

HOMOMORPHISMS OF L-VAGUE SEMIRINGS OF L-SEMIRING

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Abstract: In this paper we introduce L-vague semirings of L-semiring, homomorphism of L-vague semiring of L-semiring and studied their properties. These concepts are used in the development of some important results and theorems about L-vague semirings of L-semiring. Also some of their important properties have been investigated.

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INTRODUCTION

The concept of Lattice was first defined by Dedekind in 1897 and then developed by Birkhoff. G. imposed an operation an open problem "Is there a common abstraction which includes Boolean algebra, Boolean rings and lattice ordered group or L-group is an algebraic structure connecting lattice and group. To answer this problem many common abstractions, namely dually residuated lattice ordered semigroups, commutative lattice ordered groups. Lattice ordered rings, lattice ordered near rings and lattice ordered semirings are presented. Among them the algebraic structure lattice

ordered semiring or L-semiring was introduced by Ranga Rao. P., [13].

Also the concept proposed by Zadeh. L.A. [16] defining a fuzzy subset A of a given universe X characterizing the membership of an element x of X belonging to A by means of a membership function μ_A defined from X into [0, 1] has revolutionized the theory of Mathematical modeling. Decision making etc., in handling the imprecise real life situations mathematically. Now, several branches of fuzzy mathematics like fuzzy algebra, fuzzy topology, fuzzy control theory, fuzzy measure theory etc., have emerged. But in the decision making, the fuzzy theory takes care of membership of an element x only, that is the evidence against x belonging to A. It is felt by several decision makers and researchers that in proper decision making, the evidence belongs to A and evidence not belongs to A are both necessary and how much X belongs to A or how much x does not belongs to A are necessary.

Several generalizations of Zadeh's fuzzy set theory have been proposed, such as L-fuzzy sets [4]. Interval valued fuzzy sets, Intuitionistic fuzzy sets by Atanassov. K.T. [1], Vague sets [3] are mathematically equivalent. Any such set A of a given Universe X can be characterized by means of a pair of function (t_A, f_A) where t_A and f_A are functions from X into [0, 1] such that $0 \leq t_A(x) + f_A(x) \leq 1$ for all