

WEAK (I, J) -CONTINUOUS MULTIFUNCTIONS IN IDEAL BITOPOLOGICAL SPACES

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Date of Receiving : 19. 07. 2022
Date of Acceptance : 07. 12. 2023

Abstract. In this paper, we introduce a new type of weak (I, J) -continuous multifunction between bitopological spaces. Also we study several characterizations of this type of multifunctions and some illustrative examples are given.

1. Introduction

It is well known today that the notions of multifunctions play a very important role in General topology. Upper and lower continuity have been extensively studied on multifunctions $F : (X, \tau) \rightarrow (Y, \sigma)$. Currently using the notions of ideal topological spaces, different types of upper and lower continuity in a multifunction $F : (X, \tau, I) \rightarrow (Y, \sigma)$ has been studied and characterized [1, 5, 12, 13]. On the other hand, generalized open sets are basic and important in many topological notions and they are now the research topics of many topologists worldwide. Indeed a significant theme in General Topology and Real analysis concerns the various modified forms of continuity by utilizing generalized open sets. The concept of ideal topological spaces has been introduced and studied by Kuratowski [9] and the local function of a subset A of a topological space (X, τ) was introduced by Vaidyanathaswamy [14] as follows: given a topological space (X, τ) with an ideal I on X and if $P(X)$ is the set of all subsets of X , a set operator $(.)^* : P(X) \rightarrow P(X)$, called the local function of A with respect to τ and I , is defined as follows: for $A \subseteq X$, $A^*(\tau, I) = \{x \in X / U \cap A \notin I \text{ for every } U \in \tau_x\}$, where $\tau_x = \{U \in \tau : x \in U\}$. A Kuratowski closure operator $cl^*(,)$ for a topology $\tau^*(\tau, I)$

2010 *Mathematics Subject Classification.* 54C05, 54C08, 54E55.

Key words and phrases. Bitopological spaces, (i, j) -upper weakly (I, J) -continuous multifunction, (i, j) -lower weakly (I, J) -continuous multifunction.

Communicated by. Mridul Kumar Gupta

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