

## FOURTH YEAR - SEMESTER – VIII

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<b>AC 805</b>	<b>ADVANCED STRUCTURE - VII</b>	<b>(L=1,S=2,W=0)</b>	<b>CREDITS =02</b>
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**INTERNALASSESSMENT(T.WORK/ASSIGNMENTS,QUIZ) = 50**  
**UNIVERSITY EXAMINATION = 50**

**CONTACT HRS/WK = 03**

**Focus:** Introduction to Advanced Structures.

**Contents:** Development of structural forms of different structural elements. Economics of Material Selection. Concept of structural failure and safety of structures.  
Introduction to large span girders in RCC and Steel. Study of RCC box girders, plate girders, castellated sections.  
Introduction to cable structures, space frames. Difference between 2D frames and 3D frames. Structural conditions in favour of adoption of space frame.  
Introduction to shell structures, types of shells, folded plate, its formation and design concept.  
Pre stressed concrete structure – conditions for adopting of pre stressed concrete beams and girders.  
Pre stressed steel structures – its application in strengthening old steel members.  
Types of Soils and bunkers, understanding structural behaviour of various members and reinforcement arrangement.  
Earthquake Forces- various seismic zones, concept of earthquake resistant structures and relevant IS code.

### **REFERENCES:**

<b>SR.NO.</b>	<b>TITLE</b>	<b>AUTHOR</b>
01.	Theory of Plates & Shells	Timoshenko
02.	Pre Stressed Metal Structures	E.Belenva
03.	Pre Stressed Concrete Structures	T.Y.Lin