

No. of Printed Pages : 03

Roll No.

BB-563

M. Tech. EXAMINATION, May 2018

(Second Semester)

(B. Scheme) (Main & Re-appear)

CE(SE)

CES506

STRUCTURAL STABILITY

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. Assume any data if missing in the question paper.

(2-18/17) M-BB-563

P.T.O.

Unit I

1. A rectangular column of 5.6 m high is effectively held in position at both ends and restrained against rotation at one end. Design the column to carry an axial load of 1300 kN, if its one side is restricted to 450 mm. Use M35 mix and Fe415 steel. **15**
2. What are the different modes of buckling ? Explain in detail. **15**

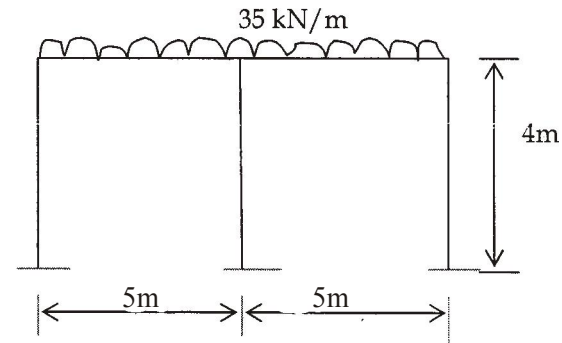
Unit II

3. Explain the energy principle. Also write down the applications of Raleigh Ritz method. **15**
4. What do you understand by the Buckling of beam column with concentrated load ? Explain with example. **15**

Unit III

5. Explain why matrix method is more useful to determine the buckling and analysis of multistory frames. **15**

6. Analyse the rigid two bay symmetrical frames shown in figure by slope deflection method. EI is constant for all members of the frame. **15**



Unit IV

7. Explain the finite difference method in detail and also explain its applications. **15**
8. Explain all the critical loads on plate for various boundary conditions in detail. **15**