

SOME RESULTS ON μ -NEARLY COMPACTNESS IN GENERALIZED TOPOLOGICAL SPACES

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Abstract. The purpose of this paper is to study the μ -nearly compactness in generalized topological spaces. Then, we also study the fundamental properties of μ -nearly compact space and obtain some results. In addition, we also investigate the characterizations of μ -nearly compact subspaces and subsets of generalized topological spaces. Some examples will be considered in order to establish some of their relationships.

1. Introduction

In 2002, Császár [3] was the first mathematician who introduced the idea of Generalized Topological Spaces (briefly GTS). Since then, there were many researchers that published their papers related to this field. For example, in 2012, Thomas and John [13] came up with the concept of μ -compactness on generalized topological space (GTS). A generalized topological space (X, μ) is called μ -compact if every μ -open cover of X contains a finite subcover. The fundamental properties of μ -compact space and its characterizations have been introduced and studied in generalized topological space. In addition, Thomas and John [13] also deal with the μ -compactness in subspaces of a generalized topological space.

In literature, some generalizations of the concept of compact sets have been studied by topologist for different reasons and purposes. Then, in 2012, Sarsak [10] introduced and studied the concept of weakly μ -compact spaces in μ -structure. A μ -structure (X, μ) is said to be weakly μ -compact (briefly $\omega\mu$ -compact) if every μ -open cover of X admits of a finite subfamily, the union of μ -closures of whose elements cover the space. Sarsak also defined μ -regular open and μ -regular closed sets. Later, in 2013, Sarsak [11] aims to introduce μ -compact sets in μ -spaces. Here, Sarsak assumed that a GTS (X, μ) is a

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