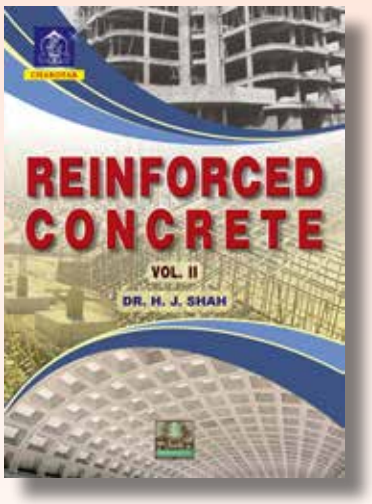

REINFORCED CONCRETE VOL. II

By
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COMING SOON

SYNOPSIS OF REINFORCED CONCRETE VOLUME II

This volume includes two major topics namely Multi-storeyed buildings and Water tanks. During last three years very important revisions are made in IS codes like IS:875 Part III, IS:1893 Part I, IS:3370 Parts I to IV, IS:13920, etc. These changes have forced me to entirely revise the existing chapters. Manual calculations are given due importance. In this modern designing world, excel calculations are termed as manual. The subject matter is arranged in two major topics as follows:

PART I: MULTI-STOREYED BUILDINGS: Analysis and design of medium rise buildings have been treated in details. The manual calculations are given sole importance. It is believed that once manual calculations are understood fundamentally, it will be easy to understand complicated programs run by the computer.

The subject matter starts with building fundamentals and overview of analysis and design for gravity loads. Next, the deformations of RCC building are attended since lateral loads are becoming more important with height of the building. The analysis of building for horizontal loads being dynamic, the building dynamics is treated in brief. A thorough discussion on lateral loads like wind and earthquake. Manual calculation of these loads is described with special attention to response spectrum method. The code has made it mandatary to use response spectrum method. An excellent explanation using excel software of the method is treated. Latest ductility provisions as per IS: 13920 are included and lucidly discussed in details. To properly grasp the analysis and design of multi-storeyed buildings, a seven storeyed unbraced building is analysed and typical members are designed with manual (including excel) calculations. Ordinary and special isolated shear walls are treated in details. The design work is carried out by using manual (excel) methods.

PART II WATER TANKS (LIMIT STATE METHOD): Fundamentals of liquid retaining structures are treated in lucid way. Using limit state method, designs are treated for individual members like cantilever wall subjected to flexure, Base slab of an elevated tank, and side wall of a container subjected to flexure and tension. The members are designed step by step considering professional designs. Circular tanks resting on ground are professionally discussed in details. A design of 10 ML USR is presented. Rectangular tanks resting on ground are solved by using approximate methods. A step by step treatment to the calculation of earthquake forces as per IS:1893-Part II is presented for ground supported and elevated tanks. The elevated circular, square and intze tanks of small size are completely analysed (including earthquake forces), designed and detailed. A number of short questions are framed and answered from each of the chapters to clear basic fundaments of the subject.