**SEISMIC ANALYSIS OF BUILDING BY USING ETABS**

**ABSTRACT**

The current version of the IS: 1893-2002 requires that practically all multi storied buildings be analyzed as three-dimensional systems. Buildings may be considered as asymmetric in plan, in mass and stiffness along storey, of the buildings. Most of the hilly regions of India are highly seismic. In this study, 3D analytical model of G+15 storied buildings have been generated for symmetric and asymmetric building models and analyzed using structural analysis tool ETABS software. Mass and stiffness are two basic parameters to evaluate the dynamic response of a structural system. Multi-storied buildings are behaved differently depending upon the various parameters like mass-stiffness distribution, foundation types and soil conditions. 2001 Bhuj earthquake in Gujrat, India demonstrated the damage and collapse of the buildings due to the irregularities in structural stiffness and floor mass. This paper is concerned with the effects of various vertical irregularities on the seismic response of a structure. The objective of the project is to carry out Response spectrum analysis (RSA) of regular and irregular RC building frames and Time history Analysis (THA) of regular RC building frames and carry out the ductility based design using IS 13920 corresponding to response spectrum analysis. Comparison of the results of analysis of irregular structures with regular structure is done.

**Key Words:** Symmetric and Asymmetric structures; Dynamic analysis, Storey Deflection, Storey Shear, Base Shear.