

PGETA SYLLABUS

Syllabus will comprise of 4 modules based on COA Minimum Standards

Module I - ARCHITECTURE AND DESIGN (48 questions)

1. Fundamentals of Architectural Design:

Design Principles, Architectural Graphics, Architectural Anthropometrics and Ergonomics.

2. Theory of Design and Architecture:

Importance of Theory; Form, Function and Aesthetics in Architecture, Space Planning and functionality, Scale and Proportion in Architectural Design, Visual composition: Rules and Principles, Study of practices and design principles of vernacular architecture and its application with contemporary architectural interventions. Structural System Alternatives; Building Materials and Finishes; Sustainable Building Practices.

3. History of Architecture:

Elements, construction, architectural styles, and examples of different periods of Indian and Western History of Architecture, Oriental, Vernacular and Traditional architecture.

4. Site Planning & Site Analysis:

Zoning and Regulations, National Building Code; Site access and Circulation- horizontal and vertical; Utilities and Infrastructure; Site Grading and Drainage; Landscaping and Green Space Design; Barrier-free design; Spatial Standards.

5. Understanding of Urban Scale Projects / Community Design Projects:

Urban form and design, sustainable urban design principles, Knowledge of Institutional buildings; mass housing schemes; Amenities, and Community facilities. Involvement of stakeholders, participatory, consultative design.

Module II - BUILDING SCIENCES & APPLIED ENGINEERING (10 questions)

1. Climate Responsive Architecture :

Bioclimatic Approach, Elements of climate, Climatic Zones in India, Climatic analysis and Site Analysis, Passive Heating and Cooling Design Strategies, Passive Technologies, Solar Orientation and Control, Wind Effects and Airflow patterns, Thermal Comfort (Terminologies, Concept and strategies).

2. Building Construction and Structures :

Building Materials and their properties (physical, chemical, thermal and Environmental properties), Load bearing and frame construction, Long-span structures, Structural steel, Materials in the building industry, Advanced structures (domes, vaults, folded plates), Pre-stressing Prefabricated structures, post-tensioning. (Concepts and Standards).

3. Building Services and Environmental System Management :

Water and Wastewater Management (Supply, Treatment, Usage and Drainage, water balancing methods), Energy Management (Generation, Utilisation and Efficiency), Waste Management, Acoustics, Artificial and Day Lighting, Renewable Energy, ECBCS code, Sustainable and Green Building Strategies.

Module III - PROFESSIONAL ELECTIVES (05 questions)

1. History and Humanities :

A) Vernacular Architecture - as a process and not a product; Determinants of vernacular form typologies, B) Architectural Conservation – Basic understanding and concepts in Conservation, examples and agencies involved.

2. Design :

A) Interior Design- Vocabulary; various components and finishes; Interior lighting, Interior landscape, and furniture.

B). Art Appreciation and Art in Architecture - Vocabulary and principles of art; Perception and representation; Contemporary Art from India and its appreciation.

C). Graphic/ Furniture/ Product Design -elements, principles, and applications; Form to Materials and Processes of Manufacture.,

D). Contemporary processes in Architecture -Concepts E). Architectural Journalism - professional journalism; Fundamentals of writing, Technologies.

3. Construction :

A). Disaster Mitigation and Management - Disasters, significance, and types; Basic concepts B). Architectural Design with Steel and Glass – Concepts and possibilities C). Earthquake resistant Architecture - Fundamentals and basic terminology.

Module IV- PROFESSIONAL ABILITY & SKILL ENHANCEMENT COURSES (12 questions)

1. Legal Framework and regulations: Architects Act 1972 – Definitions, Provisions, Code of Conduct, Ethics in Professional Practice, Fees, stages of payment, Arbitration, Competitions, National Building Code, Building legislations, Tender documents, Contracts.

2. Project Management : Concepts, Time, Cost and Quality, CPM and PERT, Cost Analysis.

3. Use of Computers in Architecture : types of software, 2D and 3D modeling.

4. Entrepreneurship Skills: Communication Skills, English language skills, various forms of writing.

5. Research in Architecture: Literature review, Methods of Data collection, Primary and secondary data, Analysis, Central Tendencies in Data, Data representation.