Diploma, Anna University-UG, PG., HSC & SSLC

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31264- STRUCTURAL DETAILING AND DRAWING

DETAIL SYLLABUS

UNIT- I SLABS

Detailing of

1. One way slab
2. Two way slab

UNIT- II BEAMS

Detailing of the following Beams

1. Singly reinforced Beam (Cantilever and simply supported beams)
2. Doubly reinforced Beam (Simply supported beams)
3. Lintel cum sunshade

UNIT- III COLUMN AND FOOTING

Detailing of Columns and Foundations – Square and Rectangular footings with Column.

UNIT- IV STEEL MEMBERS

Detailing of

1. Beam to Beam connection
2. Beam to Column connection (Framed and Seated connections)
3. Roof Truss

UNIT- V ANALYSIS USING SOFTWARE (For practice only)

Using any design software like STADDPRO, SCADS, etc., analyze the following and prepare structural drawings (not to be asked in the examination):

1. Simply supported beam
2. Fixed beam
3. Simple portal frame

LIST OF EXERCISES

PART A

1. Detailing of a simply supported one way Slab.

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2. Detailing of a Two way Slab with corners held down.

3. Detailing of a Two way Slab with corners not held down

4. Detailing of Lintel Beam with Sunshade.

5. Detailing of a Singly Reinforced Rectangular Beam. (Cantilever / simply supported)

6. Detailing of a Doubly Reinforced Rectangular Beam. (Simply supported)

7. Detailing of a Square sloped Footing with Column.

8. Detailing of a Rectangular Footing with Column

PART B

1. Detailing of a Steel Beam to Beam connection. (Welded connection only)

2. Detailing of a Steel Beam to Column connection. (Framed and seated Connections - Welded connection only)

3. Detailing of a Roof Truss, with welded joint details. (Exercises 12 to 15 –not for practical examination-practice only)

4. Generation and analysis of a simply supported beam with Point Load & UDL.

5. Generation and analysis of a Fixed beam with Point Load & UDL.

6. Generation and analysis of a simple portal frame with vertical load only.

7. Generation and analysis of a simple Portal Frame subjected to vertical and horizontal Loads