

CONTACT PERIODS : 3 (LECTURE) PER WEEK

DURATION OF EXAM : 3 HRS

EXAM MARKS : 100

PROGRESSIVE MARKS : 50

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Objective:

To give an insight into the structural behaviour of portal frames.

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Outline:

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Analysis of propped cantilever, fixed beams, Shear Force Diagrams and Bending Moment Diagrams. Analysis of continuous beam (maximum three spans) by

a) Clapeyron's Three Moments Theorem

b) Moment Distribution Method

Analysis of portal frame (single bay, single story with sway and non-sway) by moment distribution method

Note: The teacher is also expected to expound the structural concepts introduced in non-mathematical

terms with examples and application in architectural design.

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References:

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- 1) “Structural Analysis” by SS Bhavikatti

- 2) “Theory of Structures” by Vazirani and Ratwani