Abstract

Lahore is the rapidly growing population city of the Pakistan. The Geology of the study area comprises of loessic clay/Soil of Pleistocene of recent age. The loessic deposits are consisting of clay, silt, and sand and the thickness of the deposits is about 572 meters. Lahore is existed on deep fault line the activeness of this fault line in future can cause the major earthquake. In this study 60 buildings have been surveyed by the techniques of primary and secondary data. Mixed research approach was used in this study. Statistical and GIS analysis were performed on the collected data for results.

The results show that foundations of the buildings are a risk for the future earthquake because the foundations of the buildings are in different geological conditions which are prone to earthquake risk. The average depth of the foundations is less than 3-4 meters. This is not suitable for more than 4 stories building. The depth of the foundations is not according to the number of stories and seismic guidelines in the study area.

This study is very important related to the assessment of the vulnerability for the earthquake in Lahore metropolitan area. The vulnerability assessment will be very helpful for the government and other stake holders to enhance the coping capacity of the local community. The government will also formulate their strategies according to the basis of the community which is at risk. The vulnerability assessment of the considered structure indicates that they are vulnerable to damage during expected future earthquake.