SYLLABUS & WEIGHTAGE FOR
COMPUTER BASED TEST
ADVERTISEMENT No: 12/2026/CHQ/DR-CBT

MANAGER (ARCHITECTURE)

Total Marks: 120 **Duration: Two hours**

Part-A

General Knowledge, General Intelligence, General Aptitude, English etc. Weightage 30%

Part-B

Questions on subjects relating to Educational Qualifications Weightage 70%

- **Site Planning: Site Analysis:** Zoning and Regulations, National Building Code; Site access and Circulation- horizontal and vertical; Utilities and Infrastructure; Site Grading and Drainage; Barrier-free design; Spatial Standards.
- **Computer Aided Design:** Application of computers in architecture and planning; understanding elements of hardware and software; computer graphics and usage of packages such as AutoCAD, Revit Architecture, Sketch-up, Lumion, En-scape and other 3D rendering software.
  Working knowledge of BIM platforms like Autodesk Revit and BIM Collaborate Pro for integrated design, multidisciplinary coordination, automated clash detection, and lifecycle management. Understanding the creation and management of digital replicas of airport infrastructure. Integrating BIM with IoT data to monitor assets, predict maintenance, and enhance operational efficiency.
  Using software like ArcGIS to integrate BIM and GIS data, providing geospatial context for project tracking and master planning.
- **Materials and Structural Systems:** Behavioural characteristics of all types of building materials e.g., mud, timber, bamboo, brick, concrete, steel, glass, FRP, different polymers, composites, principles of strength of materials, design of structural elements. Pre-engineered buildings, steel structures, complex structural systems, principles of prestressing; tall buildings, principles of disaster resistant structures.
- **Building Construction and Management:** Building construction techniques, methods and details; estimation, specification, valuation, professional practice, project management techniques e.g., PERT, CPM etc.
- **Energy Conservation and green buildings:** Climate responsive design; energy efficient building design; Green buildings and rating system (GRIHA rating system), thermal comfort, solar architecture, principles of lighting and styles for illumination, basic principles of architectural acoustics, environmental pollution, their control & abatement, ECBC and terms such as SHGC, U-value etc.

- **Building Services:** Building Services as per National Building Code, Water supply, sewerage and drainage systems, sanitary fittings and fixtures; plumbing systems, principles of internal & external drainage systems, principles of electrification of buildings; elevators & escalators, their standards and uses; air-conditioning systems; firefighting systems, building safety and security systems. Basic knowledge of integrating and managing BMS for automated control of HVAC, lighting, security, and access systems in airport terminals
- **Contemporary Technology:** Building Automation and intelligent buildings, Earthquake resistant buildings, Alternative building materials such as hollow concrete blocks, stabilised earth blocks, Fly ash bricks etc. Prefabrication and Modular Construction-Principles and application of prefabrication and modular techniques for faster construction, reduced waste, and cost-effectiveness, especially for large-scale projects like airport expansions.
  Knowledge of popular systems in India like MIVAN aluminium formwork and steel-based modular units.
- **Composite Materials:** Knowledge of combining materials like steel and concrete or utilizing eco-friendly natural fibres to achieve enhanced strength-to-weight ratios, durability, and sustainability
- **Landscape Design:** Principles of landscape design and site planning, history of landscape styles, landscape elements and materials, plant characteristics & planting design; environmental considerations in landscape planning.
- **Interior Design:** Knowledge of durable, low-maintenance materials for flooring, wall finishes, that can withstand heavy passenger flow, strategic use of interior design elements, lighting, and signage to facilitate easy navigation, inclusion of soft scaping and natural elements into interior spaces. Understanding the design requirements for concession areas, lounges, and retail spaces within the terminal building. Knowledge of robust, airport-grade furniture fixture and equipment including baggage carousels, security equipment, and public seating etc.
- **General awareness and aptitude in civil aviation:** Master planning concepts, Terminal building designs with associated facilities, Terms related to airport planning and design.

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