રપતિની સત્તા (૬) રાજપાલની સત્તા (૭) ન્યાયતંત્ર (૮) અનુસૂચિત જાતિ, અનુસૂચિત જનજાતિ અને સમાજના પછાત વર્ગો માટેની જોગવાઈઓ (૯) એટર્ની જનરલ (૧૦) નીતિ આયોગ (૧૧) પંચાયતી રાજ (૧૨) નાણાં પંચ (૧૩) બંધારણીય તથા વૈધાનિક સંસ્થાઓ- ભારતનું ચૂંટણી પંચ, સંઘ લોક સેવા આયોગ, રાજ્ય લોક સેવા આયોગ, કોમ્પ્ટ્રોલર એન્ડ ઓડિટર જનરલ; કેન્દ્રીય સતર્કતા આયોગ, લોકપાલ તથા લોકાયુક્ત અને કેન્દ્રીય માહિતી આયોગ	
૬	સામાન્ય બૌદ્ધિક ક્ષમતા કસોટી	
૭	સામાન્ય વિજ્ઞાન, પર્યાવરણ અને ઇન્ફર્મેશન એન્ડ કોમ્યુનિકેશન ટેકનોલોજી	
૮	ખેલ જગત સહિત રોજબરોજના પ્રાદેશિક, રાષ્ટ્રીય અને આંતરરાષ્ટ્રીય મહત્વના બનાવો	

**Part-1 Syllabus of Preliminary Test**  
**Advt. No.23/2021-22**  
**Post: Junior Town Planner, Class- II, (GMC)**

<b>Medium: Gujarati</b>	<b>Questions – 100</b>	<b>Total Marks- 100</b>
1	Geography of India-Physical, Economic, Social, Natural Resources and population related topics- with special reference to Gujarat	
2	Cultural heritage of India-Literature, Art, Religion and Architecture- with special reference to Gujarat	
3	History of India with special reference to Gujarat	
4	Indian Economy and Planning	
5	<u>Indian Polity and the Constitution of India:</u> 1. Preamble 2. Fundamental Rights and Fundamental Duties 3. Directive Principles of State Policy 4. Composition of Parliament 5. Powers of the President of India 6. Powers of Governor 7. Judiciary 8. Provisions for Scheduled Castes, Scheduled Tribes and backward classes of the society 9. Attorney General 10. NITI Aayog 11. Panchayati Raj Institutions 12. Finance Commission 13. Constitutional and Statutory Bodies: Election Commission of India, Union Public Service Commission, State Public Service Commission, Comptroller and Auditor General; Central Vigilance Commission, Lokpal and Lokayukta, Central Information Commission	
6	General Mental Ability	
7	General Science, Environment and Information & Communication Technology	
8	Daily events of Regional, National and International Importance including Sports	

**Part-2 Syllabus of Concerned Subject for Preliminary Test**

**Advt. No.23/2021-22**

**Post: Junior Town Planner, Class- II, (GMC)**

**Marks – 200**

**Questions – 200**

**Medium - English**

**1. Planning History and Theory**

**Ancient and Medieval Cities in India:** Urbanization in the medieval period including a study of cities like Varanasi, Mohenjo-Daro, Harappa, Dholavira and Lothal; Chola dynasty sponsored famous towns like Thanjavur, Nagapattinam, Kanchipuram and Madurai;

**Mughal and Colonial Built Environment:** Mughals and Vijayanagara Kingdoms built grand cities like Shahjahanabad in the north and Hampi – the capital of Vijayanagara Kingdom in the south; Mughal towns and cities; City and regional planning during the British Raj involving cantonments, model towns, capital towns like New Delhi; Regional planning efforts involving development of port cities such as Bombay, Madras, Calcutta, etc.; Construction of railways, and road networks; The Portuguese port towns of Cochin, Cannanore, Goa, Daman and Diu. Contributions of scholars like Sir Patrick Geddes to Indian planning; Governance and planning legislation during the British period include a study of improvement trusts, municipalities, etc.

**Urban Theories:** Concentric Zone Theory, Sector Theory, and Multiple Nuclei Theory with a focus on the contributions of Robert E. Park, Louis Wirth, etc.; Land Use and Land Value Theory of William Alonso; From the world city to the global city.

**Theories of Planning:** Rational Planning Model; Advocacy Planning Model; Political Economy Model; Equity Planning Model; Radical Planning model; Collaborative Planning Theory.

**2. Planning Techniques**

**Scales and Preparation of Maps:** Maps as a representation of reality, Elements of Maps; Graphical, linear and areal scales, Notations involving

basic discipline of maps; Measurement of areas; Learning to prepare base maps; Contents of base maps at various scales; Choice of appropriate scales for region and settlement level plans, town development plans, zonal development plans, layout plans.

**Data for Planning and Socio-Economic Surveys:** Data requirements for urban and regional planning; Sources of primary and secondary data; Quantitative and Qualitative methods of data collection, Validity and reliability of data, Questionnaire design, measurement scales and their applications, sampling techniques, types of socioeconomic surveys; Self-surveys, interviews, mailed questionnaires and observer participation, focus groups etc.

**Physical Surveys:** Techniques of conducting surveys for land use, building use, density, structural condition of buildings, heights of buildings, land utilization and physical features of land; Data requirements for various types of regional plans; Techniques for conducting regional surveys.

**Analysis and Presentation of Data:** Land suitability analysis, Land use classification, coding and analysis; residential and non-residential density patterns and their analyses; population and economic analysis. Tabulation of data, graphical presentation of data; Preparing pie diagrams, histograms, bar charts, normal, semi-log and double log graphs and their uses; colour, black and white presentation techniques; Understanding the discipline of illustrations and tables. Colour, black and white presentation techniques; Basic discipline of presenting illustrations; Presentation of spatial data, analysis and proposals.

### **3. Transport Planning**

**Transport System:** Types and characteristics of transport systems; Determinants of transport demand; Planning norms and standards; Principles of transport infrastructure planning and design of roads and intersections, street infrastructure elements; Pedestrian and cyclist infrastructure; Parking facilities; and Principles of traffic management.

**Land use – Transport Integration:** Land use transport integration: definitions and concepts, land use transport cycle, importance of accessibility; Factors

affecting land use-transport integration, and tools for land use-transport integration; Key elements of integration; Integrating land use and transport in the planning process; Institutional integration and legal mechanisms for integration.

**Traffic Impact on Land Development:** Principles of traffic impact analysis, land development attributes, traffic generation rates of different land use; Land development impact on traffic congestion on road segments, intersections and parking, impact on public transportation, pedestrian traffic and safety.

**Transport Planning Policies and Projects:** Transport planning policies of central and state governments; Transit Oriented Development: Definition, concepts and key components; Principles of TOD, planning norms and standards of TOD, pre-requisites of TOD, financing of TOD projects, role of stakeholders; Golden Quadrilateral project, corridor development projects, expressway projects; Metro rail networks projects of urban and regional significance.

#### 4. **Housing and Environment Planning**

**Problem of Housing:** Significance of housing in economic and social development; Basic Terms in housing, understanding concepts of Housing need, demand, supply and shortage; Housing data analysis from Census; Housing typologies; Housing development process; Nature of housing problem in urban and rural India, Public health issues in housing; Housing for the poor, houselessness in India, old housing.

**Housing Policy and Finance:** Evolution of housing policy in India, Role of the government and private sector in housing; housing programmes for the poor and night shelters; Examples of housing projects, Introduction to housing finance; Affordability and Cost of housing; Role of Financing organisation. Critical Review of Current housing programmes

**Ecosystem, Urban Ecosystem and Quantitative Ecology:** Eco-system and their relevance to environment, Impact of advanced agriculture methods, urbanization and industrialization on nature; Pollution, types, sources, remedies; Urban ecosystem approach, evolution and significance;

Introduction to quantitative ecology, Identification of ecological parameters for planning at different levels, Site planning, Settlement planning, Regional planning. Data needs, formats for data collection Types of analysis required to evolve ecological parameters; Environmental impact assessment, Methods and their appraisal. preparation and analysis of resource inventories and resource matrices.

**Resource Planning and Management:** Finiteness of resources, examples of transfer from one resource to another in history in different parts of world; Development, utilization and conservation of resources, resource planning, integrated resource planning approach; Resource regions, their problems and potentials; Resource management, traditional and contemporary approaches. Resource development in India, some selected areas (energy, water, manpower, etc.); and Government's 8 missions under the National Action Plan on Climate Change.

## 5. Metropolitan Regional Planning

**Metropolitan Cities, Agglomerations and Regions:** Defining cities, metropolitan cities, mega cities, metropolitan agglomerations, conurbations, and metropolitan regions; Physical, economic and political structures of metropolitan regions; and Globalisation and extended metropolitan region; desakota model, and territoriality of rural-urban interactions.

**Metropolitan Regional Planning:** Theories about the evolution of metropolitan regions; Techniques for the delineation metropolitan regions; Approaches to preparing metropolitan regional plans; Organizations involved in the planning of metropolitan regions; Implementation of regional plans in India.

**Perpherialization of Metropolitan Regions:** Nature and causes of development in the peripheral areas of metropolitan regions; Actors involved in the development in the peripheral areas; Role of the private sector in the development of peripheral areas.

**Peripheral Development and Physical Environment:** Environmental assets in peripheral areas of metropolitan regions and their uses; Condition and status of forests, water bodies, etc.

## 6. Infrastructure Planning

**Water Supply System:** Water supply systems and networks, and network mapping; Water sources, quality and quantity requirements, and water requirement for various land uses; Factors affecting water demand; Storage facilities and distribution systems; Rain water harvesting systems and locational criteria, implications on land use and density of water harvesting system; Innovative Methods and successful urban water supply system practices; Water programmes and policies.

**Sanitation and Sewerage System and Storm Water Drainage:** General considerations and principle of sanitation and sewerage systems; Sewage disposal and treatment methods; Characteristics of waste water, industrial pollutants and their affects; Open defecation; Manual scavenging; Innovative approaches of sewage disposal in urban areas and low cost appropriate technologies for sanitation; Storm water drainage networks, and network mapping; Estimations of sewer generation and network requirements; Elements of Solid Waste Management, Classification and Characteristics of Solid Wastes; Methods for Solid waste Collection, Storage, transportation and disposal; Processing and Treatment of Solid Wastes; Land Filling methods of Solid Waste Management.

**Social Infrastructure:** Social infrastructure typologies; Planning norms and space standards for education, health, recreation and socio-cultural facilities; Amenities for urban and rural settlements; Significance of education and health infrastructure in planning; Locating education and health facilities; Understanding scalogram and other techniques.

**Policies, Programmes and Projects:** Understanding prevalent policies, projects and missions, for example, JnNURM, AMRUT, HRIDAY, Smart Cities Mission, etc.; Norms and standards for different types of infrastructure; Nature and content of infrastructure in development plans at different geographical levels; Making assessment of infrastructure requirements in plans.

## 7. Urban and Regional Governance

**Evolution of Urban and Regional Governance:** Comprehending governance; History of governance of urban and regional after 1947;

Organizations involved in planning, development and management of urban and rural areas; Present status of urban and regional governance in India.

**Devolution of Local Government:** Need for decentralization and devolution of powers from state governments to local government; District Planning Committees and Metropolitan Planning Committees; Current position of implementation of 73rd and 74th amendment acts.

**Coproduction: Role of the Third Sector:** Shift from government to governance; Context of governance for greater involvement of the private sector; Ideas of good governance; Public private partnerships; Role of global players such as the World Bank, IMF, Asian Development Bank, the private sector, INGOs, NGOs, CBOs.

**Land Administration and Management:** Models of land assembly in India - Bulk land acquisition, land reconstitution, etc.; Land administration and management; Understanding maps of land records; Methods of keeping land records in urban and rural areas.

## 8. Risk, Disaster Mitigation and Management

**Basic Concepts of Disaster Management:** Disaster: Definitions, concepts, types and perceptions; Recent initiatives at national and state level; Kyoto Framework of disaster mitigation and management; Paris agreements; Disaster management policy at the national and state levels; Disaster management statutes at national and state levels.

**Disaster Management Mechanisms:** Disaster management mechanisms at national, state and district levels; Select global practices; Disaster and development; Development plans and disaster management plans; Roles played in disaster management by INGOs, NGOs, CBOs and armed forces; and Community Based Disaster Preparedness.

**Disaster Risk Mitigation:** Natural Disasters: cyclones, floods, earthquakes, landslides etc.; Disaster as a physical phenomenon, causes and consequences of mitigation and management practices; Risks' mitigation strategies in development plans inclusive of industrial, chemical and biological disasters; Land use planning, building bye laws and disaster safe construction practices.



**Disaster Preparedness and Post Disaster Management:** Forecasting and early warning systems for various types of disasters; Role of communication and information technologies in disaster management; Disaster education and awareness; Case studies on natural disasters; Climate change and its implications in disaster mitigation; Post-disaster management including rehabilitation and reconstruction of disaster affected areas; Safe hill area development guidelines and coastal zone regulations for safe habitation.

## 9. Planning Legislation

**Concept of Law:** Sources of law (custom, legislation and precedent); meaning of the term of law, legislation, ordinance, bill, act, regulations and bye-laws; significance of law and its relationship to urban planning; benefits of statutory backing for planning schemes.

**Indian Constitution:** Concepts and contents of Indian Constitution; Rights and their implication on planning; Fundamental provisions regarding property rights; evolution of planning legislation and overview of legal tools connected with urban planning and development; model town planning laws.

**Statutory Framework for Planning and Development Law:** Evolution of town planning legislation, town planning laws, town planning as a state subject, 73rd and 74th amendment and its implications for planning law, current amendments in planning and development laws.

**Planning law and its interface with other laws affecting development:** Current laws related to environment, heritage, housing, real estate, property law and their interaction with planning law; PPP and contract laws; any other Acts relevant at a particular time, for example, special investment region acts model community participation law.

**Acts and Policies:** Gujarat Town Planning and Urban Development Act, 1976 and Rules, 1979; Gujarat Infrastructure Development Act, 1999; The Real Estate (Regulation and Development) Act, 2016; Land Acquisition Rehabilitation and Resettlement Act, 2013; Land Acquisition Act, 1894; Policies and programs of Ministry of Housing and Urban Affairs (MOHUA).

## 10. Project Planning and Management

Project planning, Project Formulation and Appraisal, Project Management and Implementation, Project Evaluation and Monitoring, Regulatory Frameworks Governing Projects, National Rehabilitation and Resettlement Policy (2007) - Social Impact mitigation; National Environmental Policy (2006) – Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP).

## 11. Urban and Regional Planning in India

**What is Planning and who are the Planners:** Various meanings of the term planning, distinction between land use planning and spatial planning; Goals and objectives of planning, orthodoxies of planning; Planning at various spatial scales; Planning challenges; Planners and their different roles.

**History of Planning before 1991:** Planning in the central Five Year Plans; Planning guidelines: Urban Plans Formulation and Implementation (URDPFI) Guidelines 1996; Story of master plan preparation and their implementation or lack of it; Planning institution building prior to 1990s; Programmes for planning like IDSMT, etc.

**Current Nature of Planning:** Mission mode planning versus plan based planning, JNNURM, SEZs, SCM; Planning in a globalised and networked India; Planning Guidelines: Urban and Regional Development Plans Formulation and Implementation (URDPFI) Guidelines, 2015, Shyama Prasad Mukherji Rurban Mission, 2016; Sustainable Development goals and their relationship with spatial planning.

**Plans and Policies:** Types, substance and dimensions of various kinds of development plans; Rethinking about development plans; need of development plans; Planning policies versus economic policies; Politics and spatial planning; Spatial plans for rural settlements; Integration of spatial and economic plans.

## 12. **Urban Information Systems and Spatial Analysis**

**Urban Information Systems:** Importance of urban information systems, information scales and levels; Pre-requisites for using planning information systems; Representing, modelling and impact analysis of the data; Query measurement and transformations; Summary statistics and inferences.

**Urban Information Systems for Planning:** Urban information systems for planning; Tools for spatial data handling-type systems, nature, hierarchy and values; Raster and vector data structures; Analysis of tools and software; Spatial data models, geo-database; Geospatial information regulation statutes and policy guidelines.

**Government Initiatives and Urban Information Systems in Planning:** National Natural Resources Management System (NNRMS), National Urban Information System (NUIS), NUIS guidelines and design standards; National urban observatory, municipal information systems, the National E-Governance Plan (NEGP) and land information systems; Global navigation satellite systems.

**Geographic Information System (GIS) and Remote Sensing Techniques:** Geographic Information Systems: Concept, components, and benefits; Spatial data entry into GIS, data structure for GIS; Mapping and spatial analysis software, linking of attribute data, spatial data aggregation, spatial data generalization; Raster data capture; Cloud based GIS on Bhuvan platform; GIS based master plans; Resource satellite, and sensing capabilities; Aerial photography; Digital survey; Raster data processing and analysis; Resolutions; Geo-Rectification; Geometric distortions, image enhancement, transformation, segmentation; Image interpretation and analysis, 3D terrain modelling.

## 13. **Current Trends and recent advancements in the above field**