

DIPLOMA (CIVIL) – PART SIX

Optional Early Certificate: - N/A

Syllabus:-

Sr. No.	Module Code	Name of Module	Credits	Total Marks
1	MC25-26	Township & Urban Planning	5	100
2	MC25-27	Earthquake Engineering	5	100
3	MC25-28	Entrepreneurship Development & Management	5	100
4	MC25-29	Project	4	100

Module Name: Township & Urban Planning

- 1. Town Planning Principles:** General -Evolution of planning-objects of town planning-Economic justification for town planning-Principles of Town Planning - Necessity of town planning -Origin of towns - growth of towns - stages in town development-personality of town - Distribution of land uses-Forms of Planning-site for an ideal Town-requirement of new Towns-Planning of the modern Town-Power required for enforce T.P schemes - Cost of town planning - Present Position of Town Planning in India.
- 2. Planning of Buildings:** Principles of Architectural Planning and Design, Function/Utility, Form, Planning for Utility and aesthetics, Submission drawings, Working Drawings. Planning concepts of Green buildings, Eco Friendly and Cost effective building, rain Harvesting Systems.
- 3. Housing:** General- Importance of Housing-Demand for Houses-Building site-requirement of Residential Buildings-Classification of residential buildings-Design of residential Areas-rural Housing- Agencies for Housing-Investment in housing-HUDCO-CIDCO- Housing problem in India.
- 4. Planning of Residential Building -I: Bungalows, Row houses, Ownership Flats and Apartments:** Elevation, Detailed Sections, Staircase, calculation of Built-up area.
- 5. Public Building :** General , Location of Public Building, Classification of Public building, principles of Design of Public Building, Town Centres, Grouping of Public -Civic aesthetics.

6. **Urban Roads** : General- object- Requirement of good city, Road-factors to be Considered-Classification of Urban Road-Types of Street System-Through and By-pass roads-outer and Inner ring roads-Express ways-Freeways-Precincts-Road aesthetics.
7. **Building Bye- Law** : General objects of bye-law-Importance of Bye-Law-function of local authority-responsibility of owner-Applicability of bye-laws-set-back-light, plane-floor, Space index-off-street, Parking-fire Protection-Minimum Lot Sizes -Some other terms-principle underlying building bye-laws-building bye-laws for residential area of a typical town planning scheme-building bye-laws-development control rules-general rules of Metropolitan Ares-CMDA rules.

Module Name: Earth Quake Engineering

1. **An Integrated Earth System:** Gravity and the Lithosphere, Introduction to the Hydrosphere.
2. **The Solid Earth:** Earth Formation and Structure, Geologic time Scale, the Lithosphere and Plate Tectonics, Geological Disturbances, Earth Internal Structure, Major Features of The Continents, The tides, Tidal Forcing.
3. **Geological Materials:** Description of Materials, Description and Classification of Soils and Rocks, Soil and Rock Description, Water -Rock Interaction.
4. **Earthquake Engineering** : Introduction, Causes of Earthquake and Faulting, Measurement of Earthquakes, Seismic Hazards In India, Earthquake Hazards in the North Eastern Region, Strong Ground motion and Fault Rupture, Main shock and Aftershocks, Observed Records, Surface Fault Trace, fault rupture Model, Strong Motion Simulations, Frequency of Earthquake, Earthquake Resistant Structure.
5. **Landslides:** Landslides, Land Subsidence, Expansive Soils.
6. **Geophysical Mapping of History Cemeteries:** Application for geophysics in cemetery, other Application Concerns, Geophysical well logging, The Borehole Environment, radioactive Methods, Conclusions, Problem, Limitation.
7. **Seismic Design of Building:** Earthquake-Their Cause and Effect, Lateral Force resisting Systems, Types of Building and typical Earthquake Performance.
8. **Tsunami:** Physical Characteristics of Tsunami, Mitigation of Risks and Hazards, Prediction and Early warning, Tsunami Safety Rules.

Module Name: Entrepreneurship Development and Management

1. **Entrepreneurship:** Definition of Entrepreneur, Internal and External factors, Functions of an Entrepreneurship Motivation and Barriers, Classification of Entrepreneurship, Theory of Entrepreneurship, Concept of Entrepreneurship, Development of Entrepreneurship.
2. **Creativity and Entrepreneurial plan:** Idea Generation, Screening and Project Identification, Creative Performance Feasibility Analysis: Economic, Marketing financial and Technical; Project planning: Evaluation, Monitoring and Control, Value analysis, Innovation.

- 3. International Entrepreneurship opportunities:** The nature of international Entrepreneurship, Importance of international business to the Firm, International Versus domestic Entrepreneurship, Stages of Economic Development. Institutional Support for new Ventures : Supporting Organization; Incentives and facilities; Financial institutions and small scale Industrial, Govt. Policies for SMEs.
- 4. Family and non-family Entrepreneur:** Role of Professionals, Professionalism vs Family Entrepreneurs, Role of Woman Entrepreneur.
- 5. Venture Capital:** Venture Capital, Nature and Overview, Venture Capital Process, Locating Venture Capitalists.