

Shantilal Shah Engineering College, Bhavnagar
Applied Mechanics Department

Date: 25/02/2025

Civil Engineering [BE / PDDC – 4th Semester]

Syllabus of Class Test (March – 2025)

#	Subject Code	Name of Subject	Syllabus – Topic / Units
1	3140603/ 2950603	Structural Analysis - I	Unit-1: Fundamentals of Statically Determinate Structures: <ul style="list-style-type: none">• Basics: Types of statically determinate & indeterminate structures, static and kinematic indeterminacy, stability of structures, principle of superposition, Maxwell's reciprocal theorems.• Framed structure: Computation of internal forces in statically determinate framed structures such as plane frame only.
			Unit-3: Direct and Bending stresses + Column & Struts <p>(A) Direct and Bending stresses</p> <ul style="list-style-type: none">• Basics: Members subjected to eccentric loads, middle third rule, kernel of section, stress distribution <p>(B) Columns and Struts</p> <ul style="list-style-type: none">• Basics: Buckling of columns, different end conditions, effective length, least radius of gyration• Applications: Euler's and Rankine's formulae, columns with initial curvature, eccentrically loaded columns, columns with lateral loading.

Subject Co-ordinator
(Prof. K. A. Mehta)