

## **B. Plan Syllabus**

### **History of Human Settlements**

Early human settlements, Town building during Indus valley civilization – Town building practices during ancient Greek and Roman period – Town building practices during Medieval and Renaissance periods – Effect of Industrial Revolution on planning of cities. Planning System in India, Regional Plan, Master Plan, Structure Plan, Detailed Development Plans, City Corporate Plan and Smart City Plan. New Town concepts like green belt, Zoning, etc.

### **Planning principles and Concepts**

Planning concepts of E. Howard, Patric Geddes, C. A. Perry, etc. Geographical study of Regional Land use and distribution of Settlements – Concept of Region, Types of Region, Techniques of Regional Analysis, Growth Model, Regional disparities, Resources in Regional development, Regional Delineation. Urban Renewal, Redevelopment, Rehabilitation, Conservation. Principles in Planning – Rationality in Planning, Blueprint and Process mode, Disjointed Incremental mode of Planning, Normative versus Functional mode of Planning – Type of planning surveys, data identification for various plan preparation. Delphi, Trade off-game, Simulation models, Gravity analysis, Lowry model, Threshold analysis, Multivariate analysis – Optimization and economic analysis methods.

### **Urban Sociology, Economics, Geography: Theories and Applications**

Socio-economic groups, structures and Institutions as related to urban and rural communities - Urbanization & Ecological theories - Social Change & Economic Development - Agglomeration economics- Economics of scale, Multiplier effect concept, scope, limitation - Basic and non-basic activities of economics base, methods of base identification - Land-use determinants, Locational Dynamics of urban Land-use - Spatial organization of Urban settlements - Urban Sprawl and Fringe – Urbanization – Housing Redevelopment – Citizen participation- Urbanization & National Housing policy

### **Environmental Issues Related to Planning**

Components of Environment – Classification of Environmental Resources - Purpose and Objectives in Environmental Protection - Institutional and Legal Support in management of the Environment – Environmental Policies, and issues -Environmental Impact Assessment Practice in India - Types, Conceptual Approach and Phases of EIA – Impact Identification - Public Participation in the Process of Environmental Decision Making Process - Environmental Concepts – Sustainable Planning – Eco Cities, Compact Cities, Smart growth, Sponge city, IGBC Rating Systems applicable for Towns.

### **Urban Infrastructure Network Planning Issues**

Obligatory and Discretionary Services, Implication of Urban Form and Size on Services, Norms and Standards. Demand Strategy, Issues and Tasks, Operation and Management Aspects of each Service - Water Supply, Sewerage / Drainage, Solid Waste Management, Roads and Street Lighting - Priority, Placement Network Options, Effective System Analysis – Private and Public partnership and innovative concepts and practices in Infrastructure Development.

### **Project Formulation and Implementation**

Types of Project, Project Cycle, Identification, Selection, Preparation - Capital Investment Programme, Internal Rate of Return, Net present Value - Cost- Benefit & Analysis, Social Cost Benefit analysis, Budgeting, Tamil Nadu Transparency in Tender Rules - Appraisal techniques - Project Proposal and objectives, Current base line conditions, Financial and Economical Appraisal, Socio cultural assessment - Process Monitoring - Key issues, Monitoring Schedule, Data collection, Design, strategy, Impact Evaluation - Approaches, Key issues, Alternative to large scale qualitative Evaluation designs.

### **Planning Legislation and Legal Framework**

The concept of law, Indian Constitution. Rights of Ownership and development of property. Evolution, scope and Significance of Planning Legislation. History and survey of development of planning legislation in India - TNULB Act, Land Acquisition, Rehabilitation and Resettlement Act, 2013. 73rd and 74th CAA and their implications on planning and development. Local Body finance, revenue, expenditure and resource mobilization - Town & Country Planning Act of Tamil Nadu 1971, The Ancient Monuments and Archaeological Sites and Remains Act, Tamil Nadu Combined Development and Building rules 2019, The Tamil Nadu Real Estate (Regulation and Development) Act, 2016. Coastal Regulation Zone and Hill Area Conservation Acts.

### **Issues in Traffic and Transportation Planning**

Highway classification - Traffic characteristics - Traffic Regulations - Traffic Signs and Traffic Markings - Horizontal and Vertical alignment, Land use & Transportation relationships - Sight distance - Cross-sectional elements of a highway - Volume Count - Origin and Destination - Parking and Public Transport - Surveys - Inventory of Transport facilities - Methods of Survey - Capacities - Limitations - Planning Aspects - Coordination - Para Transit modes - Private transport - Urban Transportation Planning Process - Trip Generation - Trip Distribution - Modal Split - Trip Assignment, Congestion pricing, Non-Motorized Transport, Transit Oriented Development, Bus Rapid Transit System, Unified Transport Authority.

### **Remote Sensing and G.I.S., In Planning**

Basics of Remote Sensing and GIS. - Classification of spatial and non- spatial data application of spatial data in urban and regional planning - Identification of required spatial data layers - Coding schemes - digitization of spatial data - editing spatial data usable for the given planning problem - Land use Suitability Analysis, Land use Modelling, Existing Land Use Preparation using Mobiles, Satellite Imageries, Aerial Photographs, Drones in Physical Planning.

### **Current Trends and Issues in Planning**

Concepts of sustainable urban development, sustainable Transportation, E - Governance, HRIDAY, RURBAN Mission, Swatch Bharat Mission, AMRUT, National Health Mission, Public private partnership, local bodies and urban finance. Land Pooling concept, Transfer of Development Right, Accommodation Reservation, Formulation of Re-development and Urban Expansion Plans - Local Area Plans, Town Planning Schemes - Special Economic Zone, Value Capture Finance Policy Framework - Swiss Challenge Model, Industrial Corridor.