LSGD AE Exam Detailed Analysis

Here is a **detailed question paper analysis** of the **Kerala PSC Civil Engineering Exam (080/2025)** based on the question booklet you provided:

📝 General Overview

- **Total Questions**: 100
- **Total Marks**: 100
- **Duration**: 90 Minutes
- **Marking Scheme**:
  - +1 for correct answer
  - –⅓ (0.33) negative mark for wrong answer
  - 0 mark for unattended questions

📚 Topic-Wise Distribution

Subject / Module	Question Numbers	No. of Questions
Strength of Materials	1–7	7
Structural Analysis & Mechanics	8–10	3
Fluid Mechanics & Hydraulics	11–15	5
Irrigation Engineering	16–20	5
Surveying	21–24	4
Estimation & Valuation	25–30	6
Building Materials & Construction	31–36	6
Construction Management & Contracts	37–41	5
Structural Design (RCC & Steel)	42–80	39
Soil Mechanics & Foundation Engineering	81–90	10
Transportation Engineering	91–100	10

🔍 Difficulty Level Estimation

Level	Estimated Count
Easy	~30–35
Moderate	~45–50
Difficult	~15–20

- **Examples of Easy**:
  - Q2: Buckling load ratio (standard formula)
  - Q37: Critical path duration (direct concept)
  - Q99: FAR-based built-up area calculation
- **Examples of Moderate**:
  - Q11: Hydrostatic force on submerged surface
  - Q54: Population forecast by arithmetic method
  - Q63: Plate girder weld design
- **Examples of Difficult**:
  - Q73: Prestress stress computation
  - Q84: Use of Newmark chart for stress
  - Q83: Seepage loss through permeable strata

🧠 High-Weightage Areas

- **Design of Structures (RCC + Steel)**: Nearly 40%
- **Soil Mechanics + Foundation**: 10%
- **Transportation Engineering**: 10%
- **Estimation & Construction Planning**: 10%

✅ Scoring Strategy Recommendations

- **Focus Areas**:
  - RCC & Steel Design (IS codes, stress-strain behavior, limit states)
  - Transportation (CBR, cant, signal timing)
  - Estimation (DSR, IS 1200 norms)
- **Skip/Delay in Exam Strategy**:
  - Complex fluid mechanics (velocity potential, stream functions)

- Foundation design involving charts (Newmark)
- Long numerical problems if time-pressured

📌 Special Observations

- Includes **recent code-based questions** (e.g., IS 456:2000, DSR 2021).
- Some questions require **use of charts** or **standard values** not easy to recall without practice (e.g., Newmark, CBR).
- Mix of **memory-based + analytical + numerical** types.
- Ethics and Environmental questions (Q46, Q60) are included — **don't skip general awareness areas**.

📊 Topic-Wise Distribution Chart (with Question Numbers)

Sl. No.	Topic / Subject	No. of Questions	Question Numbers
1.	**Strength of Materials (SOM)**	7	1–7
2.	**Structural Analysis**	3	8–10
3.	**Fluid Mechanics & Hydraulics**	5	11–15
4.	**Irrigation Engineering**	5	16–20
5.	**Surveying & Remote Sensing**	4	21–24
6.	**Estimation, Costing & Valuation**	6	25–30
7.	**Building Materials & Construction**	6	31–36
8.	**Construction Planning & Management**	5	37–41
9.	**RCC Design (IS 456)**	16	42–57
10.	**Steel Design (IS 800)**	6	63–65, 74, 80
11.	**Foundation Engineering**	6	75–78, 84–85
12.	**Soil Mechanics & Geotechnical Engineering**	7	81–83, 86–88, 90
13.	**Environmental Engineering**	9	51–60
14.	**Transportation Engineering (Road, Rail, Airport, Tunnel)**	10	91–100

Sl. No.	Topic / Subject	No. of Questions	Question Numbers
15.	**Ethics & Professional Practice**	2	46, 48
16.	**General Engineering (Basic Concepts)**	2	66, 67