

Abstract

In this thesis, we define the concepts of fuzzy implicative ideal and (α, β) -fuzzy implicative ideal in a B-algebra and investigate some of their properties, where α, β are any one of $\in, q_b, \in \vee q_b, \in \wedge q_b$ unless otherwise specified. We also introduce the notion of $(\in, \in \vee q_b)$ -fuzzy implicative ideal in a B-algebra. The concepts of implication-based fuzzy ideal and implication operators in Lukasiewicz system of continuous-valued logic in B-algebra are introduced. Lastly, we also define the concept of $(\bar{\alpha}, \bar{\beta})$ -fuzzy implicative ideals in a B-algebra, where $\bar{\alpha}, \bar{\beta}$ are any one of $\bar{\in}, \bar{q}_b, \bar{\in} \vee \bar{q}_b, \bar{\in} \wedge \bar{q}_b$ and investigate some of their related properties.