

Architectural Assistant in DUSIB

Part-I

A) ARCHITECTURAL DESIGN THEORY & PRACTICE

1. Meaning of design.
2. Appreciation of beautiful objects.
3. Design in everyday life.
4. Logic in design.
5. Elements of design- line, form, color texture.
6. Principles of design- unity, variety, hierarchy.
7. Scale and proportions.
8. Balance, emphasis.
9. Focus, fashion, decoration.
10. Basic design and architectural design- Elemental Differentiation.
11. Perception and experience.
12. Tangible and intangible in architecture.
13. Function, structure and form.
14. Space, space usage and interrelationship of spaces.
15. Circulation within Spatial Units.
16. Horizontal Circulation.
17. Vertical Circulation.
18. Circulation and Spaces, between buildings.
19. Relationship of plan, section and elevation.
20. Architectural scale.
21. Programming in Architectural design.
22. Site Planning
23. Urban Design
24. Project Management

B) BUILDING CONSTRUCTION, SURVEYING & STRUCTURE

1. Building Materials
2. Building Technology & Innovations
3. Surveying methods
4. Specifications
5. Estimating & Costing

6. Working Drawings/GFC, Sections, Toilet & Staircase details, Door & window schedules
7. Surveying
8. Retrofitting
9. Basic Structure
10. Basic components of "building"
11. Role of Construction in Architecture
12. Brick as a structural material.
13. Stones as a building material
14. Stone masonry construction.
15. Basic structural design elements.
16. Definition and concepts: Instruments used; acquaintance with electronic surveying instruments.
17. Principles of surveying, Unit of Measurements.
18. Chain surveying.
19. Compass Surveying.
20. Leveling.
21. Contouring: Topographic maps.
22. Plain tabling.
23. Marking foundations.
24. Measuring building under construction.

STRUCTURAL DESIGN

1. Forces in structures.
2. Moments in structures.
3. Loads in structures.
4. IS:875
5. Types of supports.
6. Shear Force, Bending Moment.
7. Center of Gravity, Moments of Inertia.

C) PROFESSIONAL PRACTICE: BUILDING NORMS & APPROVALS

1. Master Plan of Delhi
2. Unified Building Bye Laws of Delhi
3. National Building Code
4. Fire safety norms

5. Disaster/ Risk Management

6. Harmonized guidelines & standards for universal accessibility in India

D) BUILDING SERVICES

1. Sources of surface and ground water, treatment of water, transportation and distribution at town level.

2. Water supply system: fittings, direct and indirect supply, layout and sizes of pipes, hot water supply, storage.

3. Sewerage system: systems, fitting and fixtures, sizes and layout, sewage collection, sewage treatment and disposal at town level.

4. Solid Water management.

5. Rain water drainage.

6. Water, Waste & Sanitation

7. Electrification, Lighting & Acoustics

8. HVAC, Mechanical Mobility, Fire Safety

E) ENVIRONMENTAL STUDIES

1. The multidisciplinary nature of environmental studies, Definition, scope and importance.

2. Natural Recourses.

3. Renewable and non-renewable resources.

4. Natural resources and associated problems.

5. Ecosystems.

6. Biodiversity and its conservation.

7. Environmental pollution.

8. Climate responsive design

9 Green building rating systems such as GRIHA, ECBC, LEED etc.

10. Sustainable / Energy Efficient Building Design

11. Social issues and environment

12. Human population and environment

F) HISTORY OF ARCHITECTURE

Indian Subcontinent

1. Indus valley civilization.

2. Aryan/Vedic civilization.

3. Buddisht and Jain civilization.

4. Indio Aryan Temple Architecture.

5. Early and late Chalukyan architecture.

6. Dravidian Temple Architecture.

7. Vernacular Architecture

Western World

8. Ancient civilization- Mesopotamian, Sumerian, Babylonian, Persian, Assyrian, Egyptian civilization.

9. Classical Greek Architecture.

10. Roman Architecture.

11. Romanesque Architecture.

12. Early Gothic Architecture.

13. Renaissance Architecture.

14. Modern & Post-Modern Architecture

Contemporary Architecture

15. Works of Architects (such as B.V. Doshi, Charles Correa, Hafiz Contractor, Joseph Allen Stein, Raj Rewal, A.P. Kanvinde, Frank Gehry, Zaha Hadid, Norman Foster, Moshe Safdie, Kengo Tange etc.

G) COMPUTER APPLICATIONS

1. AutoCAD - 2d drawing

2. MS Office (Word, Excel, Power point)

3. Adobe Photoshop

4. Sketchup & Walkthrough

H) ARCHITECTURAL GRAPHICS

1. Drafting of lines, Orthographic projections, Representing simple solids, Lettering.

2. Architectural Graphic Symbols, Drawing Scales, measured drawing of a simple object/

3. Drawing, editing, modifying commands in 2-d using Auto CAS, Setting in plotting.

4. Drawings on Standard formats.