

## **ABSTRACT**

The design of structures in civil engineering involves rigorous analysis of structure for various types of loads that may occur in the design life period of structure. Earthquakes are most devastating natural disaster which will not provide any warning and time for evacuation. Thus analysis and design of structures for seismic loads due to lateral movement of ground plays a major role in the design of structure. At present India is divided into four seismic zones (II, III, IV and V) as per IS 1893:2002, with no zone as earthquake free. Hence, consideration of seismic loads along with other loads is mandatory in the design of buildings.

Seismic analysis of buildings involves consideration of various load combinations, which requires usage of fast and effective analysis tool. ETABS is one such software tool which can do various types of linear and non-linear analysis within short period of time. ETABS stands for Extended Three dimensional Analysis of Building Systems developed by Computers and Structures, Inc. ETABS 2016 software offers unmatched 3D objects based modelling and visualization tools, blazing fast linear and non-linear analytical power, sophisticated and comprehensive design capabilities, easy to understand analysis and design results.

In the present project work, the seismic analysis of a residential (G+10) building has been carried out using ETABS 2016 software tool as per IS 1893:2002 Part-1. The analysis is carried out considering seismic zone II. The Maximum Shear Forces, Bending Moments, Maximum Storey Displacements and Storey Drifts are computed and then compared for all the analysed cases