# “EFFECT OF LATERAL FORCES ON THE BEHAVIOUR OF BUILDING WITH AND WITHOUT COUPLED SHEAR WALL”

A Dissertation submitted in partial fulfillment of the requirement for the Award of degree of

**MASTER OF TECHNOLOGY**

**IN**

**STRUCTURAL ENGINEERING**

By

**GEETA**
**Roll No. – 2K13/STE/29**

Under the guidance of

**Dr. Nirendra Dev**
( Head of Department)

**Department of Civil Engineering**

**Delhi Technological University**

**(FORMERLY DELHI COLLEGE OF ENGINEERING)**

**JULY 2015**

# CERTIFICATE

This is to certify that the dissertation entitled **"Effect of Lateral forces on the Behaviour of Building with and without coupled shear wall "** being submitted by me, to the **Delhi Technological University, New Delhi,** for the award of degree of Master of Technology in **Structural Engineering** is a bonafide work carried out by me. The research reports and the results presented in this thesis have not been submitted in parts or in full to any other University or Institute for the award of any degree.

_____

**Geeta**
2K13/STE/29
Department of Civil Engineering
Delhi Technological University

This is to certify that the above statement made by the candidate is true to the best of my knowledge and belief.

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**Dr.Nirendra Dev**
(Supervisor)
Department of Civil Engineering Delhi Technological University, Delhi (India)

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I specially thank all the people who are active in this field. Reference material (pictures, tables and forms) from various national and international reports and journals, are included in this report as per the requirements and all these are quoted under the reference section at the last of this project report.

Geeta
2 K 13/STE/29
M .Tech
Structural Engineering

# ABSTRACT

Shear wall systems are one of the most commonly used lateral load resisting systems in high-rise buildings . Shear walls have very high in plane stiffness and strength, which can be used to simultaneously resist large horizontal loads and support gravity loads, making them quite advantageous in many structural engineering applications. There are lots of literatures available to design and analyze the shear wall. However, the decision about the location of shear wall in multi-storey building is not much discussed in any literatures. In this research, therefore, main focus is to determine the solution for shear wall location in multi-storey building. A RCC building of thirty storey placed in Delhi subjected to earthquake loading in zone -Iv is considered. An earthquake load is calculated by seismic coefficient method using IS 1893 (PART–I):2002. These analyses were performed using E – TAB.

# CONTENTS

# LIST OF FIGURES

# LIST OF TABLES