

Syllabus for Qualifying Entrance Examination

PG Direct Admissions in Masters in Building Engineering and Management (MBEM) programme
(Academic Year 2023-24)

SPA Vijayawada

General information:

- Question Paper shall be of 50 marks, Total Duration of time is 1 (ONE) Hour.
- There would be 40 objective type questions or MCQs of One Mark each, and 2 Descriptive Type Questions, carrying 5 marks each
- Questions shall be from any portions of the syllabus as below

Syllabus:

Part A: Common Syllabus to all aspirants of MBEM

Construction and Management; Project Management Techniques e.g. PERT, CPM etc.; Estimation and Specification; Professional Practice and ethics; Form and Structure; Principles and design of disaster resistant structures; Temporary structures for rehabilitation.

Part B: Either Part B.1 or Part B.2 will be applicable as per UG Specialization

Part B.1: Architecture (syllabus for those having UG in B.Arch)

Section B.1.1:

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.

Section B.1.2:

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.

Section B.1.3:

Building Services and Sustainability Solar architecture; Thermal, visual and acoustic comfort in built environments; Natural and Mechanical ventilation in buildings; AirConditioning systems; Sustainable building strategies; Building Performance Simulation and Evaluation; Intelligent Buildings; Water

supply; 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.

Part B2: Civil Engineering (syllabus for those having UG in B.Eng / B.E Civil / .Tech Civil)

Section B.2.1:

Principles of surveying; Errors and their adjustment; Maps - scale, coordinate system; Distance and angle measurement - Levelling and trigonometric levelling; Traversing and triangulation survey; Total station; Horizontal and vertical curves. Photogrammetry and Remote Sensing - Scale, flying height; Basics of remote sensing and GIS.

Section B.2.2:

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.

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