South East Asian J. of Mathematics and Mathematical Sciences Vol. 16, No. 3 (2020), pp. 157-170

ISSN (Online): 2582-0850

ISSN (Print): 0972-7752

NEW RESULTS OF bs- γ -OPEN MAPPINGS AND sb- γ -OPEN MAPPINGS IN TOPOLOGICAL SPACES

C. Sivashanmugaraja

Department of Mathematics, Periyar Government Arts College, Cuddalore - 607001, Tamil Nadu, INDIA

E-mail : csrajamaths@yahoo.co.in

(Received: May 24, 2020 Accepted: Sep. 09, 2020 Published: Dec. 30, 2020)

Abstract: In this paper, we introduce the notions of b- γ -continuous, b- γ -irresolute, b- γ -open, bs- γ -open and sb- γ -open mappings in topological spaces. With this notions, we also introduce b- γ -compact, b- γ -connected and b- γ -Lindelöff spaces Also we investigate some fundamental properties. Finally, we discuss the relationship among these mappings.

Keywords and Phrases: $bs-\gamma$ -open mappings, $sb-\gamma$ -open mappings, $b - \gamma$ - continuous, $b-\gamma$ -irresolute, $b-\gamma$ -open mappings.

2010 Mathematics Subject Classification: 54A05, 54C05, 54C10.

1. Introduction

In 1979, Kasahara [2] introduced the notion of an operation γ on topological spaces. After that the notion of γ -open sets was introduced by Ogata [3] in 1991. As a generalization of γ -open sets, Hariwan Z. Ibrahim [1] defined and investigated the notion of b- γ -open sets in general topological spaces. Recently, Sivashanmugaraja and Vadivel [5] introduced the notion of b- γ -open fuzzy sets in fuzzy topological spaces. The purpose of this paper is to introduce and investigate a new type of mappings called b- γ -continuous mappings, b- γ -irresolute, b- γ -open mappings, bs- γ open mappings and sb- γ -open mappings. Connected and compactness are powerful tools in topology but they have many dissimilar properties. The notions of b- γ compact, b- γ -connected and b- γ -Lindelöff spaces are also introduced. Further, we