

CE/BOS/CE 401/0513

K L UNIVERSITY

ADVANCED DESIGN OF STRUCTURE (11 - CE 401)

Pre – requisite: 11-CE204, 11-CE301, 11-CE305, 11-CE306

L	T	P	Cr
3	0	2	4

SYLLABUS

Elevated Water Tanks: Design Principles; Design of circular tank with flat base slab supported on circular beam; Intze tank; Design of staging.

Design of R.C.C Staircase: types, loads, design of staircases spanning transversely, longitudinally

Design of raft foundation: types, design consideration, design of mat foundation as per IS code.

Design of Deep Foundations- Design considerations for piles and pile groups.

Codal provisions for the design of pile caps, Rectangular, circular and triangular pile caps for group of piles.

Design of retaining wall: types, behaviour, earth pressure and stability requirements, design of cantilever and counterfort retaining wall

TEXT BOOKS:

1. Reinforced Concrete Design by S.Unnikrishna Pillai and Devdas Menon, Tata McGraw-Hill, Education Private Limited, New Delhi, Third Edition-2009.
2. Relevant IS Codes

REFERENCE BOOKS:

1. Limit State theory & Design of reinforced concrete by V. L. Shah and Dr. S. R. Karve, Structures Publications, Pune, Fourth Edition-2003.

Laboratory

Structural detailing using Auto Cad

1. Water tank
2. Cantilever retaining wall
3. Counter-fort retaining wall
4. Pile foundation
 - a) Pile cap for single pile
 - b) Pile cap for group of piles (not more than 3 piles)
5. Rectangular raft foundation
6. Stair case