Syllabus for Architecture and Planning

Ph.D entrance Test :

Verbal & Numerical Ability: English grammar, sentence completion, verbal analogies, word groups, instructions, critical reasoning and verbal deduction. Numerical computation, numerical estimation, numerical reasoning, data interpretation, Hypothesis and statistical techniques.

Research Methodologies: Scientific research methods, Architectural research techniques, analysis any synthesis techniques.

History of Architecture: Indian Indus valley, Vedic, Buddhist, Indo-Aryan, Dravidian and Mughal periods; European Egyptian, Greek, Roman, medieval and renaissance periods-construction and architectural styles; vernacular and traditional architecture. Industrial revolution; influence of modern art on architecture; works of national and international architects; art novuea, eclecticism, international styles, post modernism, deconstruction in architecture.

City & Housing: Evolution of cities; principles of city planning; types of cities & new towns; planning regulations and building byelaws; eco-city concept; sustainable development. Concept of housing; neighbourhood concept; site planning principles; housing typology; housing infrastructure; housing policies, finance and management; housing programs in India; self help housing.

Environment & Landscape : Components of Ecosystem; ecological principles concerning environment; Principles of landscape design and site planning; history of landscape styles; landscape elements and materials; environmental considerations in landscape planning.

Building Services & Science: Water supply, sewerage and drainage systems; sanitary fittings and fixtures; plumbing systems, principles of internal & external drainage systems, principles of electrification of buildings, intelligent buildings; elevators & escalators, their standards and uses; air-conditioning systems; fire fighting systems, building safety and security systems. Climate responsive design; energy efficient building design; thermal comfort; solar architecture; principles of lighting and styles for illumination; basic principles of architectural acoustics; environment pollution, their control.

Urban Design: Principles of visual composition; proportion, scale, rhythm, symmetry, harmony, datum, balance, form, colour, texture; sense of place and space, division of space; barrier free design; focal point, vista, image ability, visual survey, figure-background relationship.

Planning: Planning survey techniques; preparation of urban and regional structure plans, development plans, action plans; site planning principles and design; statistical methods of data analysis; application of G.I.S and remote sensing techniques in urban and regional planning; decision making models. Principles of traffic engineering and transportation planning; traffic survey methods; design of roads, intersections, grade separators and parking areas; hierarchy of roads and levels of services; traffic and transport management in urban areas, intelligent transportation system; mass transportation planning; para-transits and other modes of transportation, pedestrian & slow moving traffic planning.

Project Management: Estimation, specification, valuation, tendering, contracting, professional practice; project management techniques e.g., PERT, CPM etc; Planning laws; development control and zoning regulations; laws relating to land acquisition; development enforcements, urban land ceiling; land management techniques; planning and municipal administration; disaster mitigation management; 73rd & 74th Constitutional amendments

Traffic and Transportation Planning: Computer Aided Design: Application of computers in architecture and planning; understanding elements of hardware and software; computer graphics; programming languages C and Visual Basic and usage of packages such as AutoCAD, 3D-Studio, 3D Max.