

Approximation solution for system of generalized ordered variational inclusions with operator in ordered Banach space

ABSTRACT

The resolvent operator approach is applied to address a system of generalized ordered variational inclusions with \oplus operator in real ordered Banach space. With the help of the resolvent operator technique, Li et al. (J. Inequal. Appl. 2013:514, 2013; Fixed Point Theory Appl. 2014:122, 2014; Fixed Point Theory Appl. 2014:146, 2014; Appl. Math. Lett. 25:1384-1388, 2012; Fixed Point Theory Appl. 2013:241, 2013; Eur. J. Oper. Res. 16(1):1-8, 2011; Fixed Point Theory Appl. 2014:79, 2014; Nonlinear Anal. Forum 13(2):205-214, 2008; Nonlinear Anal. Forum 14: 89-97, 2009) derived an iterative algorithm for approximating a solution of the considered system. Here, we prove an existence result for the solution of the system of generalized ordered variational inclusions and deal with a convergence scheme for the algorithms under some appropriate conditions. Some special cases are also discussed.

Keyword: Algorithm; Convergence; Resolvent; Solution; System; Ordered Banachspace