

## A NEW CLASS OF BINARY $\gamma$ -PRE OPEN SETS

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**Abstract:** In this paper, we introduce the open set namely binary  $\gamma$ -pre open sets in binary topological space. Also we define new class of sets called binary  $\gamma$ -pre generalized closed set. Several theoretical results of these notions are discussed with an example.

**Keywords and Phrases:**  $b_\gamma$ - $p$ -open set,  $b_\gamma$ - $p$ -closed set,  $b_\gamma$ - $p$ - $int((E, S))$ ,  $b_\gamma$ - $p$ - $cl((E, S))$ ,  $b_\gamma$ - $p$ - $g$ -closed set.

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### 1. Introduction

In [8], binary topology concept was formulated by S. Nithyanantha Jothi and P. Thangavelu. In [2], S. Kasahara imposed the operation  $\gamma$  of a topology  $\tau$  concept. H. Ogata [10] developed a new concept of  $\gamma$ -open set. G. S. S. Krishnan and K. Balachandran [3] proposed the  $\gamma$ -preopen sets. G. S. S. Krishnan and K. Balachandran [4] investigated the new  $\gamma$ -open sets. In [5], K. Muthulakshmi and M. Gilbert Rani introduced Binary  $\gamma$ -open sets in Binary topological space and definition of Binary  $\gamma$ -pre-open set is introduced in [6].