

ON SOME NEW POLYNOMIAL AND ITS EIGEN VALUES

S. R. JOG AND S. P. HANDE*

Department of Mathematics, Gogte Institute of Technology,
Udyambag, Belgaum – 590008, India.

(E-mail: sudhirrjog@yahoo.co.in, satish_handel313@yahoo.co.in)

ABSTRACT

The path layer matrix for a connected graph is a matrix $P=[p_{ij}]$ where p_{ij} = number of vertices having a path of length j from v_i . In this paper we define a new polynomial for a connected graph with respect to its path layer matrix and obtain eigen values of characteristic polynomial corresponding to it for some standard graphs.

KEY WORDS: Path layer matrix of a graph, Eigen values, Energy.

AMS Subject classification: 05C50.