

1147-90-25

Balendu Bhooshan Upadhyay* (bhooshan@iitp.ac.in), Department of Mathematics, Indian Institute of Technology, Block-IV, Patna, Bihar 8010106, India, and **R. N. Mohapatra** (ramm1627@gmail.com), Department of Mathematics, University of Central Florida, Orlando, FL 32816,. *On Generalized Vector Variational Inequalities and Nonsmooth Vector Optimization Problems Using Convexifcators.*

In this paper, we derive the characterizations for locally Lipschitz approximate convex functions and establish that a locally Lipschitz function is an approximate convex function if and only if its convexificator is a submonotone operator. Further, we formulate vector variational inequality problems of Minty and Stampacchia type in terms of convexifcators. We employ the properties of convexificator and characterization for approximate convex function to establish the necessary and sufficient optimality conditions for a point to be a quasi efficient solution of nonsmooth vector optimization problems involving approximate convex function and its generalizations. The results of the paper extend, unify and sharpen several other results known in the literature. (Received October 12, 2018)