Books and Chapters 2018

S.No	Name/title of Paper	Name of the author
1.	Introduction to mean labelling	Ms. K. Alamelu
2.	Dom Chromatic number of certain graphs	Ms.E.F Beulah Angeline

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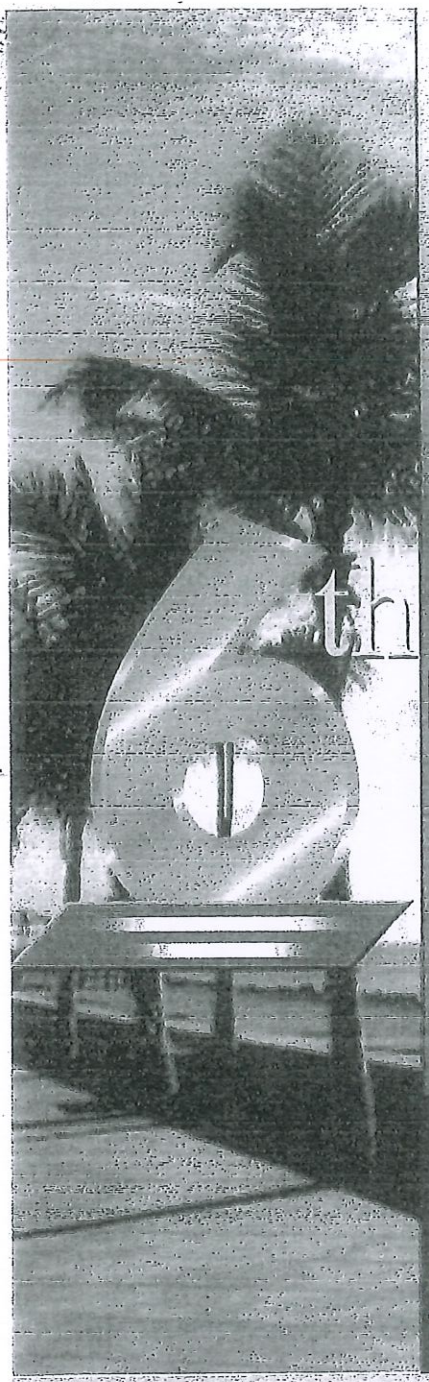

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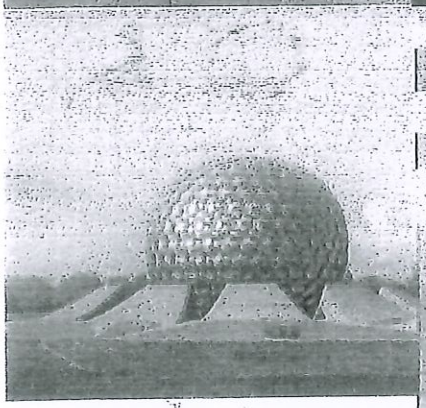

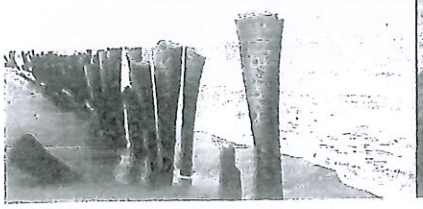

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Introduction to Mean Labeling

K.Alamelu, Assistant Professor, Department of Mathematics, Nazareth college of Arts and Science, Chennai

Abstract:--

Graph labelling is an essential and interesting topic in graph theory. There are nearly 200 graph labeling techniques. Graph theory was introduced in the year 1960.In this paper, the graph is taken as simple, finite and undirected. V(G) represents vertex set and E(G) represents Edge set. Agraph labeling is the assignment of labels, that is represented by integers, to the edges or vertices, or both, of a graph .we shall study some of the types of labelling with illustration which gives a clear idea about it. The topics are explained with examples and supporting results and diagrams for clear idea about the concept. The study is limited with certain types.

Keywords:

Mean Graph – Even Mean labelling – Odd Mean Labelling – Strongly Multiplicative – Harmonious Multiplicative – Geometric mean labelling – Skolem difference

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INTRODUCTION TO MEAN LABELING

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Abstract

Graph labelling is an essential and interesting topic in graph theory. There are nearly 200 graph labeling techniques. Graph theory was introduced in the year 1960.In this paper, the graph is taken as simple, finite and undirected. V(G) represents vertex set and E(G) represents Edge set. A graph labeling is the assignment of labels, that is represented by integers, to the edges or vertices, or both, of a graph .we shall study some of the types of labelling with illustration which gives a clear idea about it. The topics are explained with examples and supporting results and diagrams for clear idea about the concept. The study is limited with certain types.

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Introduction

In this paper, the graph are taken as simple, finite and undirected. V(G) represents vertex set and E(G) represents Edge set. A graph labeling is the assignment of labels, that is represented by integers, to the edges or vertices, or both, of a graph. A vertex labelling is a function of V to a set of labels. A graph with such a vertex labelling function is defined as Vertex – labeled graph.

An edge labeling is a function of E to a set of labels and a graph with such a function is called as an edge-labelled graph. We shall discuss about labelling concept in this paper.

Definition – 1

A graph is said to be *mean graph* if a graph with p vertices and q edges has an injective function f from the vertices of G to { 0,1,2…….q} such that when each edge uv is labeled with (f(u) + f(v))/2 if f(u) + f(v) is even and (F(u) + f(v)+1)/2 if f(u) + f(v) is odd , then the resulting edge labels are distinct.

Definition -2

A graph with p vertices and q edges is said to be a *relaxed mean graph* if there exists a function f from the vertex set of G to $\{0, 1, 2, \cdots, q-1, q+1\}$ such that the induced map $f*$ from the edge set of G to $\{1, 2, \cdots, q\}$ defined by

$$f*(e = uv) = \begin{cases} \frac{f(u)+f(v)}{2} \; if \; f(u)+f(v) \; is \; even \\ \frac{f(u)+f(v)+1}{2} \; if \; f(u)+f(v) is \; odd \end{cases}$$

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(NCETMS-2018)

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20th DECEMBER, 2018

PROCEEDINGS

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International Conference on
COMPUTING SCIENCES
ICCS 2018-2019

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Research Institute of
Mathematics and
Computing Sciences (LIMCOS)
Loyola College, Chennai, India.

This is to certify that

Mr./Ms./Dr./Prof. Beulah Angeline E F *attended the*

"International Conference on Computing Sciences" (ICCS 2018-2019)

and presented a paper / participated in the conference held during November 16-17, 2018.

Paper Title: Dom - chromatic number of certain graphs

(3)

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NAZARETHCOLLEGE OF ARTS AND SCIENCE

DEPARTMENT OF MATHEMATICS

REPORT ON THE INTERNATIONAL CONFERENCE ATTENDED-JULY 2018

Loyola College, Chennai, conducted an "INTERNATIONAL CONFERENCE ON COMPUTING SCIENCES" ON 16th & 17th November 2018 at the College premises. Ms. Beulah Angeline, Assistant Professor, Department of Mathematics, attended the conference and presented her paper titled "DOM-CHROMTIC NUMBER OF CERTAIN GRAPHS". The two day Confernce had 14 sessions which was headed by 14 resource persons, both from national and international level on the first day and on the second day nearly 300 faculties presented their paper on various fields. The various topics discussed by the resource persons were

- Security Challenges of the IoT in Kuwait
- Mathematical & Computational concepts in Arts & Science
- Data Engineering &Analytics
- Variable Selection using Kullback- Leibler Divergence loss
- Some open problems in graph labeling
- Internet of things for Engineering Applications
- Parametric estimation of an M/Er/1 queue
- Shift invariants in harmonic analysis
- Revolution in Business, IT and people
- Social network and its applications
- Cordial words recognized by automata
- Artificial intelligence
- Transformed distribution and its relevance in statistical analysis
- On variant approximation property of group C- Algebras.

The paper was presented on 17th November, at the Maths SMART room between 2:00pm-3:00pm

Signature of the staff

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Equitable Domination In Inflated Graphs

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ABSTRACT

In a graph $G=(V,E)$ a subset D of V is called an equitable dominating set of a graph G if for every $u \in V-D$, there exists a vertex $v \in D$ such that $uv \in E(G)$ and $|\deg(u)-\deg(v)| \leq 1$. The minimum cardinality of such a dominating set is called equitable domination number of G and is denoted by $\gamma^e(G)$. The inflation graph G_l is obtained from a graph G by replacing every vertex x of degree $d(x)$ by a clique $K_{d(x)}$. In this paper we study the equitable domination number for some inflated graphs and arrive with few general results.

Dom-Chromatic Number Of Certain Graphs

Joice Punitha M.[1], Beulah Angeline E. F.[2]

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2. Department of Mathematics, Nazareth College of Arts and Science, Chennai, India.

ABSTRACT

In graph theory, coloring and dominating are two important areas which have been extensively studied. In 1958, domination was formalized as a theoretical area in graph theory by C. Berge [1]. He referred to the domination number as the introduction co-efficient of external stability and denoted it as $\beta(G)$. In 1962, Ore [2] was the first to use the term "domination" for undirected graphs and he denoted the domination number by $\delta(G)$. He also introduced the concepts of minimal and minimum dominating sets of vertices in a graph. In 1977, Cockayne and Hedetniemi [3] introduced the accepted notation $\gamma(G)$ to denote the domination number. . The book by Haynes, Hedetniemi and Slater depicts the application of the concept of domination in dominating queens, sets of representatives, school bus routing, computer communication networks, (r, d)-configurations, radio stations, social network theory, landing surveying, kernels of games etc.

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