

SYLLABUS FOR COMPUTER BASED RECRUITMENT TEST (CBRT)
FOR THE POST OF LECTURER IN ARCHITECTURAL ASSISTANTSHIP UNDER
GOVERNEMENT POLYTECHNIC
(Advt No. 05 Year 2025)

I. General English including Grammar - 05 marks

II. General Knowledge, Current Affairs and Events of National and International Importance - 10 marks

III. Logical Reasoning and Analytical Ability - 10 marks

IV. Core: - 50 marks

1. Engineering Mechanics & Structural Systems

1. Stress & Strain: Basic concepts and applications
2. Elastic Constants: Young's modulus, Bulk modulus, Poisson's ratio
3. Bending in Beams and Torsion in Shafts
4. Shear Force & Bending Moment Diagrams
5. Centroid and Moment of Inertia of sections

2. Construction Materials and Technology

- Properties and uses of: Cement, Concrete, Timber, Steel
- Modern Materials: Glass, Plastics, Composites, Sustainable alternatives
- Damp-proofing, Water-proofing and Thermal Insulation materials

3. Building Construction & Detailing

- Foundation to Roof Construction Techniques
- Brickwork, Stone Masonry, Flooring & Roofing
- Doors, Windows, Staircases – Types and Detailing.

4. Building Services & Environmental Systems

- Electrical & Lighting Design
- HVAC (Heating, Ventilation & Air Conditioning)
- Water Supply and Drainage
- Fire Safety & Building Automation (Smart Systems)

5. History of Architecture & Contemporary Trends

- Overview: Indian, Hindu, Islamic & Colonial Architecture
- Early Christian & European Architecture
- Modern & Contemporary World Architecture
- Emerging trends: Parametric & Sustainable Architecture.

6. Surveying & Site Analysis

- Chain, Compass, Plane Table Surveying
- Levelling, Theodolite, Contouring
- Site Analysis for Architecture: Topography, Climate, Orientation

7. Town Planning & Urban Design

- Principles of Town Planning & Urban Development
- Land Use Zoning, Road & Street Layouts
- Smart Cities, Transport Planning, Environmental Policies

8. Quantity Surveying & Estimation

1. Methods of Estimation (Approximate & Detailed)
2. Material Take-off & Costing
3. Specification Writing & Valuation Basics

9. Digital Tools in Architecture

- AutoCAD: Drafting and Editing Tools
- 3D Modeling: SketchUp / Revit / 3DS Max Basics
- Introduction to BIM (Building Information Modeling)

10. Green Building & Sustainable Architecture

- Principles of Sustainable Design
- Energy-efficient Building Materials
- Rating Systems: GRIHA, LEED
- Passive Design Strategies

Note:

Duration for C.B.R.T : 90 Minutes

Maximum Marks for C.B.R.T : 75 Marks

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