

FIXED POINT THEOREMS OF EXPANSIVE TYPE MAPPINGS IN MODULAR FUNCTION SPACES

M. ABBAS*, S.H. KHAN** AND A. RAZANI***

*Department of Mathematics, Lahore University of Management Sciences (LUMS) Phase-II,
Opposite sector U, DHA Lahore Cantt., Lahore-54792, Pakistan.
E-mail: mujahid@lums.edu.pk

**Department of Mathematics, Statistics and Physics, Qatar University, Doha 2713, Qatar.
E-mail: safeerhussain5@yahoo.com

***Department of Mathematics, Faculty of Science, Imam Khomeini International University,
Postal code: 34149-16818, Qazvin, Iran.
E-mail: razani@ikiu.ac.ir

Abstract. In this paper, the existence of fixed point of expansive type mappings is studied in modular function spaces.

Key Words and Phrases: Fixed point, expansive mappings, modular function space.

2010 Mathematics Subject Classification: 47H10, 54H25, 54C60, 46B40.

Acknowledgement. The present version of the paper owes much to the precise and kind remarks of anonymous referees.

REFERENCES

- [1] T.D. Benavides, M.A. Khamsi and S. Samadi, *Uniformly lipschitzian mappings in modular function spaces*, *Nonlinear Anal.*, **46**(2001), 267-278.
- [2] T.D. Benavides, M.A. Khamsi and S. Samadi, *Asymptotically regular mappings in modular function spaces*, *Sci. Math. Jpn.*, **53**(2001), no. 2, 295-304.
- [3] T.D. Benavides, M.A. Khamsi and S. Samadi, *Asymptotically nonexpansive mappings in modular function spaces*, *J. Math. Anal. Appl.*, **265**(2002), no. 2, 249-263.
- [4] M.A. Khamsi, *Fixed point theory in modular function spaces*, *Recent Advances on Metric Fixed Point Theory*. Universidad de Sevilla, Sevilla, **8**(1996), 31-58.
- [5] M.A. Khamsi, W.M. Kolowski and S. Reich, *Fixed point property in modular function spaces*, *Nonlinear Anal.*, **14**(1990), 935-953.
- [6] W.M. Kozłowski, *Modular function spaces*, M. Dekker, New York-Basel, 1988.
- [7] P. Kumam, *Fixed point theorems for nonexpansive mappings in modular spaces*, *Arch. Mathematicum (BRNO)*, **40**(2004), 345-353.
- [8] M.A. Kutbi and A. Latif, *Fixed point of multivalued maps in modular function spaces*, *Fixed Point Theory and Applications*, to appear.
- [9] J. Musielak and W. Orlicz, *On modular spaces*, *Studia Math.*, **18**(1959), 591-597.
- [10] J. Musielak, *Orlicz spaces and modular spaces*, *Lecture Notes in Mathematics*, **1034**, Springer, Berlin, 1983.
- [11] H. Nakano, *Modular Semi-ordered Spaces*, Tokyo, 1950.

Received: November 24, 2009; Accepted: November 11, 2010.