Nonlinear Analysis 73 (2010) 3123–3129

Contents lists available at ScienceDirect

Nonlinear Analysis

journal homepage: www.elsevier.com/locate/na

KKM mappings in metric type spaces

M.A. Khamsi [a,b,*], N. Hussain [c]

[a] Department of Mathematical Science, The University of Texas at El Paso, El Paso, TX 79968, USA

[b] Department of Mathematics and Statistics, King Fahd University of Petroleum & Minerals, P.O. Box 411, Dhahran 31261, Saudi Arabia

[c] Department of Mathematics, King Abdulaziz University P.O. Box 80203, Jeddah 21589, Saudi Arabia

ARTICLE INFO

Article history:
Received 21 March 2010
Accepted 28 June 2010

MSC:
primary 47H09
secondary 47H10

Keywords:
KKM property
Fixed point
Cone metric space
Admissible set
Totally bounded
Approximate fixed point property

ABSTRACT

In this work we discuss some recent results about KKM mappings in cone metric spaces. We also discuss the fixed point existence results of multivalued mappings defined on such metric spaces. In particular we show that most of the new results are merely copies of the classical ones and do not necessitate the underlying Banach space nor the associated cone.

© 2010 Elsevier Ltd. All rights reserved.