

# **Some standard classes of graphs labeled by 3-total edge product cordial labeling**



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**LAHORE, PAKISTAN**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

*In the name of Allah  
the most Gracious  
the most Compassionate*

*To my dear parents and respected teachers.*

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# **Abstract**

Our task in this thesis is to study 3-total edge product cordial (3-TEPC) labeling of some standard classes of graphs. We discuss tadpole graph, helm graph, gear graph, banana tree graph and firecracker graph in the context of 3-TEPC labeling. We also discussed 3-TEPC labeling of some particular examples of graph operations like corona graphs.

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# Introduction

A graph is the collection of vertices and edges that connect them. Graphs can be divided into two classes namely *labeled graphs* and *unlabeled graphs*. A graph labeling is a task to assign integers to the edges, vertices or both subject to particular condition(s). There are three types of labelings vertex labeling, edge labeling and both vertex and edge labeling. Different types of labeling and many articles can be found in the dynamic survey of J.A Gallian [13].