

FIRST YEAR - SEMESTER - I

AC 105	STRUCTURES-I :	(L=2, S=0, W=0)	CREDITS =02
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INTERNAL ASSESSMENT (ASSIGNMENTS) = 50
UNIVERSITY EXAMINATION = 50

CONTACT HRS/WK = 02

Focus: Fundamentals of Structures.

Content: Introduction to Traditional, RCC & steel structures.
Solid, Load bearing structure, Framed structures - functions, system of load transfer, importance of foundation.
structural elements of Buildings - Floor systems (slabs), Beams, girders, Trusses, column, footings & related terminology.
Loads on Structure - Dead load, imposed load, Wind load, Earthquake load, snow load, Introduction of relevant IS codes of practice. Mechanisms of load transfer
Properties of sections – centre of gravity, moment of inertia, section modulus, radius of gyration. Relevance of these properties in the design of various structural members. Force and System of Forces - Composition and resolution of forces. Concurrent force, co-planar forces, parallel forces etc. Equilibrium of force systems. Moment & its effect, couple . Beam reactions.

REFERENCES:

SR.NO.	TITLE	AUTHOR
01.	Applied Mechanics	S.B.Jurnarkar & H.J.Shah
02.	Understanding Concept Of Structural Analysis & Design	J.P.Parikh
03.	Engineering Mechanics	R.S.Khurmi
04.	Engineering Mechanics	Hagerty & Plass
05.	Fundamentals Of Structures	Salva Dorie
06.	IS 875 – 1987 Code Of Practice For Design Loads	BIS, New Delhi