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PROPERTIES OF INTUITIONISTIC (T, S) NORMED FUZZY IDEALS IN SEMIGROUPS

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Abstract: In this paper, we introduce the notation of intuitionistic (T, S) normed fuzzy ideals in a semigroup and investigate some properties.

Keywords and Phrases: Semigroup, Subsemigroup, intuitionistic fuzzy ideal and intuitionistic fuzzy bi-ideal.

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1. Introduction

The notation of a fuzzy set was introduced by L. A. Zadeh [9] and since then this concept has been applied to various algebraic structures. The concept of intuitionistic fuzzy set was introduced by K. T. Atanassov [2,3], as a generalization of the notation of fuzzy sets N. Kuroki [4] discussed characterizations of semigroups. K. H. Kim and Y. B. Jun [6] considered the intuitionistic fuzzification of the notation of several ideals in a semigroup and investigated some properties of such ideals. M. T. Abu Osman [1] defined t-norm T and Y. Yu, J. N. Mordeson and S. C. Cheng [7] defined s-norm S. In this paper, using (T, S)-norm we study intuitionistic fuzzy ideals of semigroups and establish some results.

2. Preliminaries

Definition 2.1. [6] *Let S be a semigroup. By a subsemigroup of S, we mean a non-empty subset A of S such that $A^2 \subseteq A$.*

Definition 2.2. [6] *By a left (right) ideal, we mean a non-empty subset A of S*