

# AMAR-19 DESIGN OF STRUCTURES-III

## UNIT-1 LIMIT STATE DESIGN OF COLUMNS

- 1.1 Types of columns
- 1.2 Analysis and Design of Short Columns for Axial,
- 1.3 Uniaxial and biaxial bending
- 1.4 Use of Design aids.

## UNIT-2 DESIGN OF FOOTINGS

- 2.1 Types of footings
- 2.2 Design of wall footings
- 2.3 Design of Axially loaded rectangular footing (Pad and sloped footing).
- 2.4 Design of Combined Rectangular footings.

## UNIT-3 FLAT SLABS

- 2.4 Design Principles of flat slabs
- 2.5 Code Provision
- 2.6 Simple Design Problems

## UNIT-4 DESIGN OF MASONRY WALLS

- 1.1 Analysis and Design of masonry walls
- 1.2 Use of Nomograms
- 1.3 Code requirements.

## UNIT-5 INTRODUCTION TO PRESTRESSED CONCRETE

- 5.1 Principle of Prestressing
- 5.2 Methods of Prestressing,
- 5.3 Advantages and disadvantages.

## REFERENCES:

1. P. Dayaratnam, "Design of Reinforced Concrete Structures", Oxford and IBH Publishing CO., 1983.
2. N.C.Sinha and S.K.Roy, "Fundamentals of Reinforced Concrete", S.Chand and Co., New Delhi, 1983.
3. Krishna Raj, "Prestressed Concrete Structures", 3rd Edition, Tata McGraw Hill, 2005.