ON SOME GENERALIZED CONTRACTIVE TYPE CONDITIONS FOR MULTIVALUED

CONDENSING MAPPINGS

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Introduction.

The most convenient ambient space for stating many fixed point theorems for a contraction or a generalized contraction seems to be a metric space.However, in this setting - in the absence of the linear structure offered by a Banach space - we can obtain only metrical fixed point theorems.

In order to compensate this drawback Takahashi introduced in 1970 [14] the definition of convexity in metric spaces and generalized some important fixed point theorems previously proved for Banach spaces.

Recently, Gajić and Stojaković [11] obtain a generalization of the Takahashi's result by means of a general contractive type condition. This type of contractivity is expressed by a comparison function, i.e. a real function $\varphi : \mathbf{R}_+ \to \mathbf{R}_+$ satisfying a few properties of the linear function $\varphi(t) = \alpha t$, $0 \le \alpha < 1$, involved in