



## **Syllabus for Architecture and Art & Drawing**

### **1) Architecture, Planning and Design:**

Architectural Graphics; Visual composition in 2D and 3D; Computer application in Architecture and Planning; Anthropometrics; Organization of space; Circulation- horizontal and vertical; space Standards; Universal design; Building byelaws; Codes and standards.

### **2) Construction and Management:**

Project management techniques eg. PERT, CPM etc.

### **3) Environmental Planning and Design**

Natural and man-made ecosystem; Ecological principles; Environmental considerations in Planning and design; Environmental pollution- types, causes, controls and abatement strategies; Sustainable development, goals and strategies; Climate change and built environment; Climate Responsive design, Vernacular Architecture.

### **4) Urban Design, landscape and conservation:**

Historical and modern examples of urban design; Elements of urban built environment- urban form, spaces, structure, pattern, fabric, texture, grain etc.; Concepts and theories of urban design; Principles, tools and techniques of urban design; Public spaces, Character, spatial qualities and Sense of Place; Urban design interventions for sustainable development and transportation; Development controls- FAR, densities and building byelaws; Urban renewal and conservation; heritage conservation; historical public spaces and gardens; Landscape design; site planning.

### **5) Planning Process:**

Salient concepts, theories and principles of urban planning; concepts of cities - Eco-City, Smart City; Concepts and theories by trendsetting planners and designers.

### **6) Services and Infrastructure**

Fire fighting Systems; Building Safety and Security systems; Building Management Systems; Water treatment; Water supply and distribution system; Water harvesting systems; Principles, Planning and Design of storm water drainage system; Sewage disposal methods; Methods of solid waste management - collection, transportation and disposal; Recycling and Reuse of solid waste; Land-use – transportation - urban form inter-relationships; Design of roads, intersections, grade separators and parking areas; Hierarchy of roads and level of service; Para-transits and other modes of transportation, Pedestrian and slow moving traffic planning.

### **7) History and Contemporary Architecture:**

Principles of Art and Architecture; World History of Architecture: Egyptian, Greco-Roman classical Period, Byzantine, Gothic, Renaissance, Baroque-Rococo etc.; Recent trends in Contemporary Architecture: Art nouveau, Art Deco, Eclecticism, International Styles, Post Modernism, Deconstruction in Architecture, etc.; Influence of Modern art and Design in Architecture; Indian vernacular and Traditional Architecture, Oriental Architecture; Works of renowned national and International architects.

### **8) Building Construction and Structural systems:**

Building construction techniques, methods and details; building systems and prefabrication of building elements; Principles of Modular Coordination; Construction planning and equipment; Building Material Characteristics and applications; Principles of strength of Materials; Alternative Building Materials; Foundations; Design of structural elements with different materials; Elastic and limit state design; Structural systems; Principles of Pre-stressing; High Rise and Long span Structures, Gravity and lateral load resisting systems.

### **8) Building Services and Sustainability:**

Solar architecture; Thermal, visual and acoustic comfort in built environments; Natural and Mechanical ventilation in buildings; Air-Conditioning systems; Sustainable Building Strategies, Building Performance Simulation and Evaluation; Intelligent Buildings; Water supply; Sewage and Drainage Systems; Sanitary fittings and Fixtures; Plumbing systems; Principles of Internal and External Drainage systems, Principles of Electrification of Buildings, Elevators and Escalators- Standards and uses.

### **9) Planning Techniques and Management:**

Application of G.I.S and Remote Sensing Techniques in urban and regional planning.

