A FIXED POINT THEOREM FOR CARISTI-TYPE CYCLIC MAPPINGS

NARONGSUK BOONSRI* AND SATIT SAEJUNG**

*Department of Mathematics, Faculty of Science, Khon Kaen University
Khon Kaen, 40002, Thailand
E-mail: narongsukboonsri@gmail.com

**Department of Mathematics, Faculty of Science, Khon Kaen University
Khon Kaen, 40002, Thailand
and Research Center for Environmental and Hazardous Substance Management
Khon Kaen University, Thailand
E-mail: saejung@kku.ac.th

Abstract. We discuss two results for Caristi-type cyclic mappings due to Du and Karapinar [3]. We show that they can be deduced from our best proximity point theorem. Our result can be regarded as a generalized result of a fixed point theorem proved by Bollenbacher and Hicks [1] in the setting of cyclic mappings.

Key Words and Phrases: Best proximity point, fixed point, Caristi-type cyclic mapping, orbitally lower semicontinuity.

2010 Mathematics Subject Classification: 47H09, 47H10, 54E50.

Acknowledgements. The first author is thankful to the Development and Promotion of Science and Technology Talents Project (DPST) for financial support. The second author was partially supported by the Research Center for Environmental and Hazardous Substance Management, Khon Kaen University.

References


1Corresponding author.


Received: May 20, 2015; Accepted: January 23, 2016.