

INDIAN TECHNICAL EDUCATION SOCIETY, MUMBAI

ARCHITECTURE DRAUGHTSMAN (AD)

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| THEORY PAPER I : | Theory syllabus for this AD Paper I is same as CIVIL DRAUGHTSMAN (CD – I) Refer this syllabus booklet Page No.2 & 3 | 100 Marks |
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| THEORY PAPER II : | Drawing paper syllabus for this AD Paper II is same as CIVIL DRAUGHTSMAN (CD – II) Refer this syllabus booklet Page No. 4 & 5 | 100 Marks |
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| SESSIONAL MARKS : | (Internal) | 100 Marks |
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| THEORY PAPER III : | Theory Syllabus for this paper is given below Refer this syllabus booklet Page No. 7 & 8 | 100 Marks |
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| THEORY PAPER IV : | Drawing Syllabus for this paper is given below Refer this syllabus booklet Page No. 9 | 100 Marks |
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| SESSIONAL MARKS : | (Internal) | 100 Marks |
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Total : (600 Marks)

INDIAN TECHNICAL EDUCATION SOCIETY, MUMBAI

ARCHITECTURAL DRAUGHTSMAN [AD- III]

EXAM SCHEME: THEORY PAPER 100 MARKS – 3 HRS.

[AD – III / DCES – III]

THEORY SYLLABUS

1. R.C.C. DESIGN OF BUILDING ELEMENTS :

- ❖ Introduction to R.C.C. Design.
- ❖ Designing concept.
- ❖ Methods of Design.
 - i) R.C.C. footing ii) R.C.C. Slab iii) Column & Slab
- ❖ Complete design of G+2 & G+4 building
- ❖ Design of compression & Tension members.

2. Field Activities

- ❖ Agencies Associated in Building industry.
- ❖ Plan Sanctioning Authorities.
- ❖ Building rules and bye – laws, F.S.I., carpet area, Built – up area calculations.
- ❖ Procedure of submitting plans for approval to plan sanctioning authority.
- ❖ Planning of building.

3. Surveying and Leveling.

- ❖ Brief idea of surveying and classification of Survey.
- ❖ Chain Surveying, Instruments in chain Survey, field book.
- ❖ Plane Table Surveying, instrument used, Advantages and Disadvantages of plane tabling, Methods of Plane Tabling.
- ❖ Leveling, Terms used in leveling.
- ❖ Different types of Levels, Dumpy level and leveling staff.
- ❖ Contouring, Characteristics of contours, uses of contours.

4. Estimations

- ❖ Define Estimate, Types of Estimates.
- ❖ Methods of taking out quantities.
- ❖ Units of Measurements and Payments of Common items in Civil Engineering works.

5. Calculation of Materials & Rate Analysis of –

- ❖ Earthwork in Excavation in soft murum - Unit 100 Sq. mt.
- ❖ Earthwork in Excavation in hard murum - Unit 100 Sq. mt.
- ❖ First class brick masonry in cement mortar (1:3 to 1:6) in foundation / plinth - Unit 10 Cu. mt.
- ❖ Coursed Rubble Stone masonry in cement mortar (1:3 to 1:6) - Unit 10 Cu. mt.
- ❖ Ashler Stone Masonary in cement mortar (1:3 to 1:6) - Unit 10 Cu. mt.
- ❖ P.C.C. Bed Concrete (1:1:2 to 1:4:8) - Unit 10 Cu. mt.
- ❖ Plastering work 12 mm thick in cement mortar (1:1 to 1:6) - Unit 100 Sq. mt.
- ❖ R.C.C. slab (1:2:4) with steel (0.80 % to 1.0 %) - Unit 10 Cu. mt.
- ❖ Pointing work in cement mortar (1:1 to 1:4) - Unit 100 Sq. mt.
- ❖ White washing or colour washing to plastered wall surfaces in two coats - Unit 100 Sq. mt.
- ❖ Mosaic tiled flooring work in cement mortar - Unit 100 Sq. mt.

6. Finishes

- ❖ Surface Finishing, painting, varnishing, Polishing, Distempering, Cementing, Wall Papering, Plastering, Glazing work, white and colour washing.

7. Roads, Bridges & Railways

Different types of Roads, Railway Gauges.

- ❖ Materials used & Construction of Roads.
- ❖ Construction of cement concrete road & different Machinery used, Classification of bridges.
- ❖ Maintenance of different road, Types of R.C.C. bridges, Railway development in India.

8. Water Proofing Works :

- ❖ Materials for water proofing, tools and Methods used.
- ❖ Water proofing to W/C, bathrooms, Kitchen, Window sills & walls.
- ❖ Water proofing while casting slab.
- ❖ Water proofing to old slab & methods used.

9. Electrification Works :

- ❖ Different types of wiring Systems & Materials.
- ❖ Tools & accessories used in Electrification works.
- ❖ Specification & Importance of Electrification works & symbol in Electrification.

10. Building Maintenance Work :

- ❖ Old Plaster Repairing.
- ❖ Repair R.C.C. Slab, Leakage through parapet wall, basements, side walls.
- ❖ Maintenance of different types of floorings.

11. Check List For Different Building Works :

- ❖ Brick work, Plastering, Flooring checking.
- ❖ Termite proofing methods in foundation & superstructure.

GUIDELINES FOR QUESTION PAPER SETTERS

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| Q. no.1 | Compulsory (Objective type). | 20 marks |
| Q. no.2 to 8 | Solve any five questions from Q. 2 to 8 (Subjective type). | 16 marks each |

The paper setter should take care that (as far as possible) entire syllabus is equally covered.



INDIAN TECHNICAL EDUCATION SOCIETY, MUMBAI

ARCHITECTURAL DRAUGHTSMAN [AD- IV]

EXAM SCHEME: DRAWING PAPER 100 MARKS – 4 HRS.

CIVIL / ARCHITECTURAL DRAWING (Drawing Paper Syllabus)

1. Introduction to Engineering Drawing and Setting out of Building.
2. Types of doors and windows.
3. Perspective views – Definition, Elements, Station point, Picture plane,
4. Methods of perspective projections.
5. Isometric Projection.
6. Sections of R.C.C. Components.
7. Airport Building Drawing.
8. Multistory Building Drawing.
9. Different types of stairs.

DRAWING SHEETS

| SR. NO. | TOPICS | MIN. NO. OF SHEETS |
|---------|---|--------------------|
| 1 | Proposed Bungalow | 1 |
| 2 | Typical Residential Building (G + 3) or)G = 4) | 1 |
| 3 | Types of Stairs | 1 |
| 4 | Theatre Building or Bank Building | 1 |
| 5 | R.C.C. Drawing of Building Components – Column footing, R.C.C. Slab, Lintel and Chajja | 2 |
| 6 | Plain Table Survey sheet (Optional G.T.) | 1 |
| 7 | One Building drawing in Inking | 1 |
| 8 | Freehand Lettering (Single / Double stroke) | 1 |
| 9 | To develop a line plan | 2 |
| 10 | Rendering Sketching | 2 |
| 11 | Plan Reduction and Enlargement | 1 |
| 12 | Center line plan or Foundation plan | 2 |
| 13 | Municipal Working Drawing | 2 |
| 14 | Colouring the Ammonia Print | 1 |
| 15 | Perspective views – One point and Two points, Simple object and Perspective of Building | 4 |
| 16 | Isometric Projection – Simple Objects | 2 |
| | Total | 25 |

NOTE : Minimum 20 sheets to be completed.

GUIDELINE FOR PAPER SETTER:

1. Q. 1 – To develop a Line Plan and to draw Plan and Elevation only – 50 marks.
2. Q.2 - Strictly on Drawing Work Sheets – 30 marks (15 + 15): Solve any Two out of Four
3. Q.3 - Strictly on Drawing Work Sheets – 20 marks (10 + 10): Solve any Two out of Four
3. The Q. Paper should be in such a way that, a S.S.C. Student can solve in 4 hours.

