



COLLEGE OF TECHNOLOGY AND ENGINEERING

DEPARTMENT OF CIVIL ENGINEERING
3 YEAR BE I SEMESTER SESSION 2015-16

1. Course Code : **CE311**
2. Course Title : **THEORY OF STRUCTURES-I**
3. Credit : 4(3+1)
4. Theory Lecture Outlines :

1.	<i>Static and Kinematic Indeterminacy</i>
2.	<i>Static and Kinematic Indeterminacy</i>
3.	<i>Static and Kinematic Indeterminacy</i>
4.	<i>Static and Kinematic Indeterminacy</i>
5.	Static and kinematic indeterminacy (beam, frames: with & without sway)
6.	Static and kinematic indeterminacy (beam, frames: with & without sway)
7.	Static and kinematic indeterminacy (beam, frames: with & without sway)
8.	Introduction of Indeterminate structures.
9.	Introduction of Indeterminate structures.
10.	<i>Slope Deflection Method: Analysis of continuous beams</i>
11.	<i>Slope Deflection Method: Analysis of continuous beams</i>
12.	<i>Slope Deflection Method: Analysis of continuous beams</i>
13.	portal frames (without inclined members)
14.	portal frames (without inclined members)
15.	portal frames (without inclined members)
16.	<i>Moment Distribution Method: Analysis of continuous beams</i>
17.	<i>Moment Distribution Method: Analysis of continuous beams</i>
18.	<i>Moment Distribution Method: Analysis of continuous beams</i>
19.	portal frames (with and without sway)
20.	portal frames (with and without sway)
21.	<i>Energy Methods: Castigliano's second theorem</i>
22.	<i>Energy Methods: Castigliano's second theorem</i>
23.	<i>Energy Methods: Castigliano's second theorem</i>
24.	Principle of minimum strain energy

25.	Application to frames with one and two redundant members
26.	Trussed beam
27.	portal frames.
28.	portal frames.
29.	<i>Approximate Analysis</i>
30.	Analysis of multi storey frames by approximate methods:
31.	Analysis of multi storey frames by approximate methods:
32.	Analysis of multi storey frames by approximate methods:
33.	Portal Method
34.	Portal Method
35.	Portal Method
36.	Cantilever method
37.	Cantilever method
38.	Cantilever method
39.	Cantilever method
40.	Numericals
41.	Numericals
42.	Revision
43.	Revision
44.	Revision
45.	Numericals

Suggested Books & References

1. Junarkar, 'Mechanics of Structures', Vol II.
2. Punmia, B.C., 'Strength of materials and theory of structures', Vol –II.
3. Vazirani & Ratwani, 'Analysis of Structures', Vol. II

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