Abstract

In the first part of the thesis we introduce the basic definitions and notations. Further on we present the known results on vertex irregular total k-labelings and on edge irregular total k-labelings.

In the second part of the thesis we determine the precise value of the total vertex irregularity strength of generalized sun graphs S_n^m.

In the last part of the thesis we investigate the total edge irregularity strength of generalized helm graphs and determine the exact value of the total edge irregularity strength for generalized helms H_n^m, for generalized sun graph S_n^m and for subdivision of star $K_{1,n}^m$.