

Abstract

The notion of gröbner basis and primary decomposition is one of the fundamental notion in commutative algebra, algebraic geometry and combinatorics. Many problems in these fields require the computation of Gröbner basis and primary decomposition of ideals in polynomial ring in several variables. This interconnection help us to determine various properties and invariants in these two fields. Binomial ideals are special ideals of the polynomial ring which are generated by binomials; whereas, binomial edge ideals are those binomial ideals which are obtained through a special construction from a graphs. In [3], the authors have studied the Gröbner basis of binomial edge ideal of closed graphs with respect to a given labeling of vertices. I got the motivation from the list of articles and graduate texts given in the references. I intend to study the Gröbner basis, primary decomposition of binomial edge ideal of some particular graphs.