



**K. K. Wagh Institute of Engineering Education & Research, Nashik**

(An Autonomous Institute From A.Y. 2022-23)

InSem Examination-I Winter 2023		
Exam Seat No.:		
Academic Year:2023-2024	Semester:III	
Name of Programme:M.Tech	Pattern:2022	
Name of Course:High Rise Structures	Course Code:CIV226101A	
Max. Marks:30	Duration:1	

1. This question paper contains \_\_\_\_\_ page(s).
  2. Answer to each new question is to be started on a new page.
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1. Assume suitable data wherever required, but justify it.
  2. Draw the neat labelled diagrams, wherever necessary.
  3. The last columns indicates the Course Outcome and level of Blooms Taxonomy of the Question/sub-question

**Question No. 1 Attempt following Question**

- a) Explain the concept of premium for height. (5) CO1

**OR**

- b) What is the significance of space efficiency of high rise building columns? (5) CO1

- c) State eight lateral load resisting systems. Explain any four systems with neat diagrams. (10) CO2

**OR**

- d) Which are the factors that can be used for reduction in the weight of structural frame? (10) CO2

**Question No. 2 Attempt following Question**

- a) What are the effects of wind on high rise structure and which factors shall be considered while designing it? (5) CO1

**OR**

- b) Explain the behaviour of tall buildings during earthquake (5) CO1
- c) Explain in detail the features of Characteristics of Wind behaviour. (10) CO2

**OR**

- d) Explain the rigid model studies for wind tunnel testing with respect to modelling criteria, cladding pressures and overall building loads. (10) CO2