

Roll No

MVSE-302(A)

M.E./M.Tech., III Semester

Examination, December 2016

**Stability Theory in Structural Engineering
(Elective-II)**

Time : Three Hours

Maximum Marks : 70

- Note :* i) Attempt any five questions.
ii) All questions carry equal marks.

1. Explain stability analysis of beam column with single and several concentrated loads.
2. Differentiate between Flexural Buckling and Torsional Buckling also explain theory of combined torsional and flexural Buckling.
3. Discuss by formulae Buckling of thin plates for various age conditions.
4. Describe in detail finite difference method for the analysis of Buckling of plates.
5. Write down step by step procedure for the analysis of rigid jointed frames with and without sway.

MVSE-302(A)

73

PTO

6. Describe applications of matrix method in stability. Analysis of beam columns and frames.
7. Explain and differentiate between local Buckling and post buckling behaviour of plates.
8. Write short notes on any two of the following :
 - a) Euler Buckling loads
 - b) Critical loads of laced columns
 - c) Inelastic buckling of column

MVSE-302(A)

74