TOPOLOGICAL SET LABELING OF CERTAIN TADPOLE GRAPHS

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Abstract: The main objective of this paper is to compute the proper inequivalent τ' set labeling of certain tadpole graphs.

1. Introduction

B. D. Acharya created a link between graph theory and topology by introducing the topological set indexer concept. Later K. A. Germina extended it to topogenic graphs, topogenic index and graceful topogenic set indexers. Further N. K. Sudev and K. A. Germina discussed the concept of Topological IASL graphs. Inspired by their works we introduced topological set labeling concept.

2. Preliminaries

Definition 2.1. *Let G be a graph. X be a non empty set whose cardinality is a topological number and τ denotes the set of all topologies of X. Then the set $f(v) = \{Y/Y \in \tau\}$ for which the set valuation $f : V \cup E \to 2^X$ is a $t-$set indexer of G is called proper $\tau-$set labeling, otherwise it is called improper τset labeling. The corresponding cardinality of $f(v)$ is called proper set labeling number and is denoted by η.*