

23432

M.E./ M. Tech. 2nd Semester (Civil Engineering)

Examination, July-2022

HIGH RISE STRUCTURES

Paper-CE-660

Time allowed : 3 hours]

[Maximum marks : 100

Note :

- *Attempt any five questions. All questions carry equal marks.*

- *Assume suitable data whenever necessary.*

1. Enumerate the different types of load to be considered in the analysis and design of tall building. 20
2. Design a rectangular core shear wall $2000 \times 80000 \times 300$ mm, if it is subjected to 400 kNm moment in x direction, 350kNm moments in y direction and an axial load of 6000kN. Use M25 concrete and Fe 415 steel. 20
3. What are the different types of load coming on high rise structures ? Explain in detail Wind load and Earthquake load and their effects on design of tall structures. 20
4. Write short note on the following : 20
 - (a) Bending of perforated cores
 - (b) Second order effects of gravity loading

5. What it is required to provide thin tubes in tall buildings?
Also explain the pure torsion in thin tubes. 20
6. Discuss in detail the behaviour of symmetric wall frames
with the help of a case study. 20
7. Define Tall buildings and Principle of three dimensional
analysis of tall buildings. 20
8. What do you mean by Floor systems ? Describe the
analysis of floor system in tall buildings. 20