SYMMETRIC INVERSE GENERALIZED EIGENVALUE PROBLEM WITH SUBMATRIX CONSTRAINTS IN STRUCTURAL DYNAMIC MODEL UPDATING[*]

MEIXIANG ZHAO[†], ZHIGANG JIA[‡], AND MUSHENG WEI[§]

Abstract. In this literature, the symmetric inverse generalized eigenvalue problem with submatrix constraints and its corresponding optimal approximation problem are studied. A necessary and sufficient condition for solvability is derived, and when solvable, the general solutions are presented.

Key words. Symmetric inverse generalized eigenvalue problem, Submatrix constraint, Optimal approximation.

AMS subject classifications. 15A15, 15A29.