

2.8 30274 ELEMENTS OF R.C.C. DESIGN

UNIT-1 INTRODUCTION R.C.C.

Introduction R.C.C and there requirement different grades of cement and steel characteristics strength and grades of cement modular ratio as per (IS: 875)

UNIT-2 DOUBLY REINFORCED CONCRETE BEAMS

- 2.1. Necessity of doubly reinforced section
- 2.2. Design of DRB for flexure
- 2.3. Depth of neutral axis and moment of resistance
- 2.4. Determination of moment of resistance

UNIT-3 SLAB

- 3.1. One way slab
 - 3.1.1. Design of one way slab
 - 3.1.2. Load distribution in a slab
- 3.2. Two way slab
 - 3.2.1. Introduction and difference between one way and two way slab

UNIT-4 T- BEAMS

- 4.1. Introduction
- 4.2. Terms used in T- beams
- 4.3. Analysis of T-beams
- 4.4. MOR ($n > D_f$)

UNIT-5 COLUMNS

- 5.1. Introduction and classification
- 5.2. Difference between short and long column
- 5.3. Limit state of collapse: compression

UNIT-6 BASIC CONCEPT OF PRE STRESSED CONCRETE

- 6.1. Introduction of pre stressed concrete
- 6.2. Post tensioning advantages
- 6.3. Techniques of post tensioning.

Reference Book:

1. Advanced Reinforced Concrete Design by Varghese,
2. Design of Reinforced Concrete Structures by N Subramanian,
3. Advanced Materials and Techniques for Reinforced Concrete Structures by Mohamed El-Reedy and Mohamed Abdallah El-Reedy.