

## ON TOPOLOGICAL $J$ - QUOTIENT MAPS

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**Abstract:** In this paper,  $J$  - Quotient maps, Strongly  $J$  - Quotient maps,  $[J]$  - Quotient maps and Strongly  $J$  - Open maps utilizing  $J$  - Closed sets are introduced. The newly defined Quotient maps are analysed with various existing Quotient maps. Interrelations between  $J$  - Quotient maps, Strongly  $J$  - Quotient maps,  $[J]$  - Quotient maps and Strongly  $J$  - Open maps are investigated. Here the properties of those functions are presented.

**Keywords and Phrases:**  $J$  - Closed,  $J$  - Continuous,  $JTC$  - space,  $J$  - Open,  $J$  - Irresolute.

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### 1. Introduction

Regular open sets were introduced by Stone [14] and using the concept semi-regularization of a topological space is constructed. In 1968, Velicko [17] proposed a concept namely  $\delta$ -open sets stronger than open sets. Levine [4] has brought generalized closed sets in 1970. Dunham [2] has established  $Cl^*$  using the concept of  $g$  - closed sets. In 2016, Annalakshmi [1] has introduced regular\*-open sets using  $Cl^*$ . In 2019, the authors Meenakshi.PL and Sivakamasundari.K have introduced unification of *regular\** - open sets namely  $\eta^*$ -open sets [5] which lies between  $\delta$  - open sets and open sets. Its basic properties are studied and the concepts of  $\eta^*$  - cluster points,  $\eta^*$  - adherent points and  $\eta^*$  - derived sets are introduced. Using  $\eta^*$  - open sets, the authors have introduced  $J$  - closed sets [6] and their features. In