

Master of Architecture, Admission- 2020

Common Entrance Test (CET) (MCQ type Question-OMR based) (100 Marks)

The detail syllabus for Common Entrance (CET) is as under.

(1) Architecture, Planning and Design

Architectural Graphics and principles of design; Visual composition in 2D and 3D; projection of geometrical forms and representation; architectural and building representation through 2 dimensional and three dimensional drawings; Computer application in Architecture; Anthropometrics; Organization of space; Space Standards; Circulation- horizontal and vertical; Universal design; Building byelaws; Codes and standards.

(2) Building Materials, Construction and Management

Behavioral characteristics and applications of different building materials viz. mud, timber, bamboo, brick, concrete, steel, glass, FRP, AAC, different polymers, composites, etc. ; Alternative building materials; Building construction techniques, methods and details; Building systems and prefabrication of building elements; Principles of Modular Coordination; Estimation, specification, valuation; Construction planning and equipments; Project management techniques e.g. PERT, CPM etc.

(3) Structural Design and Systems

Forces and structural systems; concepts in analysis of structure; Principles of strength of 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; structural concepts and behavior of structural elements- load bearing structures, framed structures, composite systems, steel structures.

(4) Building Services, Infrastructure and Sustainability

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 and distribution system; Sewerage and drainage systems; Sanitary fittings and fixtures; Plumbing systems; Principles of internal and external drainage system; Principles of electrification of buildings; Elevators and Escalators-standards and uses;

Firefighting Systems; Water harvesting systems; Sewage disposal methods; Methods of solid waste management ; 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.

(5) Environmental Planning and Design

The elements of climate; study of human comfort; design of solar shading devices; Heat flow through building envelopes; Air movement due to natural and built form; Solar architecture; 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; Basics of Green Building-Concepts and Rating, ECBC- Energy Conservation Building Code.

(6) 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.

(7) 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; Ekistics; Urban sociology; Social, Economic and environmental cost benefit analysis; Methods of non-spatial and spatial data analysis; Development guidelines such as URDPFI; Various planning concepts in urban, rural and regional level development plans in the context of India.

(8) Housing

Issues concerning housing in the Indian Context; Various agencies involved in the production of housing; Factors that influence housing affordability; Various schemes and policies of the government in the housing sector; Standards and guidelines for housing; Housing design typologies and the processes involves in housing project development; Concepts, principles and examples of neighborhood; Residential densities; Affordable Housing; Real estate valuation.

(9) 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.

(10) Architectural Professional Knowledge

Professional Practice- the role of professional bodies and statutory bodies; Code of Conduct and ethics in professional practice and the mandatory provisions of the Architects Act 1972; Building bye-laws, Important legislations which have a bearing on the practice of architecture; Arbitration and other legal aspects; Project Management- tender and contract; Current affairs related to Architecture; Authors & books of architecture.