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AN INTUITIONISTIC FUZZY TOPOLOGICAL TM-SYSTEMS

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ABSTRACT. In 2010, Tamilarasi and Megalai introduced a new class of algebras called as TM-algebras. In this paper, discuss the notion of an Intuitionistic fuzzy topological TM-systems .

AMS Classification: 08A72, 03E72, 03F55

Key words : BCK/BCI Algebra, TM-Algebra, Fuzzy Topology

1. INTRODUCTION

In 1996, Y.Imai and Iseki [17] introduced two classes of algebras originated from the classical and non-classical propositional logic. These algebras are known as BCK and BCI algebras. It is known that the notion of BCI-algebra is a generalization of BCK-algebras in such a way that the class of BCK algebras is a subclass of the class of BCI-algebras [18]. In 1986, K.T.Atanassov introduced the notion of Intuitionistic fuzzy set [12]. Recently in 2010, Tamilarasi and Manimegalai introduced a new class of algebras called TM-algebras [23].

In 1965, L.A.Zadeh [25] introduced the notion of fuzzy sets, to evaluate the modern concept of uncertainty in real physical world. The theory of fuzzy topological spaces is developed by Chang [14], Wong [24] , Lowen [19] and others.

In [1], we studied Fuzzy Topological subsystem on a TM-algebra. In [2], we studied L -Fuzzy Topological TM-system. In [3], we studied L - Fuzzy Topological TM-subsystem. In [4], [5] we studied Fuzzy Supratopological TM-system, Fuzzy α - supracontinuous functions. In this paper, discuss the notion of an intuitionistic fuzzy topological TM-systems and investigate some simple properties

2. PRELIMINARIES

In this section we recall some basic definitions that are required in the sequel.