

**IV B.Tech I Semester**

**15ACE51-ADVANCED STRUCTURAL ENGINEERING**

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**CourseObjective:**

*To make the student more conversant with the design principals of multistoried buildings, roof system, foundation and other important structures.*

**UNIT-I:** *Design of a flat slab ( Interior panel only )*

**UNIT-II:** *Design of concrete bunkers of circular shape – (excluding staging) – Introduction to silos*

**UNIT-III:** *Design of concrete chimney*

**UNIT-IV:** *Design of circular and rectangular water tank resting on the ground*

**UNIT-V:** *Design of cantilever and counter forte retaining wall with horizontal back fill*

**FINAL EXAMINATION PATTERN:**

The question paper shall contain 2 questions of either or type covering all the syllabus where each question carries 35 marks out of 35 marks, 20 marks shall be for the design and 15 marks are for the drawing.

**Course Outcomes:**

*On completion of this course the student will be able to*

- *Design of roof systems with reference to Indian standards*
- *Design of water retaining and storage structures*
- *Design of silos and chimneys*

**TEXT BOOKS :**

1. Structural Design and drawing (RCC and steel) by KrishnamRaju, Universites .Press , New Delhi
2. R.C.C Structures by Dr. B. C. Punmia, Ashok Kumar Jain, Arun Kumar Jain, Laxmi Publications, New Delhi
3. Advanced RCC by Varghese, PHI Publications, New Delhi.
4. Design of RCC structures by M.L.Gambhir P.H.I. Publications, New Delhi.

**Reference books :**

1. R.C.C Designs by Sushilkumar , standard publishing house.
2. Fundamentals of RCC by N.C.Sinha and S.K.Roy, S.Chand Publications, New Delhi.

