



A.P.C. MAHALAXMI COLLEGE FOR WOMEN

THOOTHUKUDI - 2



CRITERION 3

SSR CYCLE IV

RESEARCH, INNOVATIONS AND EXTENSION

3.3. Research Publication and Awards

3.3.1.1: Number of research papers in the Journals notified on UGC CARE list year wise during the last five years



A.P.C. MAHALAXMI COLLEGE FOR WOMEN

Thoothukudi- 628 002, Tamil Nadu.

To whomsoever it may concern

I hereby declare that the following details and documents are true to the best of my knowledge. They have been checked and verified.

3.3.1. Number of research papers in the journals notified on UGC CARE list

S. No	Academic Year	Number
1	2022-2023	47
2	2021-2022	45
3	2020-2021	45
4	2019-2020	49
5	2018-2019	75
	Total	261



K. Subbulakshmi

(Dr. K. SUBBULAKSHMI)

Principal i/c

Principal

A.P.C. Mahalaxmi College for Women
Thoothukudi

Shodhasamhita : Journal of Fundamental & Comparative Research
Vol. VIII, No. 11(XII) : 2022
ISSN: 2277-7067

2-DIVISOR LUCKY LABELING OF SOME ORDER PRIME GRAPHS OF FINITE GROUP

K. ARUNA SAKTHI, Research Scholar (Reg.No.20212012092006)
A.P.C.Mahalaxmi College for Women, Thoothukudi, TamilNadu, India.
(Affiliated to ManonmaniamSundaranar University, Abhishekapatti, Tirunelveli-627012)

R. RAJESWARI Assistant Professor
PG and Research Department of Mathematics, A.P.C.Mahalaxmi College for Women,
Thoothukudi-628002, TamilNadu, India.
(Affiliated to ManonmaniamSundaranar University, Abhishekapatti, Tirunelveli-627012)

Dr. N. MEENAKUMARI Associate Professor,
PG and Research Department of Mathematics, A.P.C.Mahalaxmi College for Women,
Thoothukudi-628002, TamilNadu, India.
(Affiliated to ManonmaniamSundaranar University, Abhishekapatti, Tirunelveli-627012)

ABSTRACT:

A graph $G = (V, E)$ be a graph with n vertices and m edges. A graph G admits 2-divisor lucky labeling if $f: V(G) \rightarrow \{1, 2, \dots, n\}$ be a labeling of vertices of graph G from $\{1, 2, 3, \dots, n\}$. Define $c(u) = \lfloor \sum_{v \in N(v)} \frac{f(v)}{2} \rfloor$, where $N(v)$ is the neighborhood of v such that $c(u) \neq c(v)$ for every pair of adjacent vertices u and v in G . The 2-divisor lucky number is the least number from the set $\{1, 2, \dots, n\}$ that has been used to label the graph G . It is denoted by η_{vd1} . In this paper we have investigated for some order prime graph of finite groups.

Keywords: 2- divisor lucky labeling, 2- divisor lucky number, zero-divisor graphs, identity graphs.

AMS Subject Classification: 05C25, 05C78.

INTRODUCTION

Graph labeling was introduced by Alexander Rosa in the year 1967[6]. Rosa identified three types of labeling which was later renamed by Solomon Golomb[4]. Lucky labeling was studied by Ahai.et.al and Akbari.et.al[1][2]. Lucky labeling[3] is coloring of vertices arbitrarily such that sum of labels of all adjacent vertices of a vertex is not equal to the sum of labels of all adjacent vertices of any vertex which is adjacent to it. It has been used in transportation network, where pair wise connections are given some numerical values. And also in computational biology to model protein structures. Order prime graph was introduced by M. Sattanathan and Kala R[7]. Inspiring d-lucky labeling[5] 2-divisor lucky labeling has been investigated in this paper for some order-prime graph of finite group.

2. PRELIMINARIES

Definition 2.1:[5] Order Prime Graphs:

Let Γ be a finite group. The order prime graph (Γ) of a group Γ is a graph with

$V((\Gamma)) = \Gamma$ and two vertices are adjacent in (Γ) if and only if their orders are relatively prime in Γ .



LOCATING GEO SPECTRUM AND GEO ENERGY OF MORE GRAPHS

K. PALANI, M. LALITHA KUMARI and G. SUGANYA

¹Associate Professor

²Research Scholar, Reg. No. 20212012092007

³Assistant Professor

PG and Research, Department of Mathematics

A.P.C. Mahalaxmi College for Women

Thoothukudi, TN, India

Affiliated to Manonmaniam Sundaranar University

Abishekapatti, Tirunelveli- 627012, TN, India

E-mail: palani@apcmcollege.ac.in

lalithasat32@gmail.com

gsuganyaveni@gmail.com

Abstract

Let $G = (V, E)$ be a (p, q) simple connected graph. Gutman beheld the absicth of energy of graph G relevant to the adjacency matrix of G . Later, the study was extended to many new energy terms. Geo energy of a graph G is the sum of absolute values of the spectrum of its Geo matrix. The scope of this study is to inspect the geo energy of certain classes of graphs through graph theory and utilizations. In this paper we investigate the Geo spectrum and Geo energy of few classes of graphs.

1. Introduction

Graphs considered in this paper are finite and connected. A vasty study of utilization on graph energy was pursued by Gutman and Balakrishnan [1, 4]. The absicth of graph energy was debuted by Gutman [3] in 1978 as the sum of absolute values of spectrum of the adjacency matrix of G . The absicth of geodetic was proposed by F. Harary [6] in 1993. Let $u, v \in V(G)$. Then $d(u, v)$ denotes the number of edges in the shortest path from u to v . The shortest path of $u - v$ is known as geodesic path. A set $S \subseteq V(G)$ is a

2020 Mathematics Subject Classification: 05C50, 15A18.

Keywords: Geo matrix, Geo spectrum, Geo energy.

Received November 18, 2021; Accepted December 19, 2021



NEIGHBOURHOOD-PRIME LABELING OF CERTAIN CLASSES OF CAYLEY GRAPHS

K. PALANI¹, G. SUGANYA² and M. LALITHA KUMARI³

¹Associate Professor

²Assistant Professor

³Research Scholar, Reg. No. 20212012092007

PG and Research, Department of Mathematics

A. P. C. Mahalaxmi College for Women

Thoothukudi, TN, India

Affiliated to Manonmaniam Sundaranar University

Abishekapatti, Tirunelveli-627012, TN, India

E-mail: palani@apcmcollege.ac.in

gsuganyaveni@gmail.com

lalithasat32@gmail.com

Abstract

A Cayley graph is a graph constructed from a finite group Γ and a Cayley set S of Γ . It is denoted by $Cay(\Gamma, S)$. Let $G = (V, E)$ be a graph with n vertices. A bijection $f : V(G) \rightarrow \{1, 2, 3, \dots, n\}$ is said to be a neighbourhood-prime labeling if for every vertex $v \in V(G)$ with $\deg(v) > 1$, $\gcd\{f(u) \mid u \in N(v)\} = 1$. A graph which admits neighbourhood-prime labeling is called a neighbourhood-prime graph. This paper studies the result connecting Cayley graphs and neighbourhood-prime labeling.

1. Introduction

Cayley graph was introduced by Arthur Cayley [1] in 1878 is an important concept relating group theory and graph theory. S. K. Patel and N. P. Shrimali [7] introduced neighbourhood-prime labeling of a graph.

Definition 1.1[4]. A subset S of a group Γ is called a generating set for Γ , denoted by $\langle S \rangle = \Gamma$, if every element of Γ can be expressed as a finite product

2020 Mathematics Subject Classification: 05C78.

Keywords: Labeling, Neighbourhood-prime labeling, Hamiltonian, Cayley graphs.

Received November 15, 2021; Accepted December 27, 2021



RADIO MEAN LABELING OF PATH UNION OF GRAPHS

K. PALANI¹, **S. S. SABARINA SUBI**² and **V. MAHESWARI**³

¹Associate Professor

²Research Scholar, Reg. No. 20112012092001

³Assistant Professor

PG and Research Department of Mathematics

A.P.C. Mahalaxmi College for Women

Thoothukudi-628002, TN, India

(Affiliated to Manonmaniam Sundaranar University

Abishekapatti, Tirunelveli-627012, TN, India

E-mail: palani@apcmcollege.ac.in

sabarina203@gmail.com

mahiraj2005@gmail.com

Abstract

Let $G = (V, E)$ be a simple graph with p vertices and q edges. For a connected graph G , a radio mean labeling is a one to one mapping f from $V(G)$ to N satisfying the condition, $d(u, v) + \left\lceil \frac{f(u) + f(v)}{2} \right\rceil \geq 1 + \text{dian}(G)$ for every $u, v \in V(G)$. The span of a labeling f is the maximum integer that f maps to a vertex of G . The radio mean number of G , $rmn(G)$ is the lowest span taken over all radio mean labelings of the graph G . In this paper, we analyze radio mean labeling for some path union of graphs.

1. Introduction

The graph labeling problem is one of the recent developing area in graph theory. Alex Rosa first introduced this problem in 1967 [13]. Radio labeling is motivated by the channel assignment problem introduced by W. K. Hale in 1980 [2]. In 2001, Gary Chartrand defined the concept of radio labeling of G [1]. Liu and Zhu first determined the radio number in 2005 [3]. Ponraj et al.

2020 Mathematics Subject Classification: 05C78.

Keywords: Radio mean, Radio mean number, Radio mean labeling.

Received November 2, 2021; Accepted December 3, 2021



MINIMUM HOP DOMINATING ENERGY OF A GRAPH

K. PALANI and M. LALITHA KUMARI

²Research Scholar, Reg. No: 20212012092007

¹.²PG and Research, Department of Mathematics

A. P. C. Mahalaxmi College for Women

Thoothukudi-628002

Affiliated to Manonmaniam Sundaranar University

Abishekapatti, Tirunelveli-627012

Tamil Nadu, India

E-mail: palani@apcmcollege.ac.in

lalithasat32@gmail.com

Abstract

Let $G = (V, E)$ be a (p, q) graph. A subset $S \subseteq V(G)$ is a minimum hop dominating set of a graph G if for every $v \in V - S$, there exists $u \in S$ such that $d(u, v) = 2$. The minimum cardinality of a hop dominating set (MHD) is called the hop dominating number. Motivated by the definition of minimum dominating energy by Rajeshkanna et al. [11], in this article the concept of minimum hop dominating energy $E_h(G)$ is introduced and minimum hop dominating energies $E_h(G)$ of some standard graphs and a few well-known families of graphs are computed. Also we establish an upper bound and lower bound for $E_h(G)$.

1. Introduction

In this article we consider finite, undirected and simple graph G with vertex set $V(G)$ and edge set $E(G)$. The number of vertices and number of edges are denoted by p and q respectively. A complete graph K_p is a simple undirected graph in which every pair of distinct vertices is connected by a

2020 Mathematics Subject Classification: 05C50, 05C90, 15A18.

Keywords: MHD eigenvalues, Minimum hop dominating energy, Minimum hop dominating matrix.

Received July 12, 2021; Accepted October 12, 2021



ON TOTAL ENERGY OF A GRAPH

K. PALANI¹ and **M. LALITHA KUMARI²**

¹Head and Associate Professor

²Research Scholar

PG and Research Department of Mathematics

A. P. C. Mahalaxmi College for Women

Thoothukudi-628002, TN, India

Affiliated to Manonmaniam Sundaranar University

Tirunelveli-627012, TN, India

E-mail: palani@apcmcollege.ac.in

lalithasat32@gmail.com

Abstract

The concept of total matrix and total energy of a graph G is introduced by K. Palani et al. Let $G = (V, E)$ be a (p, q) simple graph. Let $V(G) = \{v_i / i = 1, 2, \dots, p\}$ and $E(G) = \{e_i / i = 1, 2, \dots, q\}$. The total matrix $T = T(G)$ of G is a square matrix of order $p + q$ whose (i, j) -entry is defined as:

$$T = (t_{ij}) = \begin{cases} 1 & \text{if } v_i \text{ adjacent to } v_j, i \neq j \\ 1 & \text{if } e_i \text{ adjacent to } e_j, i \neq j \\ 1 & \text{if } e_j \text{ incident with } v_i \\ 0 & \text{otherwise.} \end{cases}$$

The total energy of a graph is the sum of absolute value of the eigenvalues of its total matrix $T(G)$. For any (p, q) graph G , the total number of eigenvalue is $p + q$. Let $\lambda_1, \lambda_2, \lambda_3, \dots, \lambda_{p+q}$ be the eigenvalues of T . Then total energy of G is $TE = \sum_{i=1}^{p+q} |\lambda_i|$. In this article we write some bounds for total energy of a graph and some theorems on total energy. Further we established the algorithms and MATLAB programs to find the total energy of (n, n) -Dragon graph, cyclic graph and $C_{n+1}u_3$ graph.

2020 Mathematics Subject Classification: 05C50.

Keywords: Total matrix, total energy, (n, n) -Dragon graph, Cyclic graph and $C_{n+1}u_3$.

Received May 17, 2021; Accepted June 7, 2021



NEIGHBORHOOD PRIME LABELING IN PRODUCT DIGRAPHS

A. SHUNMUGAPRIYA and K. PALANI

¹Assistant Professor
Department of Mathematics
Sri Sarada College for Women (Autonomous)
Tirunelveli-627 011
Research Scholar- 19122012092005
A.P.C Mahalaxmi College for Women
Thoothukudi-628 002, India
E-mail: priyaarichandran@gmail.com

²Associate Professor
PG and Research Department of Mathematics
A.P.C Mahalaxmi College for Women
Thoothukudi-628 002
Affiliated to Manonmaniam Sundaranar University
Abishekapatti, Tirunelveli -627012
Tamil Nadu, India
E-mail: palani@apcmcollege.ac.in

Abstract

Let $D(p, q)$ be a digraph. A function $f : V \rightarrow \{1, 2, \dots, n\}$ is said to a neighborhood prime labeling of D if it is both in and out degree neighborhood prime labeling. In this paper, we investigate the existence of neighborhood prime labeling in product digraphs.

1. Introduction

A graph labeling is an assignment of integers to the vertices or edges or both subject to certain conditions. The concept of graph labeling was introduced by Rosa in 1967 [8]. A useful survey on graph labeling by J. A.

2020 Mathematics Subject Classification: 05C78.

Keywords: Neighborhood prime, Labeling, Cartesian, Strong, Product, Digraphs.

Received July 12, 2021; Accepted October 12, 2021



RADIO LABELING OF SOME SPLITTING GRAPHS

K. PALANI and S. S. SABARINA SUBI

¹Associate Professor

²Research Scholar-20112012092001

PG & Research Department of Mathematics

A. P. C. Mahalaxmi College for Women

Thoothukudi-628002, TN

Affiliated to Manonmaniam Sundaranar

University, Abishekapatti

Tirunelveli-627012, TN, India

E-mail: palani@apcmcollege.ac.in

sabarina203@gmail.com

Abstract

Let $G = (V, E)$ be a simple graph with p vertices and q edges. For a connected graph G of diameter d , a radio labeling is a one to one mapping f from $V(G)$ to $N \cup \{0\}$ satisfying the condition $d(u, v) + |f(u) - f(v)| \geq 1 + diam(G)$ for every $u, v \in V(G)$. The span of a labeling f is the maximum integer that f maps to a vertex of G . The radio number of G , $rn(G)$ is the lowest span taken over all radio labelings of the graph G . In this paper, we analyze some splitting graphs for radio labeling.

I. Introduction

The graph labeling problem is one of the recent developing area in graph theory. Alex Rosa first introduced this problem in 1967 [8]. Radio labeling is motivated by the channel assignment problem introduced by W. K. Hale in 1980 [3]. In 2001, Gary Chartrand defined the concept of radio labeling of G [1]. Liu and Zhu first determined the radio number in 2005 [4]. Ponraj et al. [6] introduced the notion of radio mean labeling of graphs and investigated radio mean number of some graphs [7].

2020 Mathematics Subject Classification: 05C78.

Keywords: Radio, Radio number, Radio labeling.

Received July 8, 2021; Accepted October 11, 2021

β_6 Near Rings

C. Dhivya,

Research Scholar Reg.No: 21112012092011, PG & Research Department of Mathematics,

A.P.C.Mahalaxmi College for Women, Thoothukudi.

Dr. D. Radha,Assistant Professor, PG & Research Department of Mathematics, A.P.C.Mahalaxmi College for Women,
Thoothukudi.

Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627012, Tamilnadu, India.

ABSTRACT

In this paper we introduce a new near ring called β_6 Near ring. We have discussed some properties of β_6 near rings. It is proved that if N is a β_6 near ring then $yNy = Ny^2$ for all $y \in N$. We have shown that every homomorphic image of a β_6 near ring is also a β_6 near ring. We have obtained the necessary and sufficient condition for a β_6 near ring to admit mate functions. It is shown that every zero-symmetric β_6 near ring with commutativity has Strong IFP.

Keywords: -

Commutative, Homomorphism, Mate function, Strong IFP, Zero symmetric.

1.Introduction

Near rings can be thought of as generalized rings: if in a ring we ignore the commutativity of addition and one distributive law, we get a near ring. Gunter Pilz "Near Rings" is an extensive collection of the work done in the area of near rings.

Throughout this paper N stands for a right near ring $(N, +, \cdot)$, with at least two elements and '0' denotes the identity element of the group $(N, +)$ and we write xy for $x \cdot y$ for any two elements x, y of N . Obviously $0n = 0$ for all $n \in N$. If, in addition, $n0 = 0$ for all $n \in N$ then we say that N is **zero symmetric**.

2.Preliminaries**Definition 2.1 [3]**

A **right near ring** is a non-empty set N together with two binary operations "+" and "." such that (i) $(N, +)$ is a group (ii) (N, \cdot) is a semigroup (iii) $(n_1 + n_2)n_3 = n_1n_3 + n_2n_3$ for all $n_1, n_2, n_3 \in N$.

Definition 2.2 [12]

A STUDY ON SR NEAR-RINGS

Dr.D.Radha¹, S.R.Veronica Valli², R.Soundarya³, R.Geetha⁴

¹Assistant Professor, PG and Research Department of Mathematics,

A.P.C.Mahalaxmi College for Women, Thoothukudi.

² Research Scholar (Reg. No.21212012092003),

PG and Research Department of Mathematics,

A.P.C.Mahalaxmi College for Women, Thoothukudi.

^{3,4}II M.Sc.(Maths), PG and Research Department of Mathematics,

A.P.C.Mahalaxmi College for Women, Thoothukudi.

*Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627012,
Tamilnadu, India.*

ABSTRACT

In this paper, a new notion called SR Near ring has been profounded. It has been observed that every S_2 near ring is a SR Near ring and also the vice-versa, whenever it holds good a necessary and sufficient condition for the transition. It is observed that the structure of a SR near ring is preserved under homomorphism added with certain other qualities and it undergoes morphological changes when induced with certain other structures. Every SR near ring satisfies the Insertion of Factors Property. The ideology that, the quality of a SR near ring is preserved under various consequences has been illustrated.

Keywords: Near rings, Insertion of Factors Property, Strong IFP, ($*$, IFP) S_2 near ring, Homomorphism.

SOME EXTENSIVE RESULTS ON UNIT B_1 NEAR-RINGS

Dr.D.Radha¹, S.R.Veronica Valli², S.Karpaga Lakshmi³

¹*Assistant Professor, PG and Research Department of Mathematics,*

A.P.C.Mahalaxmi College for Women, Thoothukudi.

²*Research Scholar (Reg. No.21212012092003),*

PG and Research Department of Mathematics,

A.P.C.Mahalaxmi College for Women, Thoothukudi.

³*II M.Sc.(Maths), PG and Research Department of Mathematics,*

A.P.C.Mahalaxmi College for Women, Thoothukudi.

*Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627012,
Tamilnadu, India.*

ABSTRACT

In this paper, some results on B_1 Near Rings have been proved using some of the existing sub structures of near rings. It is observed that the structure of a B_1 near ring is preserved under homomorphism added with certain other qualities. And also, the transition of a S_1 Near Ring into a B_1 near ring upon inclusion of a supportive property is verified. A new notion called Unit B_1 near ring have been introduced and it is found that every unit B_1 near ring is a B_1 near ring. Every ideal of a near ring N is found to be a Unit B_1 near ring. The quality of a unit B_1 near ring is preserved under various circumstances and undergoes changes to become another substructure of a near ring.

Keywords: Near rings, B_1 Near Rings, S_1 Near Rings, homomorphism.

1.Introduction

Gunter Pilz “Near Rings” is an exclusive collection of the work done in the area of Near rings. Near rings can be thought of as generalized rings: if in a ring we ignore the property of commutativity of addition and one distributive law, we get a near ring. Throughout this paper N stands for a right near ring $(N, +, \cdot)$ with atleast two elements. 0 denotes the identity element of the group $(N, +)$ and we write xy for $x \cdot y$ for any two

A Study on the Characteristics of R_1 – Near Ring**S.R.Veronica Valli¹, K.Bala Deepa Arasi², D.Radha³**¹Research Scholar, PG & Research Department of Mathematics,

A.P.C.Mahalaxmi College for Women, Thoothukudi.

^{2,3}Assistant Professor, PG & Research Department of Mathematics,

A.P.C.Mahalaxmi College for Women, Thoothukudi.

Abstract

In this paper, we introduce the concept of an R_1 – Near Ring. The properties of R_1 – Near Ring are discussed using the concept of Zero divisors, Idempotents and Sub-Commutativity. On some characteristics of Near Rings, added with homomorphism the resultant is proved to be another substructure of Near Ring. A Pseudo Commutative R_1 – Near Ring has strong IFP, under the existence of identity. Anti-homomorphism preserves the quality of an R_1 – Near Ring whenever it is weak commutative. Every sub-commutative near ring is an R_1 – Near Ring specified to superlative conditions. It is utmost a close correlation for a near ring to be a sub-commutative R_1 – Near Ring. Every β_1 – Near Ring is a β_2 – Near Ring, whenever it is an R_1 – Near Ring. Structure of an R_1 – Near Ring is preserved under certain characterisations.

Keywords: Zero divisors, Pseudo Commutative R_1 – Near Ring, IFP, Anti-homomorphism, β_1 – Near Ring, Weak Commutative, β_2 – Near Ring, Sub-commutative R_1 – Near Ring.

1. Introduction

Near Rings can be thought of as generalised rings: if in a ring we ignore the commutativity of addition and one distributive law, we get a near ring. Gunter Pilz [] ‘Near Rings’ is an extensive collection of the work done in the area of near rings. Throughout this paper, N stands for a right near ring with at least two elements and ‘0’ denotes the identity element of the group $(N, +)$ and we write xy for $x.y$ for any two elements x, y of N . Obviously $0n=0$ for all $n \in N$ then we say that N is zero symmetric. An element a is said to be nilpotent if $a^k = 0$ for some positive integer k . In this paper, we discuss the various

Kanpur Philosophers

ISSN 2348-8301

International Journal of humanities, Law and
Social Sciences Published biannually by New
Archaeological & Geological Society Kanpur India



Vol. XI, Issue 1, No.11 : 2022

NEBLA NEAR RING

S.R.VERONICA VALLI, Research Scholar (Reg. No.21212012092003),
PG and Research Department of Mathematics,
A.P.C.Mahalaxmi College for Women, Thoothukudi,
Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627012,
Tamilnadu, India

Dr. K.BALA DEEPA ARASI, Assistant Professor, PG and Research Department of
Mathematics, A.P.C.Mahalaxmi College for Women, Thoothukudi,
Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627012,
Tamilnadu, India

ABSTRACT

In this paper, the concept of Nebla Near-Ring has been introduced. The properties like the one satisfying the Insertion of Factors property (IFP), epimorphism, Zero Symmetricity, (*, IFP), homomorphism, sub directly irreducibility, commutativity, existence of non-zero zero divisors, sub-commutativity and some more are verified and upon those the conditions inducing a near ring to be a nebula near ring is also pro-founded. The certainties which preserve the structure of a nebula near ring is analysed. The ideologies involving various properties of inheritance from the other substructures are discussed. The role of regularity and the changes induced upon a nebula near ring being regular is also observed.

Keyword: Nebula near Ring, Theory

1. INTRODUCTION

Near Rings can be thought of as generalised rings: if in a ring we ignore the commutativity of addition and one distributive law, we get a near ring. Gunter Pilz [1] “Near Rings” is an extensive collection of the work done in the area of near rings. Throughout this paper, N stands for a right near ring with at least two elements and ‘0’ denotes the identity element of the group $(N, +)$ and we write xy for $x.y$ for any two elements x, y of N . Obviously, $0n=0$ for all $n \in N$ then we say that N is zero symmetric. An element a is said to be nilpotent if $a^k = 0$ for some positive integer k . In this paper, we discuss the various characteristics of an R_1 – Near Ring. The terms which are left undefined in this paper can be found in Gunter Pilz’s, Near Ring Theory.

2. PRELIMINARIES

Definition 2.1

A **Right Near-ring** is a set N with two binary operations ‘+’ and ‘.’ such that
a. $(N, +)$ is a group (not necessarily abelian)

Shodhasambhita : Journal of Fundamental & Comparative Research
Vol. VIII, No. 11 (XII) : 2022

ISSN: 2277-7067

THE ROLE OF REGULARITY OVER IDEMPOTENT SEMI GROUPS

S.R.VERONICA VALLI, Research Scholar (Reg. No.21212012092003)

PG and Research Department of Mathematics, A.P.C.Mahalaxmi College for Women, Thoothukudi.
(Affiliated to ManonmaniamSundaranar University, Abishekapatti, Tirunelveli – 627012)

Dr. T.THANGAM, Assistant Professor,

PG and Research Department of Mathematics, Govindammal Adithanar College for Women,
Tiruchendur.

(Affiliated to ManonmaniamSundaranar University, Abishekapatti, Tirunelveli – 627012)

Dr. K.BALA DEEPA ARASI, Assistant Professor,

PG and Research Department of Mathematics, A.P.C.Mahalaxmi College for Women, Thoothukudi.
(Affiliated to ManonmaniamSundaranar University, Abishekapatti, Tirunelveli – 627012)

ABSTRACT

The concept of Regularity is induced over Idempotent elements and the results have been subjected to various classifications. Idempotency is considered as a prominent substructure in the theory of semi group. The condition for a semi group to be normal is discussed. The conditions involving both left and right regular semi groups and the properties and conditions arrived when it is so, is discussed further. It plays an important role in the structure of semigroups especially on regular semigroups. A semigroup is said to be an inverse semigroup if and only if it is regular and its idempotents commute. This article reviews about some research work done about the structure of semigroups with a special emphasis on its idempotents

Keywords: Regularity, Idempotency, normal semi group, regular semi groups, inverse semi group.

INTRODUCTION

The formal study of semigroups began in the early 20th century. The name semigroup originates in the fact that a semigroup generalizes a group by preserving only associativity and closure under the binary operation from the axioms defining a group. The concept of a semigroup is very simple and plays an important role in the development of Mathematics. The theory of semigroup is similar to group theory and ring theory. The earliest major contribution to the theory of semigroups are strongly motivated by comparisons with groups and rings. In other areas of applied Mathematics, semi groups are fundamental models for linear time-invariant systems. If the semigroup operation is commutative, then the semigroup is called a *commutative semigroup* or (less often than in the analogous case of groups) it may be called an abelian semigroup. Throughout this paper S stands for an idempotent Semi group.

PRELIMINARIES

Definition 2.1

A group S is said to be a *Semigroup* if it is closed and associative with respect to the operations as defined in the group.

Definition 2.2

An element a in semi group S is said to be an idempotent element if $a^2 = a$.

Definition 2.3

A Semi group S is said to be rectangular if $aba = a$ for all a, b in S.

Definition 2.4

A Semi group is left (right) regular if $aba = ab$ ($aba = ba$) for all a, b in S.

Definition 2.5

S is said to be regular in general if it is both left and right regular.

THE ROLE OF REGULARITY IN QUASI WEAK COMMUTATIVE SEMI GROUPS

Dr.K.Bala Deepa Arasi¹, S.R.Veronica Valli², M.Suba saraswathi³

¹*Assistant Professor, PG and Research Department of Mathematics,*

A.P.C.Mahalaxmi College for Women, Thoothukudi.

²*Research Scholar (Reg. No.21212012092003),*

PG and Research Department of Mathematics,

A.P.C.Mahalaxmi College for Women, Thoothukudi.

³*II M.Sc.Student, PG and Research Department of Mathematics,*

A.P.C.Mahalaxmi College for Women, Thoothukudi.

*Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627012,
Tamilnadu, India.*

ABSTRACT

In this paper, the concept of quasi weak commutativity is induced in a semi group. The conditions for a semi group to be regular, both left and right are detailed. The conditions when a left regular semi group is regular and also the conditions for a right regular semi group is regular is obtained. A semi group which is induced with quasi weak commutativity is found to be regular. A semi group along with quasi weak commutative property when found to be Boolean is observed to be a Regular Semi group. A semi group which is both left and right regular is found to be commutative.

Keywords: Semi group, Quasi Weak Commutativity, left regular, right regular, Boolean, Regular Semi group.

1) INTRODUCTION

The formal study of semigroups began in the early 20th century. The name semigroup originates in the fact that a semigroup generalizes a group by preserving only associativity and closure under the binary operation from the axioms defining a group. The concept of a semi group is very simple and plays an important role in the development of Mathematics. The theory of semi group is similar to group theory and ring theory. The earliest major contribution to the theory of semigroups are strongly motivated by comparisons with groups and rings. In other areas of applied Mathematics, semi groups

Shodhasambhita : Journal of Fundamental & Comparative Research
Vol. VIII, No. 11 (XII) : 2022

ISSN: 2277-7067

A STUDY ON UNIT B_1 NEAR-RINGS

S.R.VERONICA VALLI, Research Scholar (Reg. No.21212012092003)

PG and Research Department of Mathematics, A.P.C.Mahalaxmi College for Women, Thoothukudi.
(Affiliated to ManonmaniamSundaranar University, Abishekapatti, Tirunelveli – 627012)

Dr. M.KALAISELVI, Assistant Professor,

PG and Research Department of Mathematics, Govindammal Adithanar College for Women,
Tiruchendur.

(Affiliated to ManonmaniamSundaranar University, Abishekapatti, Tirunelveli – 627012)

Dr. K.BALA DEEPA ARASI, Assistant Professor,

PG and Research Department of Mathematics, A.P.C.Mahalaxmi College for Women, Thoothukudi.
(Affiliated to ManonmaniamSundaranar University, Abishekapatti, Tirunelveli – 627012)

ABSTRACT

In this paper, some results on B_1 Near Rings have been proved using some of the existing sub structures of near rings. It is observed that the structure of a B_1 near ring is preserved under homomorphism added with certain other qualities. And also, the transition of a S_1 Near Ring into a B_1 near ring upon inclusion of a supportive property is verified. A new notion called Unit B_1 near ring have been introduced and it is found that every unit B_1 near ring is a B_1 near ring. Every ideal of a near ring N is found to be a Unit B_1 near ring. The quality of a unit B_1 near ring is preserved under various circumstances and undergoes changes to become another substructure of a near ring

Keywords: Near rings, B_1 Near Rings, S_1 Near Rings, homomorphism.

INTRODUCTION

Near rings can be thought of as generalized rings: if in a ring we ignore the property of commutativity of addition and one distributive law, we get a near ring. Throughout this paper N stands for a right near ring $(N, +, \cdot)$ with at least two elements and '0' denotes the identity element of the group $(N, +)$ and we write xy for $x \cdot y$ for any two elements x, y belonging to the right near ring N . Gunter Pilz "Near Rings" is an exclusive collection of the work done in the area of Near rings. Throughout this paper, N stands for a Unit B_1 Near Ring.

2.Preliminaries

Definition 2.1

A near ring N is Boolean if and only if $x^2 = x$ for all $x \in N$.

Definition 2.2

A zero divisor is an element that is either a left or a right zero divisor.

Definition 2.3

An element $u \in N$ is said to be a unit element if $a \cdot u = a = u \cdot a$ for all $a \in N$.

Proposition 2.4

Let N be a B_1 near-ring. Then for every $a \in N$, there exists $x \in N^*$ such that the following are true.

- (i) There exists $n \in N$ such that $axa = nax$.
- (ii) $Nax \subset Na \cap Nx$.
- (iii) If N is Boolean then $Naxa = Nxa$.

Definition 2.5

A Near Ring N is said to be S_1 Near Ring if for every $a \in N$ there exists $x \in N^*$ such that $axa = xa$.

ON SC^* - CLOSED SETS IN TOPOLOGICAL SPACESA. Chandrakala¹ and K. Bala Deepa Arasi²¹PG Student,

A.P.C. Mahalaxmi College for Women, Thoothukudi, TN.

²Assistant Professor of Mathematics,

A.P.C. Mahalaxmi College for Women, Thoothukudi, TN.

chandrapriya7311@gmail.com, baladeepa85@gmail.com

ABSTRACT:

The aim of this paper is to introduce the notation of SC^* - closed sets in topological spaces and study their basic properties. Also we obtain several characterizations of SC^* - closed sets and some preservation propositions for SC^* - closed sets.

Keywords: C^* - open, semi closure, SC^* - closed.

1. INTRODUCTION

Norman Levine introduced and studied generalized closed (briefly g -closed) sets, and semi-open sets in 1963 and 1970. In the year 1980, Jain introduced totally continuous functions. Battacharya and Lahiri introduced and investigated semi-generalized closed (briefly sg -closed) sets in 1987. Arya and Nour defined generalized semi-closed (briefly gs -closed) sets for obtaining some characterizations of semi normal spaces in 1990. Veerakumar introduced \hat{g} -closed sets in 1991. Palaniappan and Rao introduced generalized semi-pre closed (briefly rg -closed) in 1993. In this paper we introduce SC^* -closed sets in topological spaces and study its basic properties.

Section 2 deals with the preliminary concepts. In section 3, SC^* -closed sets are introduced and their basic properties are discussed.

2. PRELIMINARIES

Throughout this is paper X denotes a topological spaces on which no separation axiom is assumed. For any subset A of X , $cl(A)$ denotes the closure of A , $int(A)$ denotes the interior of A , $bcl(A)$ denotes the b -closure of A , $scl(A)$ denotes the semi-closure of A . Further $X \setminus A$ denotes the complement of A in X . The following definitions are very useful in the subsequent sections.

Definition 2.1: A subset A of a topological space X is called



AVERAGE DOMINATION ON ANTI FUZZY GRAPH

V. MAHESWARI¹ and U. SYEDUL FAHIMA²

¹Research Scholar, Reg. No.20112012092003

^{1,2}PG and Research Department of Mathematics

A. P. C. Mahalaxmi College for Women

Thoothukudi-628002

Affiliated to Manonmaniam Sundaranar

University Abishekapatti

Tirunelveli-627012, Tamil Nadu, India

E-mail: mahiraj2005@gmail.com

fahimaumarali@gmail.com

Abstract

In this paper, we introduce the average domination on anti fuzzy graph. Further, we investigate the exact value of average domination number for some standard anti fuzzy graphs. Also, establish the relationship between the average domination number and independent domination number on anti fuzzy graph with suitable example.

1. Introduction

A. Rosenfeld introduced the concept of Fuzzy graphs in 1975. R. Seethalakshmi and R. B. Gnanajothi [7] introduced the concept of Anti fuzzy graphs. Further, R. Muthuraj and A. Sasirekha [5, 6] developed the concept on anti fuzzy graph and also introduced the domination on anti fuzzy graph. Henning [1] introduced the concept of average domination and independent domination numbers. In this paper, average domination number is studied for some standard anti fuzzy graphs and the relationship between the average domination number and independence number on anti fuzzy graph is established.

2020 Mathematics Subject Classification: 05C72.

Keywords: Anti fuzzy graph, Domination, Average domination, Independence number.

Received July 8, 2021; Accepted October 11, 2021



RECIPROCAL GD-DISTANCE OF PRODUCT GRAPHS

K. THANGA KANNIGA, V. MAHESWARI and K. PALANI

¹Research Scholar, Reg. No. 19122012092012

²Assistant Professor, ³Associate Professor

PG and Research, Department of Mathematics

A.P.C. Mahalaxmi College for Women

Thoothukudi-628002, Tamilnadu, India

(Affiliated to Manonmaniam Sundaranar University

Tirunelveli-627012, Tamilnadu, India)

E-mail: kannigaprasathkpk@gmail.com

mahiraj2005@gmail.com

palani@apcmcollege.ac.in

Abstract

In the mathematical field of graph theory, the distance between two vertices in a graph is the number of edges in a shortest path connecting them. This is also known as the geodesic distance. The reciprocal Gd-distance ($Rd^{Gd}(G)$) of a graph G is defined as,

$Rd^{Gd}(G) = \sum_{\{x,y\} \subseteq V(G)} \left[\deg x + \deg y + \frac{1}{d_G} \right]$. In this paper, we determine the exact value of the

reciprocal Gd-distance of the tensor product and the strong product of two graphs.

1. Introduction

Throughout the article we consider nontrivial, finite, simple and connected graphs. Given an undirected graph $G = (V(G), E(G))$, with vertex set $V(G)$ and edge set $E(G)$. The first Zagreb index is defined as

$M_1(G) = \sum_{uv \in E(G)} [d_G(u) + d_G(v)]$. The first Zagreb coindex is defined as

$\overline{M}_1(G) = \sum_{xy \notin E(G)} [d_G(x) + d_G(y)]$.

2020 Mathematics Subject Classification: 05C12, 05C76.

Keywords: Gd-distance, Reciprocal Gd-distance, Harary index, Zagreb index, Zagreb coindex, Tensor product, Strong product.

Received November 7, 2021; Accepted December 21, 2021



ASCENDING BI-PENDANT DOMINATION DECOMPOSITION POLYNOMIAL OF PATH AND CYCLE

V. BRISHNI¹, V. MAHESWARI² and K. PALANI³

¹Research Scholar, Reg. No. 19222012092002

²Assistant Professor

³Associate Professor

PG and Research, Department of Mathematics

A.P.C. Mahalaxmi College for Women

Thoothukudi, TN, India

Affiliated to Manonmaniam Sundaranar University

Abishekapatti, Tirunelveli-627012, TN, India

E-mail: mahiraj2005@gmail.com

palani@apcmcollege.ac.in

Abstract

Let $G = (V, E)$ be a simple connected graph. We introduced Ascending Bi-Pendant Domination Decomposition of Graphs and is defined as a collection $\{G_1, G_2, G_3, \dots, G_n\}$ of subgraphs of G such that every edge of G is exactly once in G_i , each G_i is connected and $\gamma_{pe}(G_i) = i + 1, 1 \leq i \leq n$. In this paper, we introduce Ascending Bi-Pendant Domination Decomposition Polynomial of a graph. Also, we have found that Ascending Bi-Pendant Domination Decomposition Polynomial for P_p and C_p .

1. Introduction

Let $G = (V, E)$ be a simple connected graph. All the graphs considered here are finite and undirected. A vertex of degree zero is called an isolated vertex and a vertex of degree one is called a pendant vertex. An edge incident with a pendant vertex is called a pendant edge. Pendant Domination in some

2020 Mathematics Subject Classification: 05C69, 05C70.

Keywords: Dominating Set, Pendant Dominating Set, Bi-Pendant Dominating Set, Pendant Domination Decomposition and Bi- Pendant Domination Decomposition.

Received November 4, 2021; Accepted December 15, 2021



ANTI FUZZY PRIME IDEALS IN NEAR-SUBTRACTION SEMIGROUPS

K. MUMTHA¹, V. MAHALAKSHMI² and S. USHA DEVI³

¹Research Scholar

²Assistant Professor

PG and Research Department of Mathematics

A. P. C. Mahalaxmi College for Women, Thoothukudi

Affiliated to Manonmaniam Sundaranar University

Tirunelveli, Tamilnadu, India

E-mail: mamthaksai8696@gmail.com

mahalakshmi@apcmcollege.ac.in

³Assistant Professor

Department of Mathematics

Sri Parashakthi College for Women

Courtallam, India

E-mail: ushadevinathan@gmail.com

Abstract

Conceptualisation and characterization of fuzzy prime ideals in near-subtraction semigroups is already carried out. We, in our paper, introduce the concept of anti-fuzzy prime ideals in near-subtraction semigroups. Further, we explore some of its properties.

Introduction

The concept of fuzzy set was introduced by Zadeh [2]. Since then, these ideas have been applied to other algebraic structures such as semigroups, rings, near-rings, subtraction semigroup etc. In [3], Dheena and Mohanraj applied the concept of fuzzy sets to prime ideals in subtraction algebra. They proved various interesting results. In [4], Nagaiah Thandu and Narasiman

2020 Mathematics Subject Classification: 03E72, 08A72.

Keywords: Fuzzy ideals, Anti-fuzzy ideal, Fuzzy prime ideals.

Received May 17, 2021; Accepted June 7, 2021



Neutrosophic Fuzzy X-Sub algebra of Near-Subtraction Semigroups

J.Siva Ranjini*¹ V. Mahalakshmi²

¹Research Scholar(Reg No.19222012092003) Department of Mathematics, A. P. C. Mahalaxmi College for Women
Thoothukudi-628002, Tamilnadu, India.Affiliated to Manonmaniam Sundaranar University, Tirunelveli-627012, TamilNadu,
India. *E-mail:sivaranjini@apcmcollege.ac.in

²Assistant Professor, Department of Mathematics, A. P. C. Mahalaxmi College for Women Thoothukudi-628002, Tamilnadu,
India.Affiliated to Manonmaniam Sundaranar University, Tirunelveli-627012, TamilNadu,
IndiaEmail:mahalakshmi@apcmcollege.ac.in

*E-mail:sivaranjini@apcmcollege.ac.in

Abstract: Neutrosophy fuzzy set is the extended research version of the fuzzy set that deals with imprecise and indeterminate data Neutrosophic deals with the membership, non-membership and indeterminacy function. Neutrosophy have achieved in various fields such as medical diagnosis, decision making problems, image processing etc.,The motivation of the present article is to extend the concept of Neutrosophic fuzzy X-subalgebra in near-subtraction semigroups. We will discuss along with some fundamentals and their algebraic Properties.

Keywords: Near subtraction Semigroup, Fuzzy Sub algebra , Fuzzy X-sub algebra, Neutrosophic Fuzzy Sub algebra, Neutrosophic Fuzzy X-sub algebra

1. Introduction

The Theory of Fuzzy subsets, fuzzy logic found in the research area of L.A. Zadeh[15]. The theory of Intuitionistic fuzzy set is the extension of the fuzzy set that deals with truth and false membership data. From the extension version, the term Neutrosophy was identified in the F. Smarandache [13]. Neutrosophy is a new concept in philosophy. Neutrosophic deals with the membership, non-membership and indeterminacy function. Neutrosophy have achieved in various fields such as medical diagnosis, decision making problems, image processing etc., Neutrosophy became the motivation of our manuscript.

Our present manuscript describes the Neutrosophic Fuzzy X-sub algebra (NFX-SA) of Near-Subtraction Semigroup and has conceptualized some basic algebraic properties.

The results obtained are entirely more beneficial to the researchers. Our aim of this manuscript is given as follows:

- (i)To examine the some basic properties and fundamentals.
- (ii) Also expand the Intersection, Quotient of the Set.
- (iii) We also describe the Complement of the set.

2. Preliminaries

Author(s), Paper's title



Neutrosophic Fuzzy Strong Bi-ideals of Near-Subtraction Semigroups

Siva Ranjini J ^{1*}, Mahalakshmi V ²

¹ Research Scholar (Reg No. 19222012092003), P.G & Research Department of Mathematics, A.P.C. Mahalaxmi College for Women, Thoothukudi, Tamilnadu, India; e-mail@sivaranjini@apcmcollege.ac.in

² Assistant Professor, P.G & Research Department of Mathematics, A.P.C. Mahalaxmi College for Women, Thoothukudi, Tamilnadu, India; e-mail@mahalakshmi@apcmcollege.ac.in

Affiliated to Manonmanian Sundaranar University, Tirunelveli, Tamilnadu, India.

* Correspondence: e-mail@sivaranjini@apcmcollege.ac.in

Abstract: The theory of Neutrosophy fuzzy set is the extension of the fuzzy set that deals with imprecise and indeterminate data. Neutrosophy is a new branch of Philosophy. We already conceptualized the Neutrosophic fuzzy bi-ideals of Near-subtraction Semigroups (NFBI). In this article, we extend our study to strong bi-ideals. We examine some of its fundamentals and algebraic structures. Our aim of this manuscript are given as follows:

- (i) To explore the new ideas in Neutrosophic fuzzy Near-subtraction semigroups of said bi-ideals and strong bi-ideals.
- (ii) To examine the some basic properties and fundamentals.
- (iii) Also expand the direct product and regularity of Neutrosophic fuzzy strong bi-ideals (NFSBI) of a Near-Subtraction Semigroups.

Keywords: Neutrosophic Fuzzy sub algebra, Neutrosophic fuzzy X-sub algebra, Neutrosophic fuzzy bi-ideal, Neutrosophic fuzzy strong bi-ideal.

1. Introduction

The fuzzy set was first introduced by L.A. Zadeh [18]. It was conceptualized the grade of truth values belonging to a unit interval. The fuzzy sub nearrings and fuzzy ideals of near-rings was introduced by Abou zaid [1]. V. Chinnadurai and S. Kadalarasi [4] examined the direct product of fuzzy subnearring, fuzzy ideal and fuzzy R-subgroups. Atanassov [3] expanded the intuitionistic fuzzy set to deal with complicated version. It explained the truth and false membership functions. It may be applicable in various fields such as medicine, decision making techniques.

Later, Florentin Smarandache [13] introduced the concept of Neutrosophy. Neutrosophy is an extension of fuzzy logic in which indeterminacy also included. In Neutrosophic logic, we may have truth membership functions, false membership function and indeterminate functions. This idea of neutrosophic set has a remarkable achievement in various fields like medical diagnosis, image processing, decision making problem, robotics and so on. I. Arockiarani [8] considers the neutrosophic set with value from the subset of $[0,1]$ and extended the research in fuzzy

Sivaranjini J, Mahalakshmi V, Neutrosophic Fuzzy Strong bi-ideals of Near-Subtraction Semigroups



INTERVAL VALUED FUZZY STRONG BIIDEALS OF NEARSUBTRACTION SEMIGROUPS

J. SIVA RANJINI¹ and V. MAHALAKSHMI²

¹Research Scholar (Reg.No.19222012092003)

²Assistant Professor

^{1,2}PG and Research Department of Mathematics

A. P. C. Mahalaxmi College for Women

Thoothukudi-628002, Tamilnadu, India

Affiliated to Manonmaniam Sundaranar University

Abishekapatti, Tirunelveli-627012 TamilNadu, India

E-mail: sivaranjini@apcmcollege.ac.in

mahalakshmi@apcmcollege.ac.in

Abstract

The main objective of the manuscript is to investigate and study the notion of $i-v$ fuzzy Strong biideals of near-subtraction semigroups. We already conceptualized the $i-v$ fuzzy biideals of Near-subtraction Semigroups. Interval valued functions commonly deals with the membership data. In this paper, we extend our study to strong bi-ideals. We can this concept to examine Union, Direct product etc. on them. Here we expand the permutable Set and Regularity.

1. Introduction

The Concepts of Fuzzy subsets, fuzzy logic and interval valued ($i-v$) fuzzy subsets finds in the research work of L. A. Zadeh [18]. Interval valued fuzzy subsets basically defines the membership functions. These membership functions had closed intervals. Mostly all others have single members. The concept of fuzzy ideal found in the Research work of Lee and C. H. Park [5]. We have investigated these works in subtraction algebras. They also examine

2020 Mathematics Subject Classification: Primary 03E72; Secondary 16Y30, 06D72.

Keywords: Fuzzy biideal, Fuzzy Strong biideal, Fuzzy X-sub algebra, Interval valued fuzzy biideal, Interval valued fuzzy Strong biideal.

Received November 16, 2021; Accepted December 15, 2021



Neutrosophic Fuzzy X-Sub algebra of Near-Subtraction Semigroups

J.Siva Ranjini*¹ V. Mahalakshmi²

¹Research Scholar(Reg No.19222012092003) Department of Mathematics, A. P. C. Mahalaxmi College for Women
 Thoothukudi-628002, Tamilnadu, India.Affiliated to Manonmaniam Sundaranar University, Tirunelveli-627012, TamilNadu,
 India. *E-mail:sivaranjini@apcmcollege.ac.in

²Assistant Professor, Department of Mathematics, A. P. C. Mahalaxmi College for Women Thoothukudi-628002, Tamilnadu,
 India.Affiliated to Manonmaniam Sundaranar University, Tirunelveli-627012, TamilNadu,
 IndiaEmail:mahalakshmi@apcmcollege.ac.in

*E-mail:sivaranjini@apcmcollege.ac.in

Abstract: Neutrosophy fuzzy set is the extended research version of the fuzzy set that deals with imprecise and indeterminate data Neutrosophic deals with the membership, non-membership and indeterminacy function. Neutrosophy have achieved in various fields such as medical diagnosis, decision making problems, image processing etc.,The motivation of the present article is to extend the concept of Neutrosophic fuzzy X-subalgebra in near-subtraction semigroups. We will discuss along with some fundamentals and their algebraic Properties.

Keywords: Near subtraction Semigroup, Fuzzy Sub algebra , Fuzzy X-sub algebra, Neutrosophic Fuzzy Sub algebra, Neutrosophic Fuzzy X-sub algebra

1. Introduction

The Theory of Fuzzy subsets, fuzzy logic found in the research area of L.A. Zadeh[15]. The theory of Intuitionistic fuzzy set is the extension of the fuzzy set that deals with truth and false membership data. From the extension version, the term Neutrosophy was identified in the F. Smarandache [13]. Neutrosophy is a new concept in philosophy. Neutrosophic deals with the membership, non-membership and indeterminacy function. Neutrosophy have achieved in various fields such as medical diagnosis, decision making problems, image processing etc., Neutrosophy became the motivation of our manuscript.

Our present manuscript describes the Neutrosophic Fuzzy X-sub algebra (NFX-SA) of Near-Subtraction Semigroup and has conceptualized some basic algebraic properties.

The results obtained are entirely more beneficial to the researchers. Our aim of this manuscript is given as follows:

- (i) To examine the some basic properties and fundamentals.
- (ii) Also expand the Intersection, Quotient of the Set.
- (iii) We also describe the Complement of the set.

2. Preliminaries

J. Siva Ranjini and V. Mahalakshmi, Neutrosophic Fuzzy X-Subalgebra of Near-Subtraction Semigroups

How to Cite:

Gurulakshmi, P., & Fernando, J. (2022). Antibacterial and anticancer activity of trimetal nanoparticles. *International Journal of Health Sciences*, 6(S4), 4928–4934.
<https://doi.org/10.53730/ijhs.v6nS4.9197>

Antibacterial and anticancer activity of trimetal nanoparticles

P. Gurulakshmi

Research Scholar (Reg.No: 19122232032011), PG and Research Department of Chemistry, V.O.Chidambaram College, Thoothukudi, Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli - 627 012, Tamil Nadu, India & Assistant Professor, A. P. C. Mahalaxmi College for Women, Thoothukudi
Corresponding author email: guru199127@gmail.com

Jessica Fernando

Assistant Professor, V.O.Chidambaram College, Thoothukudi, Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli - 627 012, Tamil Nadu, India
Email: jessivoc@yahoo.com

Abstract--Medical field is faced with the major threat of antibiotic resisting bacteria and has turned to nanotechnology for both the drugs and their delivery. In the current study, the antibacterial and anti-cancer activities of La/Bi/Cu trimetalnanoparticles have been evaluated. They were found to decrease the cell viability of HOS cell lines in in-vitro analysis. La/Bi/Cu trimetalnanoparticles were also found to control growth of two Gram negative bacteria (Enterobacterclocae, Pseudomonas Vs1)and two Gram positive bacteria(Bacillus 1.3,Bacillus8.3)at different concentration (50-150µg/L).Based on the results, the nanoparticles can be used against human cancer and other infectious diseases.

Keywords--trimetal, antibacterial, anticancer, HOS cel.

Introduction

Nanomaterials and Nanoparticles (NPs) (particularly metallicNPs) have novel and exceptional physical and biological properties [1-5].For decades, they have shown wide applications in diverse fields ranging from catalysis and electronics, Optoelectronics, bioengineering, sensing, tunable resonances, fuel cells, information/energy storage, and nanomedicine [6-12]. According to the number of metals/metal oxides involved, metal NPs can be divided into single metals (mono-metallic) and bi- or tri-metallic NPs. Among these materials, bi- and tri-metallic NPs have recently gained attention due to their unusual enhanced properties and novel applications [13-15]. Compared with mono-metallic NPs and bi- metallic

International Journal of Health Sciences ISSN 2550-6978 E-ISSN 2550-696X © 2022.

Manuscript submitted: 27 March 2022, Manuscript revised: 18 May 2022, Accepted for publication: 9 June 2022
4928



GRAPHENE OXIDE-MODIFIED V_2O_5 NANOPARTICLES: SYNTHESIS, CHARACTERIZATION AND MORPHOLOGICAL PROPERTIES

S.Kalaiaarasi^{1,2}, S. Shyamala³, M. Kavitha³, R. R. Muthuchudarkodi*³

¹Research scholar (Reg. No. 18222232032025), PG and Research Department of Chemistry V. O. Chidambaram College, Thoothukudi, Tamilnadu (Affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu), India

²PG and Research Department of Chemistry, A.P.C. Mahalaxmi College for Women, Thoothukudi, Tamilnadu, India

³PG and Research Department of Chemistry, V. O. Chidambaram College, Thoothukudi, Tamilnadu, India

*Corresponding author: muthu.rajaram@gmail.com

ABSTRACT

In the present investigation, reduced graphene oxide/Vanadium oxide (rGO/ V_2O_5) nanocomposite was synthesized by the chemical synthesis method. Reduced Graphene oxide was synthesized by Hummer's method. rGO/ V_2O_5 nanocomposite was also successfully synthesized using ammonium metavanadate as the source of vanadium. The crystalline structure, optical properties, and morphology of rGO/ V_2O_5 nanocomposite were characterized by UV-VIS spectroscopy, IR spectroscopy, X-ray diffraction (XRD) studies, Photoluminescence (PL) spectroscopy and Field Emission Scanning Electron Microscope (FESEM) with EDAX spectroscopy. The optical property was analyzed using UV-Vis and Photoluminescence (PL) spectroscopy. The XRD spectrum showed diffraction peaks corresponding to the crystal planes of crystalline vanadium oxide. The XRD data confirms that V_2O_5 has an orthorhombic structure. The morphological studies of the nanocomposite revealed crystal-like morphology. The energy dispersive analysis confirmed the presence of Carbon, vanadium and oxygen in the doped rGO/ V_2O_5 lattice. The PL results revealed the emission peak at 617nm and 397nm for V_2O_5 and rGO/ V_2O_5 nanocomposite, respectively.

Keywords: rGO, V_2O_5 , FESEM, XRD, Nanocomposite.

1. INTRODUCTION

Nanotechnology is the science of production, manipulation, and use of materials at the subatomic level to produce novel products and processes [1]. Recently, there has been great interest in fabricating and utilizing novel graphene oxide-metal oxide nanocomposites for environmental remediation by the degradation and elimination of toxic organic contaminants and heavy metals, and antibacterial applications. Compared to graphene oxide, graphene oxide-metal oxide nanocomposites show a unique structural morphology and photochemical properties which render them good candidates for water treatment projects [2]. Recently, many research groups are working on nanocomposite materials particularly graphene-based composite materials. Different types of graphene-based composite materials are being investigated and reported for various engineering applications [3].

The graphene obtained by reduction of graphene oxide still has many chemical and structural defects which are

a problem for some applications but an advantage for some others [4]. In 1957, Hummers and Foeman developed a safer, quicker, and more efficient process called the hummers method, using a mixture of sulfuric acid H_2SO_4 , sodium nitrate $NaNO_3$, and potassium permanganate $KMnO_4$, which is still widely used, often with some modifications [5-7]. Recently a mixture of H_2SO_4 and $KMnO_4$ has been used to cut open carbon nanotubes lengthwise, resulting in microscopic flat ribbons of graphene, a few atoms wide, with the edges "capped" by oxygen atoms (=O) or hydroxyl groups (-OH) [8]. Graphite (Graphene) oxide (GO) has also been prepared by using a "bottom-up" synthesis method (Tang-Lau method) in which the sole source is glucose, the process is safer, simpler, and more environmentally friendly compared to the traditionally "top-down" method, in which strong oxidizers are involved[9].

Among the various transition-metal oxides, V_2O_5 (VO) has widely been investigated as a high-potential candidate material because of the following merits: low cost, abundant resources, layered structure, high energy



Journals & Books 

 Access through your institution [Purchase PDF](#)

Article preview

Abstract

Introduction

Section snippets

References (58)

Cited by (30)



Environmental Research
Volume 208, 15 May 2022, 112642



Green synthesis of plasmonic nanoparticles using *Sargassum ilicifolium* and application in photocatalytic degradation of cationic dyes

[Thangavel Akkini Devi](#)^a, [Rajendran Muthukumar Sivaraman](#)^b, [Seth Sheeba Thavamani](#)^c, [Thomas Peter Amaladhas](#)^c  , [Mohamad S. AlSalhi](#)^d, [Sandhanasamy Devanesan](#)^d, [Maruthamuthu Murali Kannan](#)^e

^a Department of Chemistry, [A.P.C. Mahalaxmi College for Women](#), Tuticorin, 628002, Tamil Nadu, India

^b Department of Chemistry, Kamaraj College, Tuticorin, 628003, Tamil Nadu, India

^c Post Graduate and Research Department of Chemistry, V.O. Chidambaram College, Tuticorin, 628008, Tamil Nadu, India

^d Department of Physics and Astronomy, College of Science, King Saud University, P.O. Box: 2455, Riyadh, 11451, Saudi Arabia

^e Division of Pharmacoengineering and Molecular Pharmaceutics, Eshelman School of Pharmacy, University of North Carolina, Chapel Hill, NC, USA

 Get citation

Indian Hydrobiology, 20(2): 241–250, 2021

Phytochemical screening, FTIR analysis and *in vitro* antioxidant potential of marine alga *Sargassum wightii* Greville ex J.Agardh

M. Isakkiyammal¹, V. Sornalakshmi^{2,*}, P.S. Tresina³, M. Sivagamasundari⁴ and V.R. Mohan³

¹Research scholar, Reg. No.19212232262019, PG and Research Department of Botany, V.O. Chidambaram College affiliated to Manonmaniam Sundaranar University, Tamil Nadu, India.

²Department of Botany, A.P.C. Mahalaxmi College for Women, Thoothukudi, Tamil Nadu, India

³Ethnopharmacology Unit, Research Department of Botany, V.O. Chidambaram College, Thoothukudi, Tamil Nadu, India

⁴Research scholar, Reg. No.19232232262020, PG and Research Department of Botany, V.O. Chidambaram College affiliated to Manonmaniam Sundaranar University, Tamil Nadu, India.

*Corresponding Author – sornalakshmiapcm@gmail.com

Abstract

Marine macroalgae and their derivatives have been studied for its potential biological activities to produce novel medicinally valued compounds. In the current study, the brown seaweed *Sargassum wightii* was studied for phytochemical screening FTIR analysis and potential antioxidative activities. Six different solvents namely petroleum ether, benzene, chloroform, ethyl acetate, methanol and ethanol were used to study the *in vitro* antioxidant activity using different assays viz; DPPH, hydroxyl, superoxide, ABTS and reducing power. Fourier Transform Infrared Spectroscopy (FTIR) analysis was carried out to identify the functional group present in the seaweed sample. Maximum DPPH (138.36% and IC₅₀28.64 µg/ml) and Hydroxyl (119.19% and IC₅₀21.89 µg/ml) radical-scavenging activity of ethyl acetate extract was recorded whereas methanol extract showed enhanced superoxide scavenging activity (139.90% and IC₅₀24.56 µg/ml). Maximum ABTS radical scavenging activity (128.09% and IC₅₀23.66 µg/ml) was recorded for ethanol extract. The reducing power of the sample was in the following order: methanol > ethanol > Petroleum ether > Ascorbic acid > ethyl acetate > Benzene > chloroform. Hence, these extracts could be considered as natural antioxidants and may be useful for curing diseases arising from oxidative deterioration.

Key words: Seaweed; Sargassum; Antioxidant and FTIR.

Introduction

Marine macroalgae, which are also generally recognized as seaweeds, are well known with their riches of biologically active substances mainly the polysaccharide and thus, provide great biological active resources. The lack of structural injury in seaweeds during their regular experience to air-water intertidal environment implies that these organisms are capable to generate antioxidants to defend themselves against oxidation. They produced antioxidant substances like phenolic compounds, pigments, enzymes and developed a complex defense system against reactive species. (Chang and Teo, 2016). In pharmaceutical and

parapharmaceutical sectors, the demand for marine macro algae has considerably increased due to its outstanding richness in biologically active compounds (Holdt and Kraan, 2011; Centella *et al.*, 2017).

During normal oxygen metabolism, reactive oxygen species (ROS) such as superoxide anion, hydroxyl radical and hydrogen peroxide are produced as natural by products. In normal condition, enzymatic antioxidants like as catalase, superoxide dismutase, glutathione peroxidase and non-enzymatic antioxidants, such as vitamins C and E and glutathione are used by cells to protect themselves against these reactive oxygen species (Tierney *et al.*, 2010).

**IMPACT OF TEMPERATURE AND GROWTH TIME VARIATIONS IN
THE PRODUCTION OF ENDOXYLANASE FROM *BACILLUS SUBTILIS*
USING SAW DUST AND COIR PITH AS SUBSTRATES.**

V.Jeyanthikumari

Assistant Professor of Zoology, A.P.C.Mahalaxmi College for Women, Thoothukudi-628 002.

Abstract

Xylan is the most abundant naturally occurring polysaccharide available on earth and is an important structural polysaccharide of plant cells and comprises greater than 42% of the dry weight. Xylanase, the enzyme which degrades xylan, used in several industries like pulp and paper bleaching, food, feed, textile, pharmaceuticals, and lignocellulosic biorefinery which has an increase in its stipulation universally. Realizing importance of xylan and xylanase activity, this study was undertaken. This study aimed to optimize the xylanase production from *Bacillus subtilis* by providing various growth time and temperature in constant pH (7.0) using the agricultural residues, coir pith and saw dust as substrates. At the end of the 7days incubation period, it was observed that 168hrs promoted the maximum production of enzyme with the final pH 6.5 and 6.2 in coirpith and sawdust respectively by *Bacillus subtilis*. It shows excessive growth in both substrates at 40°C at different temperatures given and in provided incubation time; 5th day incubation enhances the maximum growth and enzyme production both in coir pith and saw dust.

Keywords: Xylanase, *Bacillus subtilis*, coir pith, saw dust

Introduction

Xylan constitutes the second most and vital noncellulosic polysaccharides of the primary cell wall of grasses and secondary wall of angiosperms (Diaz *et al.*,2004). It is readily accessible in nature, followed by cellulose and covers 33% of



Degradation of Food Colours Using Probiotic Bacteria *Lactobacillus Acidophilus* and *Lactobacillus Fermentum*

Sakthika T¹, Santhalakshmi S² and Kombaiah P³

¹Assistant Professor of Zoology, A.P.C.Mahalaxmi College for Women, Thoothukudi, Tamilnadu

²Assistant Professor of Zoology, Sri Kumara Gurupara Swamigal Arts College, Srivaikundam, Tamilnadu

³Assistant Professor of Zoology, Pasumpon Muthuramalinga Thever College, Tenkasi, Tamilnadu

ABSTRACT

The present work was undertaken to study the degradation of six synthetic food colors by probiotic bacteria *Lactobacillus acidophilus* and *Lactobacillus fermentum*. Six food colors in Kesari powder (Orange red, Lemon yellow), Tang rasna and Mango rasna, Chocolate powder and Aachi Chicken masala were used for the study. The degradation effect of all food colors by the bacteria were analyzed by measuring the OD values for three days. The results indicate that five food colours were degraded above 65% by *L.fermentum*. However, below 40% degradation was observed in chocolate powder by *L.fermentum*. The study demonstrated that *L.fermentum* is more effective than *L.acidophilus* in colour degradation. Further it could be concluded that a diet favors the proliferation of Lactic acid bacteria could be used for natural detoxification of the organism in populations exposed to hazardous food additives.

Key words: Food colours, Probiotic bacteria, Degradation analysis.

INTRODUCTION

The natural and synthetic color additives were used extensively to color foods, drugs and cosmetics (Hallagan *et al* 1995). Food colors can be grouped divided into four categories: a) natural colors, b) nature-identical colors, c) synthetic colors and d) inorganic colors (Madhava and Sowbhagya, 2012). Revanker and Lele, (2007) reported that because of the wide applications of these colorants, the total world colorant production is estimated to be 8,000,000 tons per year. Synthetic colors are reliable and economical for restoring the original shade of the foods compared to the natural colorants which are expensive and less stable (Nidasaleem *et al* 2013). However, the synthetic food colorants showed adverse effect on human health. It has been reported that consumption of synthetic foods color additives could sometimes lead toxic effects on liver, kidney and testes (Naveen and Mahmoud, 2006). The administration of synthetic food colorants decreased the percentage of high density lipoprotein cholesterol (HDL-C), glutathione secretion (GSH), superoxide dismutase (SoD), and plasma immune-system and significantly increased plasma lipid lipoprotein, total cholesterol (LDL-C), lipid peroxidase, blood glucose, plasma urea and creatinine and increased activities of alkaline phosphatase, acid phosphatase, and lactate dehydrogenase (Abdellah *et al* 2015).

The human gastrointestinal tract harbors a complex and diverse microbial community composed of several thousand species (Eckburg *et al* 2005). The human intestinal microbiota provide nourishment, regulate epithelial development, instruct innate immunity, act as a barrier to colonization of the intestinal tract by pathogenic bacteria, and metabolize both dietary and in-situ-produced compounds (Cerniglia and S Kotarski, 2005). These microorganisms also play a key role in the degradation of azo dyes, with azo reduction being the most crucial reaction related to toxicity and mutagenicity (Uematsu *et al* 2007).

Lactobacillus acidophilus and *L. fermentum* are predominant lactobacilli in the human intestine and display probiotic properties (Velez *et al* 2007). An extensive variety of microorganisms capable of decolorizing a wide range of azo dyes are *Aspergillus versicolor* (Tasten *et al* 2010), *Trametes versicolor* (Aksu *et al* 2007), *Pseudomonas putida* K1, *Serratia proteamaculans* SL14 (Mahmood *et al* 2014) and *Phormidium sp.* (Sadettin and Donmez, 2007). Some strains of aerobic use azo dyes as sole source of carbon and nitrogen (Coughlin *et al* 2002) others only reduce the azo group by special oxygen-tolerant azo reductases. With this back screen the present study is aimed with isolation of probiotic bacteria from curd milk and two bacteria are used to study their potency of degradation of food colours.



PROBIOTIC EFFECT ON GROWTH AND TISSUE PROTEIN OF *EISENIA FETIDA* FED WITH AQUATIC WEED

1. Dr. T. Sakthika

Assistant Professor of Zoology,

A.P.C. Mahalaxmi College for Women, Thoothukudi.

2. Mrs. A. Anbumalar, Research Scholar, P.G and Research Department of Zoology,
V.O.C. College, Thoothukudi.

ABSTRACT

The Earthworm *Eisenia fetida* was cultured using garden leaf litter (Control), Aquatic weed waterhyacinth (*Eichornia sps*, (E1) and Waterhyacinth+Probiotic enriched *E.fetida* (E2) for 60 days. Tissue protein was calculated by Lowry *et al.*, (1951) method. The results of the study confirmed that worms grown on *Eichornia sps*, with probiotic enriched earthworm showed 88.60% increased length, 128.00% increased weight and 84.90% higher tissue protein than the control group of earth worm. Earthworm is viewed as a potential ingredient and a good source of protein in animal feed formulation. Vermiculture of probiotic enriched earthworm using aquatic weeds is a cheap strategy to get good source of protein, bio-fertilizer and a most promising way to clean the aquatic habitat.

Key words:- Aquatic weeds, Earthworm, Probiotics, Growth, Tissue protein.

INTRODUCTION

Aquatic weeds (Mukherjee *et al* 2010) are potential dietary protein sources that have been documented. Vermiculture using aquatic weeds have a good nutrient value and earthworm is viewed as a potential ingredient and a good source of protein in the feed formulation. Water hyacinth is the free floating invasive aquatic macrophytes that are known to cause severe damage to the aquatic habitat. Literature revealed that the noxious weeds like water hyacinth are resisted to the all physical, chemical, biological as well as hybrid methods that have been applied to eradicate it (Abbasi and Ramaswamy, 1999).

IMPORTANT OF TUTICORIN IMPORTS

IMPORTANT OF TUTICORIN IMPORTS

Dr.L.Sangeetha, Head & Assistant Professor of History **A.P.C. Mahalaxmi College for Women**, Thoothukudi.

Introduction

The sea-borne trade of this port was carried on by steamers and sailers. While steamers alone were used for trade with foreign countries, steamers and sailing vessels take part in the coasting trade; and of these two into the coasting trade, the sailers bulk large. An average for the 5 years (1934-38) shows the following position:- From 1930 onwards the exports fell acutely and though there has been a partial revival from 1935, the increase was not so much as to warrant a very favourable balance of trade. This fall in exports was naturally due to the world depression following the Wall Street Crash of 1929 and England's going off the Gold Standard in 1931; and the agricultural products in the form of raw materials which form the bulk of the exports of this port had been very much affected. The slight increase in exports for the past quinquennium was entirely the result of the gradual revival that followed later. The import, consisting as it did, more of finished products, was not much affected by the depression and so the fall in imports was not very perceptible.

Grain, pulse and flour:

Among the imports the place of prime importance should be given to grain and pulse. It was a matter of common knowledge that the district had a grater area under dry crops. Paddy covers only 350,000 acres, and so was inadequate for the needs of the district as a staple food. So an import from Burma, Siam and Indo – China to the average extent of Rs.180 lakhs was necessary to feed the population of this district and of the adjoining district of Ramnad and Madura. Import of dry grain, pulse and wheat was Ramnad and Madurai. Import of dry grain, pulse and wheat was made to a small extent from Karachi, while dry grain, pulse and wheat was made to a small extent from Karachi, while dry grain and pulse alone figure in the trade from Bombay and Calcutta.

Raw cotton, twist and yarn and piece goods:

The native cotton grown in the district was short stapled and was useful for the manufacture of cloth of low grade. For manufacturing superior quality better varieties of cotton were to be used and so in recent years there had been an import of longer stapled cotton, mainly from Africa – Kenya, Egypt and the union of South Africa. The average value of the import was Rs.60 lakhs, and it was only in 1938-39 that the import was as low as Rs.35 lakhs. The average weight of the raw cotton imported was 12,000 tons of 50 cubic feet. The cotton was distributed among the 3 miles of the District and those of Madurai.

There was an average import of Rs.11 lacs worth of twist and yarn into this port. This was useful for the weaving industry mills and handlooms. The Japanese yarn was used largely for the lungis as it was uniform and contains no knot or grit. There was a slight decline in the import due to increased production in the local mills. The import was mainly from the United Kingdom and Japan. Mercerized yarn from the United Kingdom and Japan declined in the value of the import. Sewing thread was obtained from the United Kingdom.

Piece goods were imported to an average value of about Rs.20 lakhs at this port. The two important countries that send this import were the United Kingdom and Japan. The difference between the imports from these 2 countries lies in the fact that finer fabrics come mainly from the United Kingdom and only ordinary and inferior varieties come from Japan. To a large extent these two countries were not competitors as they meet the needs of different classes of people. In 1938-39 there was a heavy fall of imports of this commodity, from Rs.25 lakhs. The only quality that was not affected was the plain grey goods from Japan.⁴⁰

NIU International Journal of Human Rights ISSN: 2394 – 0298 Volume 9(IV), 2022 170

Dogo Rangsang Research Journal
ISSN : 2347-7180

UGC Care Group I Journal
Vol-12 Issue-03 No. 04 March 2022

A STUDY ON STRESS LEVEL OF HOME MAKERS DURING COVID 19 PANDEMIC PERIOD WITH SPECIAL REFERENCE TO THOOTHUKUDI CITY

Dr.K.Chitra Chellam, Assistant Professor of Commerce, **A.P.C. Mahalaxmi College for Women**, Thoothukudi affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India
Dr.A.Antony Selva Priya, Assistant Professor of Commerce, **A.P.C. Mahalaxmi College for Women**, Thoothukudi affiliated to Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu,

Abstract

With a view to find out what is the present mental health status of women in this current pandemic of COVID-19, this study was undertaken mainly with respect to home makers as majority of the Indian women today are playing a central role in COVID-19 Lockdowns. The stress faced by homemakers due to online mode of education and work from home by family members during COVID-19 pandemic, is an area that remains relatively neglected. Family members being at home for most of the time of the day, is a new phenomenon for these homemakers. It is not very easy for them to deal with this new situation emotionally and physically. It means a lot of compromises are expected to be made by the homemaker in terms of time, energy and privacy, as she is most often taken for granted by our male dominated society. This research paper tries to explore the stress faced by these homemakers due to such situations arising out of COVID-19.

Keywords: Covid-19, Lockdown, Stress, Homemakers.

Introduction

Human beings irrespective of gender are blessed with beautiful life in which health is the integral part. The parts of the body and their functions determine the health of humans. Brain is the master of human body which plays a vital role in controlling our emotions and its interpretations, thoughts, attitude, actions, behaviour and directs other parts of the body. In ancient days people led a healthy and peaceful life, though not a comfortable one. There was self-sufficiency as in those days people were satisfied with what they possess and limited wants. Ofcourse, this is not applicable to kings and queens who craved for power and luxury. In the contemporary period, due to industrialisation and rapid advancements in technology, even the wants of an ordinary person has become endless. If one want is satisfied, immediately the other want creeps in his mind – which is in the brain. Joint family system that taught philosophies of life thereby enriching family bonding is slowly disappearing in the society.

Today it has become a necessity for husband and wife to earn for their living, leaving their children in creche, day care centres, hostels, or alone in the house. Today, the tremendous growth of multinational companies and technology and with the emergence of nuclear family system, people's desire for luxuries and comforts have increased. To fulfil their innate desires, either both the husband and wife go for work or the husband alone will be the breadwinner for the family. The main goal of a common man is to satisfy his endless economic wants leaving behind all the values required for a peaceful life. This attitude of human beings has made them stressful and unhealthier with tonnes of worries in their mind, affecting both their career and personal life. Now-a-days, a major proportion of the population including children are suffering from chronic stress due to changes in life style and unfulfilled demands.

Statement of the problem:

Corona Virus Disease (COVID) 19 has made all our lives stressful breaking the geographic and economic barriers. A lot of medical and social research has been undertaken to find out the cures from this contagious disease as well as to study its impact on the society as a whole. Researchers have covered almost all the aspects like economy, education, decline in measures taken by the government control Covid, employment opportunities, health care, stress level of employees and so on. This article is an attempt to study the stress level of home makers during this COVID19 pandemic period. We can rightly say that homemakers - the real pillars of every home are generally

**A STUDY OF PORT TRUSTS EMPLOYEES' JOB SATISFACTION
ON INDUSTRIAL RELATIONS**

Dr. K.SivagamaShunmuga Sundari, Assistant Professor,

Department of Commerce, **A.P.C. Mahalaxmi College for Women**, Thoothukudi

(Affiliated to ManonmaniamSundaranar University, Tirunelveli)

Dr.A.AntonySelvaPriya, Assistant Professor,

Department of Commerce, **A.P.C. Mahalaxmi College for Women**, Thoothukudi

(Affiliated to ManonmaniamSundaranar University, Tirunelveli)

ABSTRACT

Job satisfaction is most often defined as the positive emotional state resulting from the employee's professional experience. The main purpose of the study is to explore the employees' job satisfaction on industrial relations. The research is purely based on primary data. A sample of 254 employees from V.O.Chidambaranar Port Trust and 370 employees from Chennai Port Trust were selected for the study. The respondents were selected by proportionate random sampling method. The researcher applied statistical tools such as mean, median and t-test. The study found that there is a significant difference between the satisfaction of employees of V.O.C. and Chennai port trusts with regard to relationship with industrial relations.

Keywords: Port trusts, Industrial relations, Job satisfaction, Employees

INTRODUCTION

The term 'Industrial Relations' comprises of two terms- 'Industry' and 'Relations'. "Industry" refers to "any productive activity in which an individual or a group of individuals are engaged". By "relations" we mean "the relationships that exist within the industry between the employer and his workmen." In an industrial unit different people are working. They are employers, executives, supervisors and workers. They inter-act and create a relationship called industrial relations. Industrial relations cover a vast arena, including all kinds of formal relationships existing in an organization.

The scope of industrial relations can be briefly classified into four dimensions. They are Employer-Employee Relations, Group Relations, Labour Relations and Public

शोध प्रभा

Shodha Prabha (UGC CARE Journal)

ISSN: 0974-8946

Vol. 47, Issue. 01, No.3: 2022

**INVESTMENT HABIT OF TEACHING FACULTIES IN WOMEN'S COLLEGE
TOWARDS POSTAL SCHEME WITH SPECIAL REFERENCE TO THOOTHUKUDI CITY**

C.Maheshwari Reg.No.21112011012002, Ph.D Research Scholar (FULL TIME), PG& Research Department of Commerce, A.P.C. Mahalaxmi college for women, Thoothukudi, Tamilnadu. Affiliated to Manonmaniam Sundaranar University, Tirunelveli.

Dr.S.Vanitha Head & Assistant Professor, PG& Research Department of Commerce, **A.P.C. Mahalaxmi college for women**, Thoothukudi, Tamilnadu.

B.Jesus Sanma Reg.No.21112011012004, Ph.D Research Scholar (FULL TIME), PG& Research Department of Commerce, A.P.C. Mahalaxmi college for women, Thoothukudi, Tamilnadu. Affiliated to Manonmaniam Sundaranar University, Tirunelveli.

ABSTRACT

Savings is a habit which is particularly personified to women. Women's income plays an important role in the household. Each and every women has a peculiar liberty to opt their own investment pattern based on her specific needs. Women have lower risk tolerance and lower return on investment. This research paper was conducted to find out investment habit of teaching faculties in women's college. This study explores the factors that influences them to save and their preference level towards postal schemes. Efforts have also been made to find out the satisfaction level of working women towards postal scheme.

KEYWORD: Investment habit, Working women, Postal schemes.

INTRODUCTION

Savings are essential to the country's economic development and advancement. In India, Post Office savings scheme conspires and gives a safe, hazard free and appealing speculation choice for the little financial specialists and offers the investment funds items over its 155000 Post offices. The post office savings bank in India was set up by the British Colonizers. Post office savings bank is the biggest reserve fund establishment in the nation. Post offices offer various saving schemes like Savings Bank Account, National Savings Certificate, Post Office Monthly Income Scheme, Senior Citizen Scheme, Recurring Deposit, Public Provident Fund, Sukanya samridhi yojana, kisan vikas patra and Time deposit. This study is conducted among working women because they save for their safety and children's wellbeing and to meet future needs.

STATEMENT OF THE PROBLEM

Women's income is very much needed to cope with family emergencies of an uncertain future. These days, women's pay are high, so women investors have also been expanded in recent times. Working women need to fiscally safe and secure. They need to invest their earning in an effective way to handle critical circumstances that arise at any stage of their lives. Postal schemes have constructed a great public image and gained confidence between middle and small income people. The raised question is whether the postal schemes help working women in upgrading their lives or not? After investing their monetary level have improved or not? Either they face any consequence? Hence an attempt has been made to examine the investment habit of teaching faculties in women college towards postal scheme in thoothukudi city.

OBJECTIVES

- To study the perception of women faculties while making investment decisions.
- To identify the factors that influence women faculties to save.
- To analyse the level of satisfaction towards postal scheme among women faculties.

LITERATURE REVIEW

Dr. N Rameshkumar (2018) said that "It is one of the best investment schemes for rural working women when compare to other investment schemes. Rural working women investors have a great faith and positive attitude towards postal schemes because they have easy availability and

Page | 136

JOURNAL OF EDUCATION: RABINDRA BHARATI UNIVERSITY
ISSN : 0972-7175

AN EAGLE EYE OF YOUNGSTER'S PERSPECTIVE ON RETRO MARKETING

G. Sathya Priya Research Scholar, A.P.C. Mahalaxmi College for Women, Thoothukudi
Dr. S. Vanitha Head and Assistant Professor, PG & Research Department of Commerce A.P.C.
Mahalaxmi College for Women, Thoothukudi

ABSTRACT:

Nostalgia is a powerful feeling which can drown out anything. Marketing uses nostalgia as an instrument to review old patterns, styles, looks, products etc. For many people, nostalgia helps to overcome from sadness, loneliness, anxiety and depression. Looking at past helps in inducing common mental behaviour of a person. Nostalgia evokes the strong feelings that hiding inside our mind. It gives rise to the emotions such as happiness, eagerness, sadness, longingness etc. It gives a feeling of legitimacy in the minds of consumers while looking into the products or services. The main motive of choosing this topic is that it provides a sense of continuity to the whole life. Humans have some zones which will not be filled just by filling the products to consume. Few products or services serves a fulfillment. If this has been keenly observed, the reason behind the satisfaction, the way or the other it may be connected with the feeling of nostalgia. Though it seems to be an old and simple way of marketing, the impact framed by these types of market proven to show a great comeback for the products. It's a proven psychological phenomenon. It gives the consumers an image of heartwarming, in-depth, smoothing effect. Apart from all of the above stated reasons, it inspires the consumers to invest their money in the products as it ensures a spontaneous return in the form of comfort and happiness.

Keywords: Nostalgia, Marketing, Styles, Patterns, Looks, Feelings, Consumer behaviour, Emotions.

INTRODUCTION:

Retro Marketing is about selling the past to sell the present. Nostalgia is feeling that smoothens our mind. It gives a level of feel of trusting the product. It makes us to sell or buy products with a simpler and happier mindset along with comfort and stability. It replicates the feel of longing during the times of uncertainty. It gives a relaxation as it recreates memories in the mind of consumer. The market for Retro products, especially in India, now-a-days have a huge demand. We still see many celebrities wearing their earlier generation things during memorable situation. Like Sania Mirza, the famous tennis player wore her mother's wedding saree for her marriage. Therefore, Retro Marketing is a feel of nostalgia.

REVIEW OF LITERATURE:

Stephen Brown, in his writings, Retro Marketing: yesterday's tomorrow and today, Article in Marketing Intelligence and Planning (1999), denotes retro as de rigueur which means retro marketing always maintains its footprints in the world of fashion. The article has revealed about many branded companies' usage of retro marketing and its successiveness. It states that the ironic outcome of the current outbreak of retro is that it may stimulate a revival of the modern marketing paradigm itself.

STATEMENT OF THE PROBLEM:

This study is to analyse and examine the level of preferences of youngsters in the retro marketing. It is to bring out the list of products which has top list in retro marketing and to know about buying behaviour of youngsters.

OBJECTIVES OF THE STUDY:

- To study the buying behaviour of younger generation.
- To know about the products which has demand in retro marketing among youngsters.

Vol: XXIV, No. :1(V), 2022

98

Shodhasamhita : Journal of Fundamental & Comparative Research
Vol. VIII, No. 11(XII) : 2022
ISSN: 2277-7067

A STUDY ON AWARENESS TOWARDS DIGITAL BANKING SERVICES OF INDIAN POST IN THOOTHUKUDI CITY

C. MAHESHWARI, Ph.D Research Scholar (Full Time) - Reg.No.21112011012002

Department of Commerce, A.P.C. Mahalaxmi College for Women, Thoothukudi, Tamilnadu.
(Affiliated to Manonmaniam Sundaranar University Abishekapatti, Tirunelveli Tamil Nadu, India)

Dr. S.VANITHA, Head & Assistant Professor,

Department of Commerce, A.P.C. Mahalaxmi College for Women, Thoothukudi, Tamilnadu.
(Affiliated to Manonmaniam Sundaranar University Abishekapatti, Tirunelveli Tamil Nadu, India)

B.JESUS SANMA, Ph.D Research Scholar (Full Time) - Reg.No.21112011012004

Department of Commerce, A.P.C. Mahalaxmi College for Women, Thoothukudi, Tamilnadu.
(Affiliated to Manonmaniam Sundaranar University Abishekapatti, Tirunelveli Tamil Nadu, India)

ABSTRACT

Digitalization has become an integral part of everyone's daily lives around the world. Digital banking is one among them. Digital bank represents a virtual process that includes online banking and beyond. Digital bank offers a wide range of services to its users, which are easily accessible, the demand for digital banking has expanded enormously because they gained large number of customers. It allow customers to access financial information via PC's, mobile phones, and through ATM services. As a result, the present study has attempted to find out the awareness among customers towards digital banking services of Indian post and also helps to analyse the satisfaction level of the digital banking users.

Key words: Indian post, Digital banking services.

INTRODUCTION

The implementation of core banking by post offices around the country would provide the required infrastructure for digital banking adoption. This will allow for the creation of millions of digital savings accounts as well as the implementation of digital payment systems. Last-mile digital banking connectivity would be ensured by the existence of post offices in even the most distant corners of the country. The postal banks of India will be a driver for achieving financial inclusion targets due to their mobility and street network, and there is substantial synergy to be tapped through prospective alliances and collaborations with cooperatives and microfinance institutions. Due to the geographic diversification of Post Offices across the country, similar collaborations between these institutions will aid in the delivery of credit to rural areas in a much more efficient manner, as well as promote financial inclusion and economic growth at the grassroots level.

STATEMENT OF THE PROBLEM

People require savings to move their daily lives. Savings are determined by a person's lifestyle. Indian postal department delivers valuable services to the people in many aspects. Postal investment are the best investment option for the investors to save their hard earned money. The post office savings bank is the nation's largest savings entity. Indian Postal Service has expanded its core banking services and offers wide range of banking services. With the advancement of modern technology the scope of its service expands dramatically. The major problem was most of the people were unaware about the digital services that have been extended by our central government. Hence, the problem area have been identified and proper measures should be facilitate to overcome them.

शोध प्रभा
Shodha Prabha (UGC CARE Journal)

ISSN: 0974-8946
Vol. 47, Issue 03 No.6 : 2022

**A STUDY ON WOMEN ENTREPRENEURS IN SMALL SCALE BUSINESS
WITH REFERENCE TO THOOTHUKUDI**

P. KARPAGAVALLI, Assistant Professor of Commerce
A.P.C. Mahalaxmi College for Women Thoothukudi
(Affiliated to Manonmanium Sundaranar University, Tirunelveli)

S.VANITHA, Assistant Professor
A.P.C. Mahalaxmi College for Women Thoothukudi
(Affiliated to Manonmanium Sundaranar University, Tirunelveli)

ABSTRACT:

Entrepreneurship play a vital role in the growth of any society. Entrepreneurs emerge from an individual 's creative spirit into long – term business ownership, employment creation, capital formation and economic security. Entrepreneurs may be defined as the women or group of women who take initiative to set up a business enterprise and to run it smoothly. According to Schumpeter's concept, " Women who innovative, imitate or adopt a business activity are known as women entrepreneurs." Today Women Entrepreneurs growth is essential for social development. The primary aim of the study is to understand the socio – economical factors of women entrepreneurs' nature of business, Income level, Motivational factors and Problem faced in their business..

Keywords: *Entrepreneurs, women entrepreneurs, small business*

INTRODUCTION

Entrepreneurship plays an imperative role in the growth of any society. Development of entrepreneur's culture and qualitative business Development service are the major requirement for industrial growth. Entrepreneurs emerge from an individual's creative spirit into long-term business ownership, employment creation. Capital formation and economic security. Entrepreneurial skills are essential for industrialization and for alleviation of mass unemployment and poverty. Women, Entrepreneurs may be defined as the women or group of women who take initiative to set up a business enterprise and to run it smoothly. According to Schumpeter's concept, "Women who innovative, imitate or adopt a business activity are known as women entrepreneurs.

OBJECTIVES

- To Understand the motivational factors of women entrepreneurs in small scale business.
- To find out Problems faced by women entrepreneurs in small scale business.

SCOPE OF THE STUDY

The present study discloses the motivational factors and problems faced by women entrepreneurs in small scale business with reference to Thoothukudi.

METHODOLOGY

Data was concluded and composed from 50 women entrepreneurs in small scale business with reference to Thoothukudi. This study is based on primary and secondary data. Primary data was collected from questionnaire targeted from women entrepreneurs in small scale business and secondary data taken from websites, journals and magazines etc.

Kanpur Philosophers

ISSN 2348-8301

International Journal of humanities, Law and Social Sciences
Published biannually by New Archaeological & Geological Society
Kanpur India



Vol. IX, Issue I No.7 : 2022

ATTITUDE TOWARDS INVESTMENT OF WOMEN ENTREPRENEURS - AN EMPIRICAL STUDY IN THOOTHUKUDI CITY

MARIA AUXILIYA JOESCY, Ph.D., Research Scholar (Full Time) – Reg. No. 21112011012001
PG and Research Department of Commerce, A.P.C.Mahalaxmi College for Women, Thoothukudi,
Tamilnadu. (Affiliated to Manonmaniam Sundarnar University, Tirunelveli)

Dr.S.VANITHA, Head & Assistant Professor

Department of Commerce, **A.P.C.Mahalaxmi College for Women**, Thoothukudi, Tamilnadu,
(Affiliated to Manonmaniam Sundarnar University, Tirunelveli)

ABSTRACT

This study aims to be aware of women entrepreneurs' investment paradigms and to reveal their ambitions, professionalism, and desire to form a strong framework in the context of economic development. The persistent characteristics of women entrepreneurs for economic development compelled us to investigate factors that influence women's willingness to make long-term investment decisions in their businesses despite uncertainty. A self-designed structured questionnaire with approximately 120 adequate responses from Thoothukudi revealed that women's investment attitude has a positive significant mediating effect on social, behavioural factors, and investment decisions. The study's novelty in the context of women entrepreneurs' investment attitudes adds to the existing literature and encourages future scholars to broaden the horizon of the existing area of study in the context of cultural, demographic, and seasonal factors, which also influence women entrepreneurs' investment decisions.

Keywords: Women entrepreneurs, Investment decision, Investment attitude

INTRODUCTION

Women entrepreneurs can be found all over India's start-up ecosystem. Women are also seen leaving high-profile jobs, and some are stepping outside the four walls of their homes and entering the pool of Entrepreneurship in India. Capital is a critical factor in launching an entrepreneurial venture, and various banks offer specialised loans for female entrepreneurs with slightly different and more flexible terms and conditions pertaining to collateral security, interest rates, and so on. During this pandemic, there is an entrepreneurial surge among women entrepreneurs, and women entrepreneurs are emerging in India, but they will require mentoring support from experts to sustain the business.

STATEMENT OF THE PROBLEM

Women as entrepreneurs are now gaining importance in men's worlds due to their economic independence, combined with the challenge of doing something on their own and the encouragement they receive from family members. Despite the fact that a wide range of investment options are available, the vast majority of them are still rely on the banking system to invest their savings using excess liquidity. Banks have steadily reduced the interest payable on deposits in the banking system.

शोध प्रभा
Shodha Prabha (UGC CARE Journal)

ISSN: 0974-8946
Vol. 47, Issue 03 No.6 : 2022

CONSUMER AWARENESS TOWARDS WATER SANITATION AND PUBLIC HEALTH IN THOOTHUKUDI DISTRICT

V.SANTHIYA, Ph.D. Research Scholar, (Reg. No:20212011012011)
PG & Research Department of Commerce, A.P.C. Mahalaxmi College for Women, Thoothukudi-2.

Dr. S.UMAMAGESWARI, Assistant Professor
PG & Research Department of Commerce, **A.P.C.Mahalaxmi College for Women**, Thoothukudi-2.

ABSTRACT:

The study focuses on sanitation and hygiene are major public health concerns among communities throughout India. More than half of India's population defecates in the open, which has significant effects on water quality and children who are at risk for diarrheal disease. To know poor hygiene practices and inadequate sanitary conditions play major roles in the increased burden of communicable diseases within developing countries. Water supply, hygiene promotion and considers the costs and benefits of each in turn. Water supply and sanitation offer many benefits are considered in detail because they have important implies for the share of the cost that is reference to the health sector. The study measures to provide basic WASH resources connected with efforts to create awareness to improved WASH practice and prevent diseases. A universal and proper connection to safe and affordable drinking water and adequate sanitation and hygiene can be related to water and sanitation are achieved. Water is basic human right, most natural resource for economy and health. Sanitation is determinants of quality of life and individual's hygiene can affect the whole community. Drinking water and sanitation is an essential health service. WASH interventions such as safe water storage for portable water, latrines for sanitation and soap for hygiene, bath and hand washing.

Keywords: WASH, Drinking water, Water supply, Diarrheal, Sanitation

INTRODUCTION

The present situation of lack of WASH indices across the global is worrisome. Every one out of four people in the world lack access to safe drinking water, while only two out of four people use safely managed sanitation service. For example, while more than 90% of the urban population in India use safe water, the ratio comes down to 50% for the rural population. While the point of reference related to WASH are improving moderately, there is not much known about the tribal regions in India. The tribal population contributes to more than 8% of India's total population and is traditionally less developing than the non-tribal population due to various reasons. Water safety in a community depends up on a range of factors, from the quality of source water to storage and handling in the home setting.

Hygiene is a very personal subject, and encouraging changes in hygiene requires skill and care. These challenges are the subject of hygiene promotion. It is a planned approach which encourages people to adopt safe hygiene practices. We linked a study to document information about water management, sanitation, and defecation habits in rural areas in order to better understand the impact of socio-cultural factors on water usage and safety. Two of these measures deal with water and sanitation, and they would help the organization speed up its efforts to improve access to safe drinking water, sanitation, and hygiene (WASH) in health-care facilities (HCF). Water safety in a community is determined by a number of factors, including the quality of the source water as well as storage and handling in the home. There are scant reports on excretion habits and toilet accessibility, especially in rural India. WASH (safe drinking water, sanitation, and hygiene) has remained a major

शोध प्रभा
Shodha Prabha (UGC CARE Journal)

ISSN: 0974-8946
Vol. 47, Issue 02 No.6 : 2022

A STUDY ON CONSUMER PERCEPTION TOWARDS DIGITAL PAYMENT IN THOOTHUKUDI CITY

K. JOTHILEKSHMI, Assistant Professor of Commerce
A.P.C. Mahalaxmi College for Women, Thoothukudi – 628002, Tamil Nadu
(Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627 012)

A. PRIYANKA, II M.Com
A.P.C. Mahalaxmi College for Women, Thoothukudi – 628002, Tamil Nadu
(Affiliated to Manonmaniam Sundaranar University, Abishekapatti, Tirunelveli – 627 012)

ABSTRACT:

Information and Communication Technology plays a significant role in the development of the society. The usage of internet and mobile phone leads to tremendous growth in the use of digital payment. Digital Payment means where financial transactions are made digitally without any involvement of physical cash. The Ministry of Electronics and Information Technology launched 'Digital India Program' in 2015, with a vision to transform India into digital empowered economy that is "Faceless, Paperless and Cashless". Demonetization and Covid -19 situations have initiated majority of the people to adopt digital payment. The main objective of this study is to identify the factors which influence the customers and to find out the problems faced by customers while using digital payment. The Percentage analysis and Garrett Ranking tool are to be used in the data analysis.

Keywords: Digital Payment, Faceless, Paperless, Cashless Transactions

INTRODUCTION

In India, Information and Communication technology plays a significant role in the development of the society and digitization of the economy. The economy is also called as digital economy. The last decade has seen tremendous growth in use of internet and mobile phone leads to exponential growth in use of digital payment. Digital payments are the trend of the day. Digital payments are transactions that take place via digital or online modes with no physical exchange of money involved. The Ministry of Electronics and Information Technology launched in 2015, 'Digital India Program' with a vision to transform India into a digital empowered economy that is 'Faceless, Paperless and Cashless'. In 2016, demonetization paved the way towards the usage of digital payment. The other key factors to boost the digital transactions are Pradhan Mantri Jan-Dhan Yojana (PMJDY) is a flagship program launched by the government of India to promote financial inclusion. The main aim of this program was all citizens having own bank accounts and in 2016, RBI and government jointly rolled out the Unified payment Interface (UPI) a uniquely secured and interoperable interface for retail payments, biometric based as well as QR code based payment. In 2020, COVID – 19 Pandemic further adoption of digital payment because people wary of coming in contact with others, refrained from using cash. People have grown more comfortable with using digital payment.

In order to accelerate and popularize the adoption of digital payments, many digital payment systems have been launched in India. The advantages of digital payments are faster transactions, saves time (24*7) service, easy to track small expenses, receive discounts and cashback offers, reduced environmental pollution and social upheaval etc... Although digital payments are generally accepted by the public, there are few criticisms regarding the process of digital payment system.

Consumer Perception means the consumers overall opinion, thought, awareness and feeling about a company and its products and services. In our study we can see how consumers perception towards digital payment in Thoothukudi City.

Shri Lal Bahadur Shastri Rashriya Sanskrit Vidyapeetha

JOURNAL OF EDUCATION: RABINDRA BHARATI UNIVERSITY
 ISSN : 0972-7175
**CONSUMER PERCEPTION TOWARDS SECURITY THREATS OF DIGITAL PAYMENTS
 IN RURAL AREAS OF RAMANATHAPURAM DISTRICT**

A. Benazir Laila Kaleeth, Reg. No.20222011012003, Ph.D Research Scholar (Part Time), PG & Research Department of Commerce, A.P.C. Mahalaxmi College for Women, Thoothukudi affiliated to Manonmaniam Sundaranar University, Tirunelveli . Guest Lecturer, Department of Commerce, Government Arts and Science College, Kadaladi , Ramanathapuram District, Tamilnadu.
Dr.T.Chellammal, Assistant Professor of Commerce, A.P.C. Mahalaxmi College for Women, Thoothukudi affiliated to Manonmaniam Sundaranar University, Tirunelveli.
 Email: benal809@gmail.com ; chellachella98@gmail.com

ABSTRACT

Digital payment system, the emerging trend has expanded rapidly and enhanced in recent days. Rural people, like the urban, are gradually shifting their payment systems to digital means. Adopting these simple payment methods simplifies the consumer's life and saves people time. When people incline towards digital mode, the challenges and opportunities concurrently intensify. To resolve this, it is pivotal to strengthen cyber security, which has become mandatory in digital payment systems. When people follow the usage protocol within the approved manner, then it may be safe for the consumer. This paper describes consumer perceptions of security threats in digital payments, particularly in rural areas of Ramanathapuram District, as well as the security measures that consumers are taking to combat the threats.

Keywords- Payment system, digital mode, Security, threat, cyber security.

INTRODUCTION

Payment by digital means, the smart evolution in this digital era that has entered into every nook and corner of the nation, especially in rural areas that has become handy and convenient through smartphones. The world is getting smarter day by day. The payment system followed by the consumer cuts short time and the process and saves the consumer's time. There are many authorised applications and fintech apps that make the digital payment process easier. Though cashless payment has many advantages, at the end of the day, it has security risks too. While using a third-party website that is unauthorised and fake or malicious applications, through this, unknowingly the user shares sensitive information like PIN, OTP, bank credentials, etc. that makes the hackers easier to filch the consumer information. So the consumer has to follow the security measures to avoid threats like virus attacks (Trojans, etc.), phishing, spoofing, etc. This malicious act leads to illegal admittance and theft of credentials, hence the consumer has to ensure their digital payment is safe and secure. Security measures like changing passwords often, enabling two-factor authentication (e.g. receiving SMS, OTP, etc.), updating the security software, receiving alerts through SMS, and securing applications have to be taken over by the consumer.

OBJECTIVE OF THE STUDY

- To divulge the security threat factors in using Digital Payments.
- To expose the security measures to be considered in using Digital Payments.

METHODOLOGY

To find out the consumer perception regarding the security threats of digital payment methods in rural areas of Ramanathapuram District, a simple random method was chosen. Primary as well as secondary data collections were conceded out respectively in this study. Primary data that was collected from 70 respondents in the rural areas of Ramanathapuram district exclusively contains the use of questionnaires. Secondary data was collected from various sources like journals, magazines, books, and the Internet. To formulate the study more effectively, the data is reviewed through statistical tools like factor analysis and Garrett ranking.

Shodhasamhita : Journal of Fundamental & Comparative Research
Vol. VIII, No. 11 (XII) : 2022
ISSN: 2277-7067

**EMPLOYEES ATTITUDE TOWARDS TRADE UNIONS AT
V.O.CHIDAMBARANAR PORT TRUST, THOOTHUKUDI**

Dr. R. SAMUNDESWARI, Assistant Professor of Commerce
A.P.C. Mahalaxmi College for Women, Thoothukudi, Tamil Nadu, India
Dr. C. SUBATHRA, Assistant Professor of Commerce,
Pioneer Kumaraswamy College, Nagercoil

ABSTRACT

A trade union is an organisation of workers, acting collectively, who seek to protect and promote the mutual interests through collective bargaining. The Industrial Revolution destroyed the older way of life and left the individual worker at the mercy of the employer "who became the catalytic agent that crystallized them into a self-conscious group". The worker became completely dependent on others for his livelihood, and "equality came to mean equality for competitive strife. The role of trade unions are considered as essentially reformist organisations and economic institutions based on the Sarvodaya principles of Truth, Non-violence and Trusteeship. Trade unions are important players in today's industrialized world. Trade unions have three cardinal principles: Unity is strength, Equality of pay for equal work and Security of employment. In India Trade Unions are closely linked with Industrial Relations. Now-a-days the trade union movement is no longer solely a movement for advancing claims as a movement seeking to increase the material well being of its members but has grown into a force which not only defends the political, social and cultural interests of its members but also carries out special tasks affecting enterprising and intellectual workers especially with regard to their career, jobs, salaries, paid holidays, vocational training, recreational and health improvement programmes etc. Trade union behaves like a ladder to both the parties, which promotes an effective channel of communication.

Keywords: Trade Union, Collective bargaining, Security, Industrial relations.

INTRODUCTION

The trade unions have a crucial role to play in maintaining smooth industrial relations. A trade union (or labor union) is an organization of workers or employees who have combined together to achieve common goals in areas such as in working conditions and protecting and promoting their mutual interests through collective action. A trade union, through its leadership, bargains with the employer or the management on behalf of the union members and negotiates labor contracts etc. The process of negotiating wages, work rules, complaint procedure and workplace safety is called collective bargaining. Historically, union representation and collective bargaining have been the keys to the growth of a stable working population in developed economies and it has made it possible for workers to gain a more equitable share of the wealth that they create; they are able to improve working conditions and help workers gain job security. Changes in the political, social and educational environments regarding awareness of rights –such as the right to organize, the right to bargain and the right to settle the terms and conditions of the employment- have caused workers unions to spring up to protect and further workers interests. Thus, with the establishment of minimum wages, norms for mandatory work hours, provisions for health and safety, and overall improvement in working conditions, unionization has become instrumental in improving the quality of life of workers.

Worker being weaker segment they can get their rights only through collective representation i.e. collective bargaining. Collective bargaining is the backbone for harmonious industrial relations. Right to collective bargaining is available only to recognized trade union. Recognition of trade union means accepting or conferring right to negotiate on behalf of workers. The individual employee possesses very little bargaining power as compared to that of his employer.

JOURNAL OF EDUCATION: RABINDRA BHARATI UNIVERSITY
ISSN : 0972-7175

**A STUDY ON IMPACT OF TRAINING ON THE PERFORMANCE OF NURSES –
WITH REFERENCE TO PRIVATE HOSPITALS IN TIRUCHENDUR TALUK**

Mrs. A. AYSHA MUZAMMILA, Reg.No. 20222011062004, Ph.D Research Scholar, PG and Research Department of Commerce, A.P.C.Mahalaxmi College for Women, Thoothukudi, TamilNadu. Affiliated to ManonmaniamSundaranar University, Tirunelveli

Dr. R. SAMUNDESWARI, Assistant Professor, Department of Commerce, A.P.C.Mahalaxmi College for Women, Thoothukudi, Tamilnadu. Affiliated to ManonmaniamSundaranar University, Tirunelveli.

ABSTRACT

The backbone of any organisation is their reputed employees. The reputation of the organisation depends on the involvement of their employees as they are the key indicators for the success or failure of it which has great impact on the productivity or profitability of the organisation. Similarly, the spinal cord of the health care units is their nurses who are responsible for the overall care of the patients with whole hearted involvement and dedication. The reputation of any hospitals is based on their strong system of cooperated dedicative nurses. It is necessary for the hospitals to train nurses properly not only to boost their knowledge in their field but also to enhance their performance in their working institution. By concentrating on giving timely and proper training for both present working nurses and freshly recruited nurses will benefit them in developing new set of skills required for performing their duties at their maximum potential. And hence, care should be taken to focus on proper training to the nurses in order to increase their performance. The aim of this study is to analyse the impact of training on the improvement of performance of nurses working in private hospitals in TiruchendurTaluk. The sample of 94 nurses have taken using purposive sampling and data were collected through structured questionnaire and analysed using SPSS.

Keywords:training, nurses, enhancement in performance, knowledge.

INTRODUCTION

Nurse are the soul and heart of the health care sector. Their contribution as professionals towards society are often considered as challenging tasks. They are responsible for the constant direct care of every patients. In order to perform this, nurse should try to enhance their nursing competencies and they should apply those skills in their routine practices (Abdel-GadirSufianEltayeb Mohamed Dr., & AL-Jahwari Nabila SalimHamed, 2020). Accomplishment of specific tasks measured in terms of accuracy, perfectness and fulfilment will be considered as the performance enhancement in predefined jobs (FarooqMubashar.,& Khan MuhamamdAslam, 2011). The level of performance in all sort of organisations can be enhanced by the training programs and hence, by implementing various training programs and there will be a noticeable improvement in the team works which will be resulted in increasing level of employee's performance (ShanthaAruna, 2019).Employees competencies can be changed by attaining training programs effectively. Training programs not only improve the performance of employees but also help him to improve their skills and knowledge to perform their future jobs effectively and it leads to achieve the goals of organisation (Valentine Khaemba, 2017). The recent trend in nursing field shows that most of

Vol: XXIV, No. :11(VIII), 2022

1

Kanpur Philosophers

ISSN 2348-8301

International Journal of humanities, Law and Social Sciences
Published biannually by New Archaeological & Genological Society
Kanpur India



Vol. IX, Issue I No.7 : 2022

A STUDY ON OPPORTUNITIES AND CHALLENGES OF USING ONLINE SHOPPING THROUGH DIGITAL MARKETING-WITH REFERENCE TO THOOTHUKUDI DISTRICT

B. JESUS SANMA Ph.D., Research Scholar (Full Time) – Reg. No. 21112011012004
PG and Research Department of Commerce, A.P.C.Mahalaxmi College for Women, Thoothukudi,
Tamilnadu. (Affiliated to Manonmaniam Sundarnar University, Tirunelveli)

Dr. R. SAMUNDESWARI, Assistant Professor
Department of Commerce, A.P.C.Mahalaxmi College for Women, Thoothukudi, Tamilnadu,
(Affiliated to Manonmaniam Sundarnar University, Tirunelveli.)

C. MAHESHWARI Ph.D., Research Scholar (Full Time) – Reg. No. 21112011012002
PG and Research Department of Commerce, A.P.C.Mahalaxmi College for Women, Thoothukudi,
Tamilnadu. (Affiliated to Manonmaniam Sundarnar University, Tirunelveli)

ABSTRACT

Digital Marketing means using of digital technologies which helps to sell or buy your goods and services. Since it is flexible, cost effective, saves time, globally reachable. Digital marketing has brought different businesses to gain incredibility. It also helps both buyers and sellers to improve their base in nature. The paper starts with explaining what is digital marketing, reviewing its history, analysing their challenges and opportunities of using online shopping through digital marketing. This study also focuses on analysing the opinion towards adoption of digital marketing. Close ended questions was used to collect primary data from online shopping users. We suggest the conclusion by considering both positive and negative aspects of digital marketing that lie ahead.

Keywords: Digital, Marketing, Online shopping, Adoption.

INTRODUCTION

Digital Marketing has become social. Many emerging trends arise among people. Habits of customers changes by every minute. Online shopping is a business where both buying and selling happens via internet. Online shopping helps people customer purchase globally at their door step. Advancement in technology knowledge has made free space for digitalization to enter the society. Increase in use of cellphones and electronic gadgets has paved a way for businesses to enter at ease. Online shopping is fully lying a head over internet and technology.

STATEMENT OF THE PROBLEM:

Technology has become social in society. Now a days most of the businesses uses digital marketing as a platform for their business since technology has occupied larger space in the lives of the people. Due to increase in knowledge and advancement in technology has made them enter into society and corporate. Online shopping has now become largest business entity in the world. They provide everything we need at our doorstep and saves time with huge variety of products. The major problem

ENSURING SUSTAINABLE FUTURE IN CONSTRUCTION INDUSTRY

ENSURING SUSTAINABLE FUTURE IN CONSTRUCTION INDUSTRY

Dr. S. Anthony Rahul Golden, Assistant Professor of Commerce, St. Xavier's College (Autonomous), Palayamkottai affiliated to Manonmaniam Sundaranar University, Tirunelveli.

B. Durga Devi, Reg. No.19221281012002, Ph.D Research Scholar (Part Time- Internal), Commerce Research Center, St. Xavier's College (Autonomous), Palayamkottai & Assistant Professor of Commerce, A.P.C. Mahalaxmi College for Women, Thoothukudi affiliated to Manonmaniam Sundaranar University, Tirunelveli.

Email id: kvsrahul@gmail.com : bdurgadevi23@gmail.com

Abstract

Construction is a massive industry today that impacts nearly every other industry across the globe. The construction process itself involves a lot of different activities that influence sustainability, such as use of energy-efficient equipment, effective use of resources, minimization of construction waste, implementation of innovative technologies, involvement of multiple stakeholders, and raising knowledge and awareness of the aspects of sustainable construction. Sustainable development has led to the necessity to implement changes towards balancing all areas of human activity, including the construction sector. Sustainable construction is considered as a measure to support healthy environment and number of benefits are caught up to the stakeholders. Even though the industry could not achieve their future sustainability in construction. The study aims to identify the factors of sustainable in construction and the most sustainable methods used in construction. Methodologies are based on secondary data collection. The result of the study is to explain the development and implementation of sustainability strategies in the construction sector is poor awareness level noted that many stakeholders in the construction industry do not have sufficient information on sustainable.

Keywords: Sustainability, Sustainable Construction, Sustainable Development, Construction methods, Green construction, Benefits.

Introduction

Construction is thought to be one of the most energy-intensive industries, which is why it is imperative that it be considered in a sustainable development context. Construction businesses provide the manpower, competencies, materials, plant and equipment required for infrastructure development: a key goal of the sustainability agenda. Sustainability ensures that the present generation is able to meet its need without depriving future generation of meeting their needs. Construction professionals need to adopt environmentally friendly techniques to combat environmental issues from construction activities.

The construction industry's environmental impact is huge. In the United States, buildings account for 39 percent of total energy use, 12 percent of total water consumption, 68 percent of total electricity consumption and 38 percent of carbon dioxide emissions, according to the EPA. The main objectives of sustainable construction are to build accessible, secure, healthy and productive buildings while minimizing societal, environmental and economic effects. Sustainable development is a balance between the available technologies, strategies of innovation and the policies of governments. Sustainable construction was defined as 'creating and operating a healthy built environment based on resource efficiency and ecological design'.

Sustainable construction was defined as 'creating and operating a healthy built environment based on resource efficiency and ecological design'. Sustainable construction focuses on six principles: "conserve, reuse, recycle/renew, protect nature, and create non-toxic and high quality." It aims to be able to also exist generations in the next century by protecting natural and built environment and taking care of continuity of human beings and natural resources. People need a lot of buildings for sustaining their lives during civilization. These facilities cause a lot of environmental problems during their construction, operation and maintenance, and destruction. Buildings consuming huge amount of energy and natural resource has an impact on climate change by affecting quality of air and water in cities.

NIU International Journal of Human Rights ISSN: 2394 – 0298 Volume 9(II), 2022 103

शोध प्रभा
Shodha Prabha (UGC CARE Journal)

ISSN: 0974-8946
Vol. 47, Issue 02 No.6 : 2022

CUSTOMER RELATIONSHIP MANAGEMENT IN RETAIL SECTOR

P. ULAGAMMAL, Research Scholar (Reg. No : 21122011012007)
Assistant Professor of Commerce, **A.P.C. Mahalaxmi College for Women**, Thoothukudi – 628002
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

Dr. K.CHITRA CHELLAM, Head & Assistant Professor of Commerce
A.P.C. Mahalaxmi College for Women, Thoothukudi – 628002
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli)

ABSTRACT:

Today in the highly competitive market, increasing customer demands retail stores realize the importance of customer relationship management. The lack of understanding on Customer Relationship Management is always a concern among the service providers especially retail stores, retailers have their own way of managing their relationships with the customers. Customer Relationship Management (CRM) has the potential for achieving success and growth for organizations. CRM enables retail sector to know their customers better and to build sustainable relationships with them. Nowadays, as the economic environment continuously fluctuates, many retail sectors are looking for strategies to be followed to satisfy their wide range of customers and even wider range of needs. Thus, a combination of customer delight and loyalty is essential. Customer Relationship Management tools helps the organization to identify and implementing the strategies to retain the customer. In this paper an attempt has been made to study the impact of CRM on customer satisfaction and customer loyalty in retail sector.

Keywords: CRM, Customer Satisfaction, Customer Loyalty, Retail Sector, Growth.

INTRODUCTION

Indian Retail industry has emerged as one of the most dynamic and fast –paced industries due to the entry of several new players. It accounts for over 10% of the country's gross domestic product and around 8% of the employment. India is the world's fifth largest global destination in the retail space and ranked 63 in World bank's Doing Business 2020. India's retail sector is witnessing accelerated growth, with retail development taking place not just in major cities and metros, but also in Tier-II and Tier –III cities. The Purchasing power of Indian consumer is growing in categories like apparels, cosmetics, shoes, watches, beverages, food and even jewelry. Customer service is a vital factor required for a successful retail business. Several retail organizations often only focus on the quality of services and organizational infrastructure. They overlook the fact that it is consumers who can make or break a business. Today, consumers are more conscious of products and also demanding. They know what they want and where to buy it. Retaining their loyalty is a significant challenge for retailers. Marketing, social media platforms, and better accessibility play a crucial role in deciding customer behavior. This is where CRM comes into the picture. Customer Relationship Management is a technology for managing company's relationships and interactions with customers and potential customer. The objective of CRM is to retain the customers for life. Customer Relationship Management is a strategic approach that is concerned with creating improved shareholder value through the development of appropriate relationship with key customers.

The retail industry in India is largely an unorganized sector but is growing at a very fast pace, hence the need of CRM solutions. In today's technologically connected global village where consumer behavior is highly influenced by the power of social media and mobile, creating and holding on to their attention is the sole criterion which determines winners and losers in the business of retail. CRM in retail industry provides a tool to the retailers to stay in touch with their customers and offer personalized service, benefitting both the parties in equal measure. Cloud based CRM solutions in retail not just collaborates customer information, it is also effective in gathering and

शोध प्रभा

Shodha Prabha (UGC CARE
Journal)

ISSN: 0974-8946

Vol. 47, Issue 03 No.6 :
2022

**COMPARATIVE STUDY ON THE WORK-LIFE BALANCE OF THE
WOMEN DOCTORS IN GOVERNMENT AND PRIVATE HOSPITALS IN
TIRUNELVELI DISTRICT**

A. RAJESWARI, Phd Scholar, (Reg No. 19121281012024)
St.Xavier's College (Autonomous), Palyamkottai
Asst. Professor, Department of Commerce, A.P.C Mahalaxmi College for Women, Thoothukudi
(Affiliated to Manonmanium Sundaranar University, Tirunelveli)

K.S. ARCOKIASAMY, Assistant Professor
Department of Commerce, St.Xavier's College (Autonomous) Palayamkottai,
Tirunelveli (Affiliated to Manonmanium Sundaranar University, Tirunelveli)

Dr. K. SUNDARARAJAN, Associate Professor
Department of Management Studies, PSN College of Engineering and Technology,
Melathediyoor, Tirunelveli, Tamilnadu

ABSTRACT:

Entrepreneurship play a vital role in the growth of any society. Entrepreneurs emerge from an individual „s creative spirit into long – term business ownership, employment creation, capital formation and economic security. Entrepreneurs may be defined as the women or group of women won take initiative to set up a business enterprise and to run it smoothly. According to Schumpeter's concept, “ Women who innovative, imitate or adopt a business activity are known as women entrepreneurs.” Today Women Entrepreneurs growth is essential for social development. The primary aim of the study is to understand the socio – economical factors of women entrepreneurs

शोध प्रभा
Shodha Prabha (UGC CARE Journal)

ISSN: 0974-8946
Vol. 47, Issue 03 No.6 : 2022

CONSUMER AWARENESS TOWARDS WATER SANITATION AND PUBLIC HEALTH IN THOOTHUKUDI DISTRICT

V.SANTHIYA, Ph.D. Research Scholar, (Reg. No:20212011012011)
PG & Research Department of Commerce, A.P.C. Mahalaxmi College for Women, Thoothukudi-2.

Dr. S.UMAMAGESWARI, Assistant Professor
PG & Research Department of Commerce, A.P.C. Mahalaxmi College for Women, Thoothukudi-2.

ABSTRACT:

The study focuses on sanitation and hygiene are major public health concerns among communities throughout India. More than half of India's population defecates in the open, which has significant effects on water quality and children who are at risk for diarrheal disease. To know poor hygiene practices and inadequate sanitary conditions play major roles in the increased burden of communicable diseases within developing countries. Water supply, hygiene promotion and considers the costs and benefits of each in turn. Water supply and sanitation offer many benefits are considered in detail because they have important implies for the share of the cost that is reference to the health sector. The study measures to provide basic WASH resources connected with efforts to create awareness to improved WASH practice and prevent diseases. A universal and proper connection to safe and affordable drinking water and adequate sanitation and hygiene can be related to water and sanitation are achieved. Water is basic human right, most natural resource for economy and health. Sanitation is determinants of quality of life and individual's hygiene can affect the whole community. Drinking water and sanitation is an essential health service. WASH interventions such as safe water storage for portable water, latrines for sanitation and soap for hygiene, bath and hand washing.

Keywords: WASH, Drinking water, Water supply, Diarrheal, Sanitation

INTRODUCTION

The present situation of lack of WASH indices across the global is worrisome. Every one out of four people in the world lack access to safe drinking water, while only two out of four people use safely managed sanitation service. For example, while more than 90% of the urban population in India use safe water, the ratio comes down to 50% for the rural population. While the point of reference related to WASH are improving moderately, there is not much known about the tribal regions in India. The tribal population contributes to more than 8% of India's total population and is traditionally less developing than the non-tribal population due to various reasons. Water safety in a community depends up on a range of factors, from the quality of source water to storage and handling in the home setting.

Hygiene is a very personal subject, and encouraging changes in hygiene requires skill and care. These challenges are the subject of hygiene promotion. It is a planned approach which encourages people to adopt safe hygiene practices. We linked a study to document information about water management, sanitation, and defecation habits in rural areas in order to better understand the impact of socio-cultural factors on water usage and safety. Two of these measures deal with water and sanitation, and they would help the organization speed up its efforts to improve access to safe drinking water, sanitation, and hygiene (WASH) in health-care facilities (HCF). Water safety in a community is determined by a number of factors, including the quality of the source water as well as storage and handling in the home. There are scant reports on excretion habits and toilet accessibility, especially in rural India. WASH (safe drinking water, sanitation, and hygiene) has remained a major



Evolution in Human Resources Management

Ulu al-Albab in the New Era

Presented by:

M Fahim Tharaba¹, Bambang Sugiyono Agus Purwono², **Shyamala Susan**³, Rosida Kerin Meirani⁴

^{1,4} Universitas Islam Negeri Maulana Malik Ibrahim, Malang, Indonesia

² State Polytechnic of Malang, Indonesia

³ **APC Mahalaxmi College for Women**, Thoothukudi, Tamilnadu, India

DETECTION OF ORAL LICHEN PLANUS USING MACHINE LEARNING TECHNIQUE

Dr. A. Ramalingam¹, Dr. P. Aurchana², S. Prabavathy³, R. Felista Sugirtha Lizy⁴, G. Jeya Sutha Perciya⁵

¹Professor, ^{2,3,4,5}Assistant Professor

^{1,2}Department of Master of Computer Applications, ^{3,4}Department of Computer Science,

⁵Department of Information Technology

^{1,2}Manakula Vinayagar Engineering College, Puducherry, ^{3,4}A.P.C. Mahalaxmi College for Women, Thoothukudi, ⁵Pope's College (Autonomous), Sawyerpuram

Abstract

Oral lichen planus (OLP) is a relatively common oral disorder that shares clinical and histopathological features with other lichen planus lesions, resulting in significant inter-observer disagreement. This affects our understanding of the pathogenesis of this disease and its potential for malignant transformation. Artificial intelligence creates machine learning artificial neural networks to detect diseases. In the proposed work, the microscopic image was taken. Features extraction techniques mainly Block Intensity Code Comparison and Histogram were used to extract the features. The derived features were fed into Support Vector Machine and Gaussian Mixture Models which is then classified into normal and abnormal. From the above experiments, when compared with support vector machine and Gaussian Mixture Model gives the satisfactory results of 95.00%.

Keywords: OLP, SVM, GMM, histogram, BICC, OSCC.

1. Introduction

Lichen planus is another common precancerous lesion that can appear on the skin and in the oral cavity, so it is called a mucocutaneous lesion, destroying the basal layer of the epithelium. It affects 1% to 2% population and are the most common oral skin disease in the oral cavity [1].

Over the past years, studies of the potential malignancy of oral lichen planus (OLP) have provided clinical evidence that patients affected by OLP are more likely to develop a oral squamous cell carcinoma (OSCC); However, there is still controversy over whether or not OLP has an inherent tendency to become malicious [2] [3].

[7525]

Comparative Study on Location Aware Aco Routing Protocols in Manets

P. Roselin

Research scholar, Department of computer science Engineering,
ManonmaniamSundaranarUniversity,TirunelveliTamilNadu, India.

rosephil56@gmail.com

Dr. D. Murugan

Professor, Department of computer science Engineering, ManonmaniamSundaranar
University, Tirunelveli TamilNadu, India.

dmurugan@msuniv.ac.in

S. Brisklinekiruba

Research scholar, Department of computer science Engineering,
ManonmaniamSundaranarUniversity,TirunelveliTamilNadu, India.

briskline@gmail.com

Abstract:

MANETs (Mobile Ad hoc Network's) are self-configuring, infrastructure-free networks made up of wireless mobile devices. Routing in such networks is difficult due to these features. The development of highly efficient routing protocols for MANETs is a major challenge, as solutions must meet a number of criteria, including low packet latency, high packet delivery rate, and good adapting to network topology changes with minimal control overhead. Academics have been paying close attention to swarm intelligence-inspired algorithms because they offer feasible solutions that meet the requirements. The Ant Colony Optimization (ACO) algorithm has been used to balance the various routing needs in MANETs, and it is an effective example of swarm intelligence. A comparative examination of location aware ACO routing methods in MANETs is presented in this research. 1) Implementation of current location aware ACO based protocols is one of the paper's primary contributions. 2) Examining the drawbacks and benefits of the current approaches and determining the optimum method for developing a new automated routing technique. and 3) debating unresolved concerns and potential design paths for ACO-based routing protocols in the future.

Keywords: Mobile Ad hoc Network's, Ant Colony Optimization, Swarm Intelligence etc.

[10814]

A Novel Pulse Coupled Genetic Particle Swarm Optimization Algorithm with Neural Network classifier for Heart Disease Prediction

¹A. Sahaya Arthy and ²G.Murugeswari

¹Research Scholar, Associate Professor, Department of Computer Science and Engineering, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India

Abstract - Heart disease is still a major public health concern around the world. Restricting human knowledge and ability in manual diagnosis results in faulty diagnoses in the health-care system, as well as information about various illnesses collected through various forms of medical technology that is either insufficient or inaccurate. Intelligent resources assist doctors in making better decisions and initiating therapy early since proper identification of a person's condition is critical. Data mining is used as effective support systems in predicting the disease where large volume of data involved. More amounts of attributes helps to predict the disease accurately, but takes more time. It is critical to find the suitable attributes that provide best prediction accuracy. In this paper, we propose a novel hybrid algorithm namely Pulse Coupled Genetic Particle Swarm Optimization Neural Network (PCGPSONN) for feature selection. The proposed algorithm combines Genetic algorithm, Pulse Coupled Neural Network and Particle Swarm optimization algorithm together. A heart disease prediction model is developed using the proposed algorithm and SVM classifier. The prediction model is validated with Real time Data sets, Hungarian data set and UCI machine learning repository using various performance metrics such as accuracy, precision, and recall rate. It is found that our proposed algorithm performs well in feature selection and we achieved a maximum classification accuracy of 96.29% for heart disease prediction.

Index Terms - Heart Disease, Genetic algorithm, Prediction, Pulse Coupled Neural Network, Particle Swarm Optimization, feature selection

INTRODUCTION

Heart disease is one of the leading causes of death worldwide. The patient's signs, symptoms, and physical examination are widely utilised to diagnose cardiac illness. Smoking, high cholesterol, a family history of heart disease, obesity, high blood pressure, and a lack of physical activity are all factors that contribute to heart disease. Heart disease and stroke are the two most common health concerns in the United States today. In order to a recent World Health Organization (WHO) report published in 2018, heart disorders caused 56.9 million deaths worldwide in 2016 [17]. In 2008, 17.3 million individuals died from heart disease [16]. The World Health Organization (WHO) acknowledged data mining's promise for identifying early stages of heart disease and offering precise illness remedies. In order to the World Health Organization (WHO), 14 million of India's 30 million individuals with heart disease live in cities, while 16 million live in rural regions. A multitude of diseases might disrupt the blood flow to the heart, resulting in leakage or incorrect shutdown [27].

Heart disease kills both men and women in the United States every year, despite the fact that it is generally referred to as "men's sickness." In the first year after a heart attack, one out of every four women dies, compared to one out of every five males. Overweight and obesity, poor nutritional condition, physical incapacity, and excessive alcohol use are all factors that raise the danger of heart disease in persons [30].

Various applications make use of data mining methods. In the healthcare industry, data mining has proven to be useful in predicting sickness. The amount of tests will be reduced using mining algorithms. This reduction test is crucial for accuracy and timing. In data mining, there are a variety of learning approaches that may be used to observe large volumes of previously available data. Decision Tree (DT), Multi-layer Perceptron (MLP), Nave Bayes (NB), K-nearest neighbour (K-NN), and Support Vector Machine (SVM) are some of the methodologies [20].

The feature selection method [5] aids in the reduction of irrelevant features. There are a number of ways for selecting features, including WEKA and R. Some of the tools are freely available on the internet. [9] To forecast cardiac disease, the reduced features are sent into classification algorithms. To forecast cardiac disease, the reduced features are sent into classification algorithms. The focus of this research is on feature selection techniques for building predictive models.

The model's performance is then assessed using a heart disease dataset. To find and use the most important and critical features, we apply a feature selection algorithm. These traits are subsequently incorporated into cardiac disease prediction systems. These models' accuracy is then compared.

DETECTION OF ORAL LICHEN PLANUS USING MACHINE LEARNING TECHNIQUE

Dr. A. Ramalingam¹, Dr. P. Aurchana², S. Prabavathy³, R. Felista Sugirtha Lizy⁴, G. Jeya Sutha Perciya⁵

¹Professor, ^{2,3,4,5}Assistant Professor

^{1,2}Department of Master of Computer Applications, ^{3,4}Department of Computer Science,

⁵Department of Information Technology

^{1,2}Manakula Vinayagar Engineering College, Puducherry, ^{3,4}A.P.C. Mahalaxmi College for Women, Thoothukudi, ⁵Pope's College (Autonomous), Sawyerpuram

Abstract

Oral lichen planus (OLP) is a relatively common oral disorder that shares clinical and histopathological features with other lichen planus lesions, resulting in significant inter-observer disagreement. This affects our understanding of the pathogenesis of this disease and its potential for malignant transformation. Artificial intelligence creates machine learning artificial neural networks to detect diseases. In the proposed work, the microscopic image was taken. Features extraction techniques mainly Block Intensity Code Comparison and Histogram were used to extract the features. The derived features were fed into Support Vector Machine and Gaussian Mixture Models which is then classified into normal and abnormal. From the above experiments, when compared with support vector machine and Gaussian Mixture Model gives the satisfactory results of 95.00%.

Keywords: OLP, SVM, GMM, histogram, BICC, OSCC.

1. Introduction

Lichen planus is another common precancerous lesion that can appear on the skin and in the oral cavity, so it is called a mucocutaneous lesion, destroying the basal layer of the epithelium. It affects 1% to 2% population and are the most common oral skin disease in the oral cavity [1].

Over the past years, studies of the potential malignancy of oral lichen planus (OLP) have provided clinical evidence that patients affected by OLP are more likely to develop a oral squamous cell carcinoma (OSCC); However, there is still controversy over whether or not OLP has an inherent tendency to become malicious [2] [3].

[7525]



RASAYAN J. Chem.

Vol. 14 | No. 4 | 2255-2262 | October- December | 2021

ISSN: 0974-1496 | e-ISSN: 0976-0083 | CODEN: RJCABP

<http://www.rasayanjournal.com><http://www.rasayanjournal.co.in>

MINERALOGICAL AND MORPHOLOGICAL CHARACTERIZATION OF ORGANICALLY AMENDED SOIL

**R. Suya Padhra Haridha^{1,2,✉}, F. Jeyamangalam³, R. Mary Jenila¹
and S. C. Vella Durai⁴**

¹Department of Physics, St. Xavier's College (Autonomous),
Palayamkottai-627 002, Tamil Nadu, India

²Department of Physics, A.P.C. Mahalaxmi College for Women,
Thoothukudi-628 002, Tamil Nadu, India.

³Department of Physics, Sarah Tucker College (Autonomous),
Tirunelveli-627 007, Tamil Nadu, India.

⁴Department of Physics, JP College of Arts and Science, Agarakattu,
Tenkasi-627 852, Tamil Nadu, India.

(Affiliated to Manonmaniam Sundaranar University, Tirunelveli-627012, India.)

✉Corresponding Author: suyatweety31@gmail.com

ABSTRACT

The objective of this paper is to propose a soil characterization methodology based on mineralogical and morphological analyses. This paper intends to offer the consequences of Powder X-ray diffraction (PXRD) exams and scanning electron microscopy-Energy dispersive X-ray spectroscopy (SEM-EDS) analyses which predict the presence of minerals in organically treated soil. PXRD offers records on the crystal shape of the pattern and different structural parameters. The observed PXRD patterns indicate the presence of Quartz, Kaolinite and Calcite. The FTIR study also confirms the variation in minerals before and after the application of the organic amendments. FTIR offers the molecular decision of mineral and natural purposeful corporations of soil. SEM exams had been extensively utilized to assess microstructural modifications within the tested specimens and examine the effects of pore size in the sandy soil. The results of SEM indicate the improvement in soil structure with a good Water Holding Capacity (WHC). EDAX studies confirm the significant variation in micronutrients. Measurement of pH and electric conductivity (EC) parameters offers valuable records for assessing soil situation for plant growth, nutrient cycling and organic hobby. It also improves the macro-nutrients like Nitrogen (N), Phosphorus (P) and Potassium (K).

Keywords: EDAX, FTIR, Mineralogical Analyses, Organic Amendment, PXRD, SEM.

RASAYAN J. Chem., Vol. 14, No.4, 2021

INTRODUCTION

Our country is predominantly vegetarian and pulses play an important role in Indian agriculture. Pulses are the main source of protein and amino acids. In India, the total production of pulses for the last decades was around 13 to 15 million metric tons. Black gram (*Vigna Mungo L*) is one of the major pulse crops among the grain legume grown in India. It is commonly known as "Urad" or "Urad bean". Black gram is a very nutrient-demanding crop that needs organic or inorganic fertilizers to promote crop yield.¹ It is more nutritious, containing one-third of the protein in it and nourished with Phosphorus, Potassium, Calcium along a notable amount of Sodium. It is also reported that it is substantially good in Vitamin A, B₁, B₃ other than proteins.² Nutrients that are removed from the soil can be retrieved with the usage of fertilizers and it also acts as an additive for the soil to enhance the yield.^{3,4} Organic Farming, a system that favors the use of organic materials such as manure to improve the health of the soil and to improve the yield.⁵ Soil fertility and productivity can be enhanced with the addition of animal manures and crop residues. Organic amendments are said to improve soil structure, texture and increase biochemical activities of soil microorganisms aside from adding essential nutrients to the soil.⁶ It also avoids the use of synthetic fertilizers and pesticides thereby reducing their deleterious effect on the environment. Organic agriculture is healthier not only for humans and animals but also for the environment. The continuous

Rasayan J. Chem., 14(4), 2255-2262(2021)

<http://doi.org/10.31788/RJC.2021.1446515>



This work is licensed under a CC BY 4.0 license.



ORIENTAL JOURNAL OF CHEMISTRY

An International Open Access, Peer Reviewed Research Journal

www.orientjchem.org

ISSN: 0970-020 X
CODEN: OJCHEG
2022, Vol. 38, No.(2):
Pg. 399-405

Swine Manure as Soil Supplement to Enhance the Growth and Yield of Black Gram (*Vigna Mungo.L.*): A Field Study

R. SUYA PADHRA HARIDHA^{1*}, F. JEYAMANGALAM² AND R. MARY JENILA³

¹Department of Physics, A. P. C. Mahalaxmi College for Women, Thoothukudi-628002, India.

²Department of Physics, Sarah Tucker College (Autonomous), Tirunelveli-627007, India.

³Department of Physics, St.Xavier's College (Autonomous), Palayamkottai-627002, India.
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli-627012, India).

*Corresponding author E-mail: suyatweety31@gmail.com

<http://dx.doi.org/10.13005/ojc/380222>

(Received: March 22, 2022; Accepted: April 26, 2022)

ABSTRACT

This study emphasis on the impact of Swine manure (SM), Vermi compost (VC) and combination of both the manures (SMVC) treatments on physico-chemical, chemical and physical properties of Sandy Clay Loam (SCL) soil and on the growth parameters of the Black Gram (*Vigna Mungo.L.*). A field experiment was conducted with three different treatments viz., sole application of SM, VC and combined application of both manures SMVC at three different doses of 8, 12.5 and 17 t ha⁻¹ respectively. Soil properties got better enhancement for the amendment of swine manure as a single treatment at 17 t ha⁻¹ (T3) and also responded well when combined usage with vermicompost at 17 t ha⁻¹ (T9) too. The highest yield of 512 kg ha⁻¹ was obtained for the treatment T9 and it is also in par with T3 of 510 kg ha⁻¹, and the lowest yield 94 kg ha⁻¹ was acquired with the control plot (T10). Chemical properties like Nitrogen (N) and Phosphorus (P) and Potassium (K) got enriched after amendment with organic supplements, hence the development in the growing parameters viz., height of the plant and number of leaves per plant got increased. Bulk density takes place a cardinal role in the enhancement of water holding capacity along with saturated moisture (SaM) and thereby increases the yield. Statistical analysis has been done using SPSS (P<0.05) and height of the plant in 45DAS was found to be significantly responded to the crop yield. Present finding revealed that swine manure could be reliably used to enhance the productivity of Black Gram (*Vigna Mungo.L.*) instead of preferring to the Chemical Fertilizers (CF) and deteriorating the environmental ecosystem also to reduce the first concern of FYM.

Keywords: Swine manure, Vermicompost, Sandy clay loam, Black gram, Chemical fertilizers.

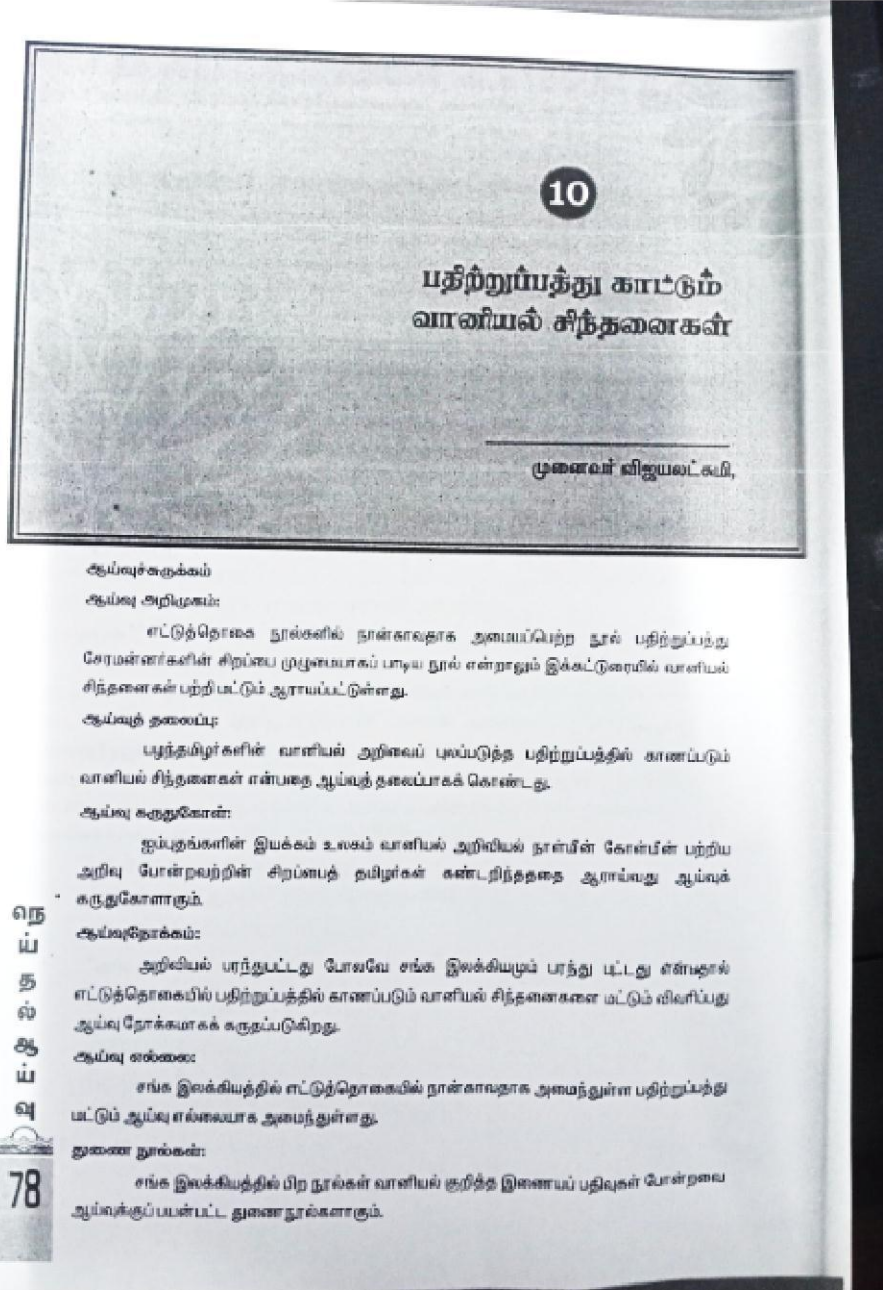
INTRODUCTION

Agriculture creates an evolution in the advancement of human civilization. In the recent years, chemical fertilizers stand its feet in the field of agriculture and generates a vigorous effect on the health of the people along with an unendurable

extent of pollution and declining the fertility of the soil. Studies have been done for a long time and proven that incessant usage of chemical fertilizers in agricultural land declines the crop yield. The reason behind to it is ineffective usage of nitrogen, diminishing of soil physical and chemical characteristics deficiency of relevant micronutrients

This is an Open Access article licensed under a Creative Commons license: Attribution 4.0 International (CC- BY).
Published by Oriental Scientific Publishing Company © 2018





शोध प्रभा

Shodha Prabha (UGC CARE Journal)

ISSN: 0974-8946

Vol. 47, Issue 02 No.6 : 2022

TRANSCENDING MORTALITY THROUGH SINGULARITY: A TRANSHUMANISTIC STUDY OF DAN BROWN'S THE LOST SYMBOL

Dr. P. BALA SHANMUGA DEVI, Associate Professor

P.G. and Research Department of English, **A.P.C. Mahalaxmi College for Women**,
Thoothukudi- 628 002, Tamil Nadu, India,
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli – 12)
E-mail : devibala25.oct@gmail.com

Ms. K.S. ANUSHYA, Assistant Professor

P.G. and Research Department of English, **A.P.C. Mahalaxmi College for Women**,
Thoothukudi- 628 002, Tamil Nadu, India,
(Affiliated to Manonmaniam Sundaranar University, Tirunelveli – 12)
E-mail : anushyaselvaraja@gmail.com

ABSTRACT:

The emergence of unexpected changes in the field of science leads to revolutionary changes in the society. One of the major revolutions is Noetic science that has broken new grounds in the understanding of how the universe works. Noetic science focuses more in the inner universe rather than the outer universe. The primary concern is with consciousness, unlike conventional science which is actively concerned with the role that consciousness plays in the dance of life. Noetic Science has made firm inroads into exotic observations of Transhumanism. When Dan Brown's The Lost Symbol is explored with insights of transcending mortality and Transhumanism, it bestows a very new and different perspective to the novel. Transhumanism is termed as another form of immortality or a new dimensional alchemy and, achieved with the scientific mode of nano technology and artificial intelligence. Even during the 19th century, there was a theory called Panpsychism, the default theory in the field of mind philosophy and one of the oldest philosophical theories has been ascribed to many ancient well-known philosophers. The paper concludes that due to the evolution of Transhumanism, the world of human beings would turn into e-world where the souls would writhe under the control of inhuman artificial intelligence. Furthermore, the glorious divinity predicted in the holy books and scriptures for souls would be gone into null and void.

Keywords: Noetic science, Transhumanism, Cryo-preservation, Panpsychism, Artificial Intelligence.

INTRODUCTION

Evolution of knowledge and understanding opens new avenues that seemingly overturn and question even the most basic concepts of science. What was once accepted as 'truth' by what is termed as empirical research evidence for a more complete truth or a substantial one has always been part and parcel of science.

The emergence of unexpected changes in the field of science leads to revolutionary changes in the society. British philosopher Edmund Burke clearly illustrates the law of such new changes in his terms:

We must all obey the great law of change. It is the most powerful law of nature, and the means perhaps of its conservation. All we can do, and that human wisdom can do, is to provide that the change shall proceed by insensible degrees. This has all the benefits which may be in change, without any of the inconveniences of mutation. (Levin)

One of the major revolutions is Noetic science that has broken new grounds in the understanding of how the universe works. Noetic science focuses more in the inner universe rather than the outer universe. The primary concern is with consciousness, unlike conventional science which is actively concerned with the role that consciousness plays in the dance of life. Sean A. Hays,

SUFFERINGS AND CHALLENGES OF MAYA IN ANITA DESAI'S *CRY, THE PEACOCK*: A FEMINISTIC VIEW

Dr. J. VASANTHA SENA

Assistant Professor, Department of English
A.P.C. Mahalaxmi College for Women, Thoothukudi

Abstract

Anita Desai, a great analyst of the human mind, a creator of brilliant characters, and an astute interpreter of life, represents a gallery of vivid and realistic portraits. She concentrates on the predicament of modern women in the male-dominated society and her destruction at the state of marriage. According to her, most marriages prove to be unions of incompletely men who are apt to be rational and rigid with the women who are sentimental and emotional. Anita Desai's first novel Cry, the Peacock is about Maya's cries for love and understanding in her loveless marriage with Gautama. She wanted to live passionately like peacocks which tore at each other before making love.

Keywords: marriage, relationship, domination, detachment, crisis

Introduction

Anita Desai, one of the most appealing novelists on the Indo-English fiction, appeared on the Indian English Literary scene with the publication of her first novel *Cry, the Peacock* in 1963. Unlike many other Indian writers in English, Desai is not interested in merely narrating a story. She is more interested in her characters and themes and primarily her views. She is interested in the inner life of her characters. The themes of her novels are mostly related to the plight of women. These women characters react very strongly and sensitively to the forces of male dominated society. As Kohli points out, "No other writer is so much concerned with the life of young men and women in Indian cities as Anita Desai is" (62).

The novel *Cry, the Peacock* narrates the story of Maya's married life with Gautama. Maya, young, beautiful, intelligent and very sensitive as well as sensuous, fails to grow out of childhood, married to a reputed lawyer, nearly twice her age. She is incapable of leading an

independent existence. Her neurotic life is linked with her father's personal attention. She is filled with fear of death and so she cannot establish effective communication with her husband. She feels lonely and this isolation is total when she murders her husband in a fit of insane fury. The death motif is built into the structure of the story. R.S.Sharma feels, "The novel operates primarily on a symbolic level. But it has a vast Canvas of events, characters and relationships that add to the narrative appeal" (49).

Maya represents a class of women who silently suffer at the hands of men. Maya, as a wife, how far succeeded in capturing Gautama's mind, is debatable. There is a temperamental difference between Gautama and Maya, and a wide difference in age too. Her husband's indifference adds to her loneliness in the house. The nerve-racking experience of being ignored by Gautama and his family induces her to recoil to her childhood days.

There is a gap between the family status of Maya and Gautama. She comes from high class,

Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)
Journal of Tianjin University Science and Technology
ISSN (Online): 0493-2137
E-Publication: Online Open Access
Vol:54 Issue:06:2021
doi: <https://doicatalog.org/19.4102/jtus.v54i6.3470>

THE DEVELOPMENT OF SCIENCE INTEGRATION TOWARDS SMART CAMPUSES IN INDONESIA USING THE ISLAMIC HIGHER EDUCATION MANAGEMENT MODEL

M. Fahim Tharaba^{1*}, Shyamala Susan Vincent², Fantika Febry Puspitasari³, Basori⁴ and Bambang Sugiyono Agus Purwono^{5*}

^{1,3,4}Universitas Islam Negeri Maulana Malik Ibrahim Malang

²Computer Science Department in APC Mahalaxmi College, Thoothukudi, Tamil Nadu, India

⁵ State Polytechnic of Malang, Malang 65141, Indonesia

*Corresponding authors: fahimtarbiyah@pai.uin-malang.ac.id; bambangsap2015@gmail.com

Abstract

The Education Management Model in the State of Islamic University (UIN) Maulana Malik Ibrahim Malang has a purpose to integrate ulū al-albāb for its graduates. To reach the goal, the State of Islamic University (UIN) Maulana Malik Ibrahim Malang has some uniqueness as follow: (1) known as the Ulū al-albāb campus, (2) the one and only university that has direct transformation from STAIN (the State of Islamic College) to UIN, and (3) the integrated campus that believes in the disappearing dichotomy of sciences symbolized by Tree of Science metaphor. Therefore, the purposes of this research are, (1) finding education management model based on ulū al-albāb in science integration developing context, and (2) finding the strategic model in the development of science integration at UIN Malang. This research is a case study using indept interviews as the instrument to collect the data which then were processed as follows, (1) data reduction, (2) data presentation, and (3) verification/making conclusion. The results of the research are (1) the descriptions of education management model based on ulū al-albāb that (a) the orientation of institution integrates the element of supra-rational, rational, and situational, (b) the formulation of five elements of institution as follow, (i) Management concept based on spiritual vision, (ii) the principles valued are *dhikr*, intellectual thinking, good behavior, and al-akhlaq al-Karima, (iii) the eight characteristics of ulū al-albāb leadership, (iv) Integrating nine components of arkan al-jamiah, and 12 steps of implementation strategic. (2) the strategy for science integration in UIN Malang through (a) Developing Tree of Science metaphor, (b) Elaborating the curriculum structure building from science discipline in integrative sciences with a tree metaphor model, that produce science, faith, good deeds, and al-akhlaq al-Karima, to be professional whose intellect Muslim religious teacher (ulama)/or ulama whose intellect is professional, (c) synthesis between he university and the Islamic boarding school (*Islamic Boarding School (Pesantren)*) form (d) spirituality depth, morality strength, intellectuality mastering, and professionalism.

Keywords: *Management of education; Ulu al Albab; Science Integration*

Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)/
Journal of Tianjin University Science and Technology
ISSN (Online): 0493-2137
E-Publication: Online Open Access
Vol:54 Issue:06:2021
doi: <https://doicatalog.org/19.4102/jtus.v54i6.3474>

DISRUPTION OF BALAGHAH LEARNING MEDIA DURING THE COVID-19 PANDEMIC IN IAIN TULUNGAGUNG

Ahmad Nurcholis^{1*}, Umi Machmudah², Izzatul Laila³ and Shyamala Susan Vincent⁴

¹Institute Agama Islam Negeri (Tulungagung)-Indonesia

²Universitas Islam Negeri Maulana Malik Ibrahim (Malang)- Indonesia

³MTsN 1 Malang, Indonesia

⁴APC Mahalaxmi, Thoothukudi, Tamil Nadu, India

*Corresponding author: cholisahmad87@gmail.com

Abstract

Purpose of the study: The premise of this paper is to describe the disruption of the Balaghah learning media during the covid-19 pandemic in IAIN Tulungagung

Methodology: It is a descriptive study with a qualitative approach. It represents two main descriptions such as the problems of online-based Balaghah learning for IAIN Tulungagung students and Balaghah learning media disturbances during the covid-19 pandemic in IAIN Tulungagung.

Main Findings: The results showed that at the beginning of its implementation, many students well responded to this online class, however, after several times of the courses, many students experienced difficulties in learning. This situation reduces the quality of the teaching and learning process. Most students choose the learning process in the offline class because the students faced some problems while having an online class. The freedom provided, on the other hand, even distracts the students' focus. The disruption of Balaghah learning media during the Covid-19 pandemic in IAIN Tulungagung is the shift from conventional to online-based media such as Zoom Meeting, Google Meet, Google Classroom, and WhatsApp Group.

Novelty/Originality of this study: This research addressed the online learning problems of Balaghah for IAIN students, Tulungagung are the difficulty of receiving Balaghah learning materials related to words and sentences pronunciation, much subject matter that is too hard to understand, lack of student interest and motivation to learn, little time available, network quality in certain areas, as well as an environment that is less supportive of Balaghah learning. The disruption of the Balaghah learning media during the Covid-19 pandemic at IAIN Tulungagung is the use of various online media such as (1) Media with video conference features, Zoom Meeting and Google Meet, (2) Media with low capacity video conferencing features, WhatsApp Group, and (3) Alternative media, Google Classroom.

INTRODUCTION

The Covid-19 outbreak has spread to 215 countries in the world, it challenges educational institutions, especially higher education. To fight Covid-19, the Government asks all people to do social distancing and physical distancing, wear a

Tianjin Daxue Xuebao (Ziran Kexue yu Gongcheng Jishu Ban)
Journal of Tianjin University Science and Technology
ISSN (Online): 0493-2137
E-Publication: Online Open Access
Vol:54 Issue:06:2021
DOI 10.17605/OSF.IO/64PWA

DOMINANT FACTORS FOR ENHANCING PRODUCT QUALITY, SERVICE QUALITY, PROMOTION EFFORTS, AND DECISION MAKING TOWARD THE XBCA BANK CUSTOMER'S SATISFACTIONS

Mochammad Jasin*

Universitas Islam Negeri, Jakarta, Syarif Hidayatullah, Indonesia

Shyamala Susan Vincent

APC Mahalaxmi, Thoothukudi, Tamil Nadu, India

Masroni

Politeknik (Malang) Negeri, Indonesia

Bambang Sugiyono Agus Purwono*

Politeknik (Malang) Negeri, Indonesia

Corresponding authors:

moch.jasin@uinjkt.ac.id, bambang.sugiyono@polinema.ac.id

Summary

This research is aiming towards determining and analysing the presiding elements of the promotion, trait, service quality, and decision making toward customer satisfaction at the XBCA Branch Office of XBCA Equity Tower Jakarta, Indonesia. The data used to analyze are primary and secondary data. The sampling technique used was proportional sampling and collected data of 130 appellants from vivid norms such as education, age, monthly income, and gender. Factor Analysis is the measurable strategy that has been used as a research method here. And the results are a) the four mutables brought down to two factors (named promotion, product effort, and choosing the product). b) The primary factor (named promotion and product effort) held up by two mutables (promotion, quality of the product). c) The secondary one (named as choosing the product) held up by two mutables (service quality, & decision making).

Keywords: Promotion, quality, service quality, decision making, Customer Satisfaction.

I. RESEARCH BACKGROUND

In attempt of striving for economic sustainability and growth, the government established a series of policies in the monetary and banking sector. The policy is intended to increase mobilization of public funds. Competition in the banking world has become the center of attention of various groups, due to the occurring of elements to concern and put efforts helping to the welfare of society improvement. Seeing this condition, all banking institutions, including XBCA Bank, are competing one another to market their savings products that are able to meet the society needs. XBCA Bank as one of the largest private banks in Indonesia, also markets a savings

NANOSYSTEMS:
PHYSICS, CHEMISTRY, MATHEMATICS

Kalaiaarasi S., Shyamala S., et al. *Nanosystems: Phys. Chem. Math.*, 2022, 13 (3), 320–330.
<http://nanojournal.ifmo.ru>
DOI 10.17586/2220-8054-2022-13-3-320-330

Original article

Electrochemical performance of r-graphene oxide based MnO₂ nanocomposite for supercapacitor

S. Kalaiaarasi^{1,2}, S. Shyamala³, M. Kavitha³, C. Vedhi³, R. R. Muthuchudarkodi³

¹Manonmaniam Sundaranar University, Tirunelveli, Tamilnadu, India

²PG and Research Department of Chemistry, A.P.C. Mahalaxmi College for Women, Thoothukudi, Tamilnadu, India

³PG and Research Department of Chemistry, V.O. Chidambaram College, Thoothukudi, Tamilnadu, India

Corresponding author: R. R. Muthuchudarkodi, muthu.rajaram@gmail.com, cvedhi23@gmail.com

ABSTRACT In this study, we improved the capacitance of carbon based reduced graphene oxide (rGO) and metal oxide based MnO₂ by preparing nanocomposites of rGO/MnO₂ nanocomposite using chemical synthesis method. The prepared nanoparticles and nanocomposites are characterized by FTIR spectroscopy, XRD, PL spectroscopy and FESEM with EDAX spectroscopy. FTIR studies disclose the characteristic chemical bonding between the respective materials. The FESEM images demonstrate that the surface structure of rGO and MnO₂ can be easily tuned by forming the composite of rGO/MnO₂ materials leading to excellent process ability of the system. The super capacitive behaviors of nanocomposites are evaluated using cyclic voltammetry and galvanostatic charge–discharge techniques. The specific capacitance of rGO/MnO₂ composite is high compared to that of MnO₂ nanoparticle. In addition, impedance measurements of the MnO₂ nanoparticles and rGO/MnO₂ electrodes are executed proposing that the rGO/MnO₂ composite electrodes are promising materials for super capacitor (186.6 Fg⁻¹).

KEYWORDS graphene oxide, cyclic voltammetry, nanocomposite, FESEM, electrochemical properties, supercapacitors

ACKNOWLEDGEMENTS The authors would like to express their gratitude to the Department of Science and Technology (FAST TRACK and FIST) in New Delhi, India for allowing them to use the CHI electrochemical workstation. The FT-IR spectra were generously provided by the PG and Research Department of Chemistry at V. O. Chidambaram College in Thoothukudi. We are grateful to the Secretary of A. P. C. Mahalaxmi College for Women, Thoothukudi.

FOR CITATION Kalaiaarasi S., Shyamala S., Kavitha M., Vedhi C., Muthuchudarkodi R. R. Electrochemical performance of r-graphene oxide based MnO₂ nanocomposite for supercapacitor. *Nanosystems: Phys. Chem. Math.*, 2022, 13 (3), 320–330.

1. Introduction

Recently, great interest appeared in fabricating and utilizing novel graphene oxide–metal oxide nanocomposites for environmental remediation by the degradation and elimination of toxic organic contaminants and heavy metals, and for antibacterial applications. Compared with graphene oxide, graphene oxide–metal oxide nanocomposites show a unique structural morphology and photochemical properties which render them good candidates for water treatment projects [1]. Many research groups are working on the nanocomposite materials particularly graphene-based composite materials. Different types of graphene based composite materials are being investigated and reported for various engineering applications [2].

Supercapacitors have attracted growing interest, due to their high power density, long cycle life, and fast charging rate, which play an important role in complimenting or even replacing batteries in many applications [3–5]. Nevertheless, the low-energy density and higher production cost are still some of the major challenges for implementing supercapacitor in future application. To date, the carbon materials (activated carbon, carbon nanotubes, (CNT) and reduced graphene oxide (rGO)) [3, 4, 6] transition metal oxides (ruthenium dioxide (RuO₂), manganese dioxide (MnO₂), nickel oxide (NiO), cobalt oxide (Co₃O₄) [4, 5, 7] and conducting polymers (polypyrrole, polyaniline, PEDOT-PSS and polythiophene) [8, 9] have been recognized as the most promising materials for supercapacitors. Based on literature, the carbon-based electrodes display an excellent rate of capability, good reversibility [3], and superior cyclability but suffer from low capacitance value. On the other hand, transition metal oxides and polymer-based electrodes produce high capacitance through a fast faradic reaction but have a poor rate of capability and stability [3, 10].

Transition metal oxides are used in supercapacitor applications. In transition metal oxide, RuO₂ exhibits major supercapacitive performance, but it cannot be commercialized due to its high production cost and toxicity. Low cost

© Kalaiaarasi S., Shyamala S., Kavitha M., Vedhi C., Muthuchudarkodi R. R., 2022



Contents lists available at ScienceDirect

Materials Today: Proceedings

journal homepage: www.elsevier.com/locate/matpr

Tungsten oxide decorated graphene oxide nanocomposite: Chemical synthesis, characterization and application in super capacitors

S. Kalaiarasi^{a,1,*}, M. Kavitha^b, P. Karpagavinayagam^b, C. Vedhi^b, R.R. Muthuchudarkodi^{b,*}

^aDepartment of Chemistry, V.O. Chidambaram College, Thoothukudi 628008, Tamilnadu, India

^bPG and Research Department of Chemistry, V.O. Chidambaram College, Thoothukudi 628008, Tamilnadu, India

ARTICLE INFO

Article history:
Received 23 February 2020
Received in revised form 3 July 2020
Accepted 10 July 2020
Available online xxx

Keywords:
Graphene oxide
WO₃
Cyclic voltammetry
Nanoparticles
Nanocomposites

ABSTRACT

Nano structured metal oxides received considerable research attention due to their unique properties that can be used for designing advanced nanodevices. Thus, in the present study, Tungsten oxide/graphene oxide (WO₃/GO) nanocomposite was synthesized, characterized and implemented in an electrochemical system. Graphene oxide was synthesized by Hummer's method, WO₃ doped Graphene oxide nanocomposite were also successfully synthesized using sodium tungstate as the source of Tungsten. The crystalline structure and optical properties of WO₃ doped GO nanocomposite were characterized by UV-VIS spectroscopy, IR spectroscopy, X-ray diffraction (XRD) studies, Field Emission Scanning Electron Microscope (FESEM) with EDAX spectroscopy. The XRD spectrum showed diffraction peaks corresponding to the crystal planes of crystalline Tungsten oxide. Using Debye scherrer formula, the size of the undoped and Tungsten oxide doped Graphene oxide nanocomposite were also calculated. The morphological studies of the nanocomposite revealed crystal like morphology. The energy dispersive analysis confirmed the presence of Carbon, Tungsten and oxygen in the doped WO₃/GO lattice. Cyclic voltammetric behaviour showed better electrochemical response with the doped sample when compared with the undoped sample.

© 2020 Elsevier Ltd. All rights reserved.

Selection and peer-review under responsibility of the scientific committee of the International Conference On Impact Of Innovations In Science And Technology For Societal Development: Materials Science.

1. Introduction

Supercapacitors are charge storage devices of tremendous interest in view of its high power density, fast charging/discharging rate, long cycle life, a wide operating temperature range and environmentally benign. Still the low energy density of these supercapacitors has imposed significant challenges in utilizing them as primary energy sources to replace batteries [1]. Hence continuous effort have been undertaken to use nanostructured materials with improved specific capacitance. Most research are focused on the development of different electrode materials like carbon, conducting polymers, metal oxides and out of which carbon based materials like activated carbon, carbon nanotube and carbon aerogels is paid more attention for energy storage devices [2]. Activated carbon and carbon nanotube exhibits good electrical double layer

capacitance due to their excellent conductivity and high surface area, where the storage process is non-Faradaic and the storage of energy is electrostatic. The key to achieve high capacitance is increase the surface area and electrical conductivity of the material. Recently graphene has been the most promising material for energy storage applications due its high conductivity, superior chemical stability, unique mechanical strength and large surface to volume ratio than other carbon materials [3]. Super capacitors are categorized into two types based on the charge storage mechanism viz. electric double layer capacitors (EDLCs) and pseudo capacitor. The latter stores charges faradically, which allows them to achieve higher capacitance properties and enhanced energy densities than EDLCs. Polymers and metal oxides are exhibit this type of capacitance called pseudo capacitance which involves redox reactions and often the pseudo capacitance of such polymers and metal oxides show higher specific capacitance than EDLCs [4].

In the last few years, graphene based composites are being investigated for super capacitor applications. In general, the specific capacitance of graphene is lesser than the expected value due to restacking of the graphene sheets which could be improved by

* Corresponding authors.

E-mail addresses: kalaponpriya@gmail.com (S. Kalaiarasi), muthu.rajaram@gmail.com (R.R. Muthuchudarkodi).

¹ Affiliated to Manonmaniam Sundarnar University, Tirunelveli, Tamilnadu, India.

<https://doi.org/10.1016/j.matpr.2020.07.207>

2214-7853/© 2020 Elsevier Ltd. All rights reserved.

Selection and peer-review under responsibility of the scientific committee of the International Conference On Impact Of Innovations In Science And Technology For Societal Development: Materials Science.

Please cite this article as: S. Kalaiarasi, M. Kavitha, P. Karpagavinayagam et al., Tungsten oxide decorated graphene oxide nanocomposite: Chemical synthesis, characterization and application in super capacitors, Materials Today: Proceedings, <https://doi.org/10.1016/j.matpr.2020.07.207>

சிறப்பிதழ் Special Issue	05 புரட்பாசி 2052 21 st September 2021	ISSN : 2321 - 984X
57. ம.கப்பராயன் & த.ஜெயக்குமார்	திருக்குறளில் சமூகநீதிச் சிந்தனைகள்	289-294
58. க.கப்பலட்சுமி	சமூக வாழ்வியலில் முல்லை மகளிரின் முன்னெடுப்புகள்	295-298
59. பெ.கமதி & தே.மகேஸ்வரி	சிக. செல்லப்பா சிறுகதையில் வாழ்வியல் சிக்கல்கள்	299-304
60. A.SUMATHI	தமிழ் இலக்கியத்தில் அறிவியலின் பங்கு	305-308
61. ச.கனகா.அருள்ஞானம்	புலவர் வே.இரா.தெய்வசிகாமணிக் கவுண்டரின் கவடியியல் பணிகள்	309-312
62. க. நளினி	இலக்கியத்தில் கலைஞர்களின் வாழ்வியல் நெறி	313-316
63. ச.சங்கீதா & பா.திருஞானசம்பந்தம்	தமிழில் உயிரியல் சிந்தனையும் காட்சிப்படுத்தலும்	317-320
64. நேந்திரா நேவீஸ்	தமிழர் வாழ்வியலில் களவியல் பண்பாடு	321-325
65. S.THIVYANATHAN	TESTING LISTENING SKILL PROFICIENCY OF 9TH STANDARD STUDENTS IN DINDIGUL DISTRICT WITH SPECIFIC REFERENCE TO SECOND LANGUAGE	326-334
66. க.தேன்மொழி	ஐந்திணை நிலங்களும் அதன்வழி இறைநெறிக் கோட்பாடுகளும்	335-338
67. கா.தில்லையாடி வள்ளியம்மை	செந்நெல் நாவலில் சமுதாய மாற்றங்கள்	339-344
68. பா.சாந்தி & வை.கஜேந்திரன்	திருமுல்லை மெய்யறிவுச் சிந்தனைகள்	345-349
69. மு. திருமுருகன் & S. சரவணஜோதி	பெருமாள் முருகன் புனைவில் பெண்	350-355
70. இ.சுமையா தேவி	உளவியல் நோக்கில் சிவப்பதிகார பெண் கதைமாந்தர்களின் வாழ்க்கை நெறிகள்	356-359
71. அ. குருசாமி	வாலியின் திரையிசைப் பாடல்களின் தலைமைப் பண்புகள்	360-363
72. இரா. சங்கரேஸ்வரி & ஞா. கஜநாதா	நாலடியார் உணர்த்தும் வாழ்வியல் சிந்தனைகள்	364-368
73. காயிரோமா	கதமிழ்ச்செல்வியின் பூரிளங்கனில் மருத்துவம்	369-373
74. செ.சாந்தி & வே.ரோஸ்லின்	விரயுகநாயகன் வேள்பாரி நாவல் சுறுகின்ற வாழ்வியல் நெறிமுறைகள்	374-378
75. இரா.வேம்பு	தமிழ் நாடக வகையும் வடிவமாற்றமும்	377-381
76. அ.வேணுகோபால்	கவித்தொகை காட்டும் வாழ்வியல் முறைகள்	382-385
77. க.கோவிந்தராஜி	விவேகசிந்தாமணி காட்டும் இல்லற நெறிகள்	386-390
78. ச.க.விக்னேசுவரன்	சங்ககால வேளிகளின் போர் முறைமைகள்	391-399
79. பேரா. கா.விக்னேசு	சங்க இலக்கியங்களில் இசையும் - இசை மரபினரும்	400-403
80. கோ.கவிதா	விவேகசிந்தாமணி சுற்றம் வாழ்வியல் நெறிகள்	404-410
81. க.சந்திரசேகரன்	அற இலக்கியங்களில் விருந்தோம்பல்	411-414
82. மு. சரவணன்	சங்க கால மக்களின் வாழ்க்கையில் கலைகள்	415-419
83. த. சத்தியசீலன்	மண்பாரம் சிறுகதைத் தொகுப்பில் பெண்நிலை	420-425
84. கலைவாணி இளங்கோ	திருக்குறளில் இயற்கை வேளாண்மையும் வேளாண்மை தொழில்நுட்பமும்	426-430
85. ந. இரகுதேவன் & C. முத்துப்பாண்டி	மொழிபெயர்ப்பும் தமிழ்ச் சமூகமாற்றமும்	431-436
86. ச.இளமாறன் & பெ.கமதி	மார்க்சிய நோக்கில் இ.செல்வரத்தின் தோல் புதினம்	437-441
87. சாந்தி மகாலிங்கசீலம் & இரா.கோகுல்	சம்பந்தத் தேவாரத்தில் பெளத்தர்களின் வாழ்நெறி	442-446
88. ர. பாக்கியராஜ்	சூல் புதினத்தில் நம்பிக்கைகளும் உயிரினக் குறியீடுகளும்	447-454
89. கு.காந்திகா	பழமொழி நானூற்றில் வாழ்வியல் நெறிமுறைகள்	455-461
90. ப. செல்வி	மணிமேகலையில் ஆதிசை பிச்சையிட்ட காதையில் காணலாகும் வாழ்வியல் விழுமியங்கள்	462-466
91. த.மஞ்சளா தேவி	மேலாண்மையின் வேளாண் சிந்தனைகள்	467-469
92. கி. தத்தாத்ரேயன்	ராமகிருஷ்ண இலக்கியத்தில் இல்லற வாழ்வியல் நெறிகள்	470-476
93. K.UMARAJ	THE CONCEPT OF GOD, SELF AND THE UNIVERSE IN SIVANGANA BOTHAM	477-480
94. ஆ. நித்யா	கஜநாதரின் குறுப்புதினத்தில் காணப்படும் குடும்ப உறவுகளின் போராட்ட நிலை	481-483
95. அர.சதீஸ் குமார்	சங்க இலக்கியத்தில் சமூகம்	484-489
96. மி. கவிடலின் கவிதா	சிவம்பு காட்டும் பண்பாடு	490-492
97. ஜோ.பென்னி	சிவப்பதிகாரம் காட்டும் கணிகையர் வாழ்வியல்	493-497
98. நா.பகுஷியா பேசும்	கவித்தொகையில் வாழ்வியல் நெறிகள்	498-502
99. மு. மாரியப்பன்	வழிபாடு - தோற்றுலாய்	503-507
100. செ.சாந்தி & வே.ரோஸ்லின்	விரயுகநாயகன் வேள்பாரி நாவல் சுறுகின்ற வாழ்வியல் நெறிமுறைகள்	508-510
101. ஆ. ஜோசப் ஜெயபால்	சுற்றலின் தேவை	511-514
102. ஜா. பென்னிதாமஸ்	தமிழ்க்காப்பியங்களில் அரசியல் பதிவுகள்	515-518
103. ச. கலாதேவி	குறுத்தொகை காட்டும் மக்கள் வாழ்வியல் நெறிகள்	519-523
104. ஜெ.சரஸ்வதி	பழந்தமிழரின் வாழ்வியல் குறியீடுகள்	524-528
105. SYRYAKALA CHANDRIKA JEEVANANTHAN	HOW SIGNS UTILIZED IN AMERICAN SIGN LANGUAGE	529-530
106. கா.கணநாதன்	இலக்கியங்களில் வாழ்வியல் சிந்தனைகளில் முல்லை நில மக்களின் வாழ்வியல் சுறுகள்	531-535
107. வினோதினி அறிவழகன்	பழமொழி நானூறு மனித வாழ்வின் மேம்பாடு	536-539
108. ச. பாக்கியசுனி	நற்றிணை காட்டும் வாழ்வியல் நெறிமுறைகள்	540-543
109. ந.இரகுதேவன் & வே.நித்யப்பிரியா	கல்வி ஒருக்குமுறை - தவித் பெண்படைப்பாளிகள் பார்வையில்	544-549
110. ந. பரமேஸ்வரி	சங்க இலக்கியம் உணர்த்து வாழ்வியல் பண்பாட்டு நிலைகள்	550-552
111. உ.கருப்பத்தேவன்	பதினெண் கீழ்க்கணக்கு நூல்களில் சமூகம் சார்ந்த வாழ்வியல் முறைமை	553-560
112. அ.பாவை & பொ.கதாராணி	வள்ளுவம் மொழிந்த வாழ்வியல் அறநெறிகள்	561-565
113. மு. பூணியா & பொ.கதாராணி	சங்ககால வாழ்வியல் நெறிமுறைகள் - எட்டுத்தொகை நூல்களை முன்வைத்து	566-570
114. வெ.நிமலா	பண்பாட்டுப்பிழலத்தில் தமிழர் வகுத்த வாழ்வியல் நெறிகள்	571-574
115. பெ.சத்யா	நற்றிணையில் வாழ்வியல் நெறிமுறைகள்	575-577

திருக்குறளில் நவீன மேலாண்மைச் சிந்தனைகள்

க.கப்புலட்கமி

இணைப்பேராசிரியர், தமிழ்த்துறை
ஏ.பி.சி.மகாலட்கமி மகளிர் கல்லூரி, தூத்துக்குடி

ஆய்வுச்சுருக்கம்

பொது நிர்வாகவியலின் முக்கிய உள்ளடக்கமாக மேலாண்மை கருத்தியல்கள் விளங்குகின்றன. மேலாண்மைச் சிந்தனைகளை மேலாட்டார் வகுக்கும் முன்பே திருவள்ளுவர் திருக்குறளில் பதிவிட்டுள்ளார். நவீன மேலாண்மைக் கோட்பாடுகளாக ஹென்றி போயல் வகுத்துள்ள வேலைப் பகிர்வு, கட்டளை ஒருமை, ஒருமுனை இயக்கம் மையப்படுத்தலின் தரம், அதிகாரம், ஆணையுரிமை வரிசை, பணியாளர்களின் காலவரையறையின் நிலைத்தன்மை, பொறுப்பு, ஒழுங்குமுறை, நேர்மைநெறி, பொதுநலன் ஊதியம் தன் முயற்சித் திறன், குழப்பிணைப்புணர்ச்சி ஆகியன திருக்குறளில் பதிவிடப்பட்டுள்ளன. அன்றிருந்த அரசியல் முறைமை இன்றுள்ள தொழில் நிறுவனங்களுக்குப் பொருத்தி வருகின்றன.

முன்னுரை:

மேலாண்மை என்பது திட்டங்கள் மற்றும் செயல்பாடுகளோடு தொடர்புடையது. பொது நிர்வாகவியலின் முக்கிய உள்ளடக்கமாக மேலாண்மை கருத்தியல்கள் விளங்குகின்றன. மேலாண்மைச் சிந்தனைகளை மேலாட்டார் வகுக்கும் முன்பே திருக்குறளில் பதிவிட்டுள்ளார் திருவள்ளுவர். திருக்குறளில் இடம் பெற்றுள்ள நவீன மேலாண்மைச் சிந்தனைகளை ஆராய்வதே இக்கட்டுரையில் உள்ளடக்கச் செய்திகளாகும்.

மேலாண்மையின் வரைவிலக்கணம்:

“மேலாண்மை என்பது பன்னோக்குச் செயல். அது வியாபாரத்தை மேலாண்மை செய்கிறது. மேலாளரை மேலாண்மை

செய்கிறது. மேலும் பணியாளரையும் பணியினையும் மேலாண்மை செய்கிறது” என்கிறார் பீட்டர் குடிர்க்கர்.

“முன்னரே முடிவு செய்யப்பட்ட குறிக் கோளை மற்றவர்களைக் கொண்டு நிறைவேற்றும் பொருட்டு முயற்சி மேற்கொள்வதே மேலாண்மை” என்று எளிய வரையறை கொடுக்கிறார் டெர்ரி.

நவீன மேலாண்மைக் கோட்பாடுகள்

“நவீன மேலாண்மையின் தந்தை ஹென்றி போயல்” நவீன மேலாண்மையின் கோட்பாடுகளாகப் பின்வருவனவற்றை எடுத்து மொழிகிறார்.

1. வேலைப்பகிர்வு
2. கட்டளை ஒருமை
3. ஒருமுனை இயக்கம்
4. மையப்படுத்தலின் தரம்
5. அதிகாரம்
6. ஆணையுரிமை வரிசை
7. பணியாளர்களின் காலவரையறையின் நிலைத்தன்மை
8. பொறுப்பு
9. ஒழுங்குமுறை
10. நேர்மை நெறி
11. பொதுநலன்
12. ஊதியம்

நவீனத் தமிழியல் (உள்ளடக்குப் பன்முகத் தமிழ் களாண்டு ஆய்விதழ்) 25 ஆகஸ்ட் 2021 - சிறப்பு இதழ் (ISSN: 2321-984X)
Modern Tamizh Research (A Quarterly International Multilateral Tamizh Journal) 28 August 2021 - Special Issue (ISSN: 2321-984X)
இணைப்பேரிப் பன்னாட்டுக் கருத்தரங்கம் : திருக்குறளில் பன்முகறைச் சிந்தனைகள்
தமிழ்த்துறை, ஸ்ரீகண்டயா பரமேஸ்வரி மகளிர் கலை மற்றும் அறிவியல் கல்லூரி, பாரிமுனை, சென்னை-600 001, தமிழ்நாடு, இந்தியா

சங்ககால உயிரினச்சூழலில் மானும் மானுடமும்

க.சுப்புலட்சுமி

இணைப்பேராசிரியர், தமிழ்த்துறை
ஏ.பி.சி.மகாலட்சுமி மகளிர் கல்லூரி, தூத்துக்குடி

ஆய்வுச் சுருக்கம்

தாவரங்களும், விலங்குகளும் இயற்கைச் சூழ்நிலையோடு சேர்ந்து செயல்படுமுறைக்கு உயிரின வாழ்க்கைச் சூழல் தொகுதி (Eco - System) என்று பெயர். மனிதன் இச்சூழ்நிலைத் தொகுதியின் ஓர் அங்கமாக விளங்குகிறான்.

ஒவ்வொரு மனிதக்குழுவும் அல்லது சமூகமும் எப்படித் தத்தம் வாழ்க்கையை இயற்கை நிலைகளுக்கு இனக்கமாக்கி வாழ்கின்றன என அறிவது “மானிட உயிரின வாழ்க்கைச் சூழலியல்” எனப்படுகிறது.

சங்க இலக்கியங்கள் மனிதனுக்கும் பிற உயிரினச் சூழலுக்கும் இடையிலான இணைப்பினை எடுத்துரைக்கின்றன. அப்பிணைப்பையே முதல், கரு, உரி என்ற பகுப்பாக வகுத்தனர்.

இவ்வகையில் சங்க கால மக்கள் மானுடன் இணைந்து தங்கள் உயிரினச் சூழலையும், சமூக அமைப்பையும் உருவாக்கிக் கொண்ட விதத்தை ஆராய்வதே இந்த ஆய்வின் நோக்கம்.

தன் இயற்கை நுண்ணறிவினால் புல்வெளி இருக்கும் இடம் அறிந்து வந்த மான்களோடு, மனித இனம் பயணித்தது. செழிப்பான உறைவிடத்தை மான்களால் அறிந்தனர். புலிகளைக் கொல்லும் ஆற்றலுடைய இரலை மான் கூட்டம் தங்கும் இடத்தில் மனித இனம் வசிக்கத் தொடங்கியது. மான்களின் துணையோடு புலிகளிடமிருந்து தப்பினர். வட புலம் முதல் தென்புலம் வரை மனித குல இடப்பெயர்ச்சிக்கு இரலை மான் உதவியது.

நவீனத் தமிழாய்வு (பன்னாட்டுப் பன்முகத் தமிழ் காரணம் ஆய்விதழ்) 23 மே 2021 - சிறப்பு இதழ் (ISSN : 2321-984X)
Modern Thamizh Research (A Quarterly International Multilateral Thamizh Journal) 23 May 2021 - Special Issue (ISSN : 2321-984X)

இணையவழிப் பன்னாட்டுக் கருத்தரங்கம் : தமிழ் இலக்கியங்களில் அறிவியல்
தமிழ்த்துறை, தூய மரியன்னை கல்லூரி (தன்னாட்சி), தூத்துக்குடி, தமிழ்நாடு, இந்தியா

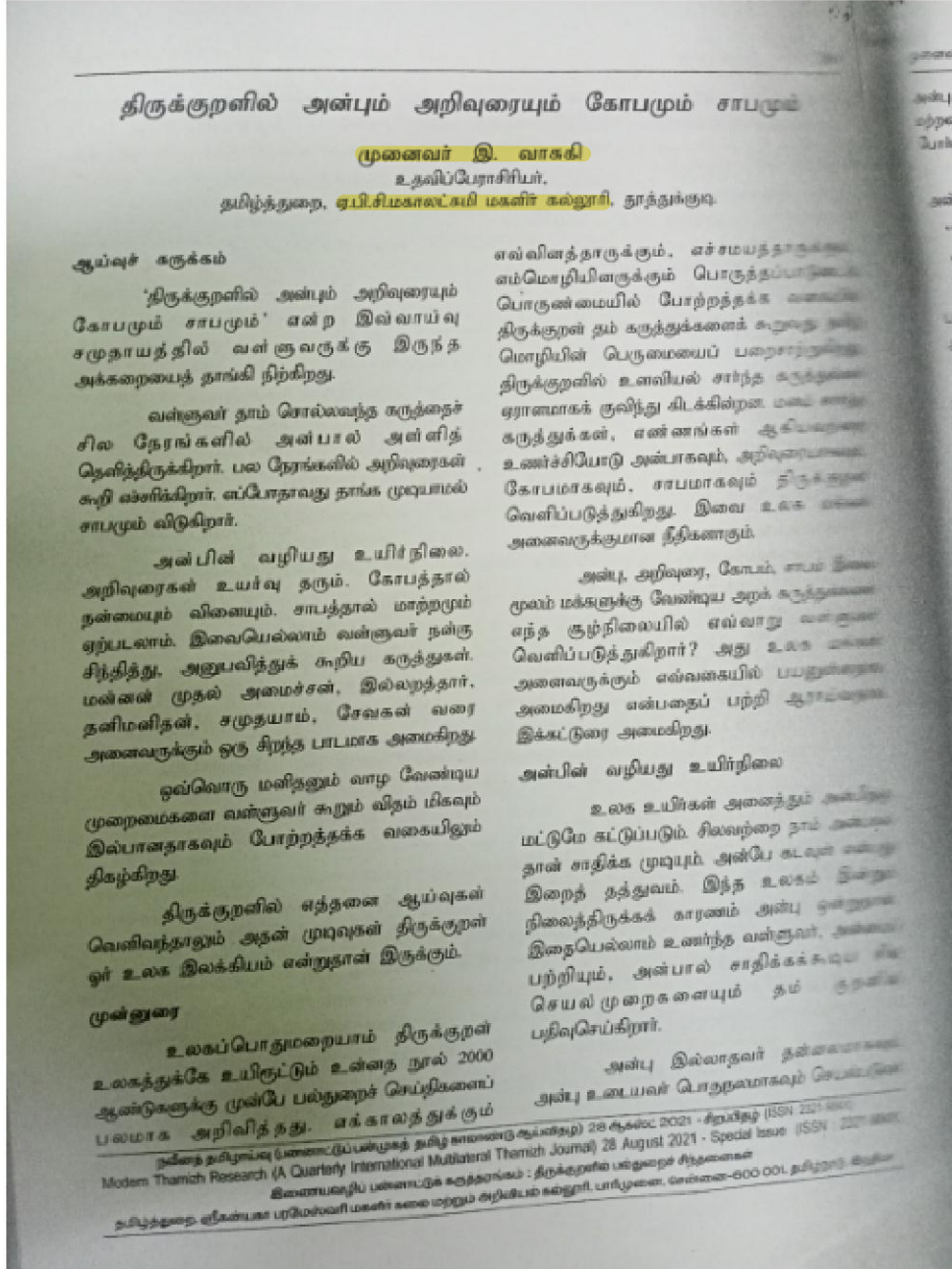
திருமால் வழிபாடு இந்தியா முழுமையும் பரவ, மானின் பெயரால் “வேளிமான்” என்ற பெயர் கொண்ட அரசபரம்பரை உருவாக, முல்லை நிலச் சமூக அமைப்பில் கற்பு, ஏறுதழுவுதல், குடும்ப அமைப்பு, தந்தை வழிச் சமூகம் சிறு பொழுதாகிய மாலை, பெரும்பொழுதாகிய கார் காலம் இவற்றோடு ஏற்பட்ட தொடர்பு, வாரிக்களையும், தலைவியையும் தலைவன் காப்பாற்றாதல், நாகரிக முறை மாற்றம் என அனைத்தும் உருவாக மான்களின் உயிரினச் சூழல் காரணமாக அமைந்துள்ளது என்பதைச் சங்க இலக்கியங்கள் தெளிவாக எடுத்துரைக்கின்றன.

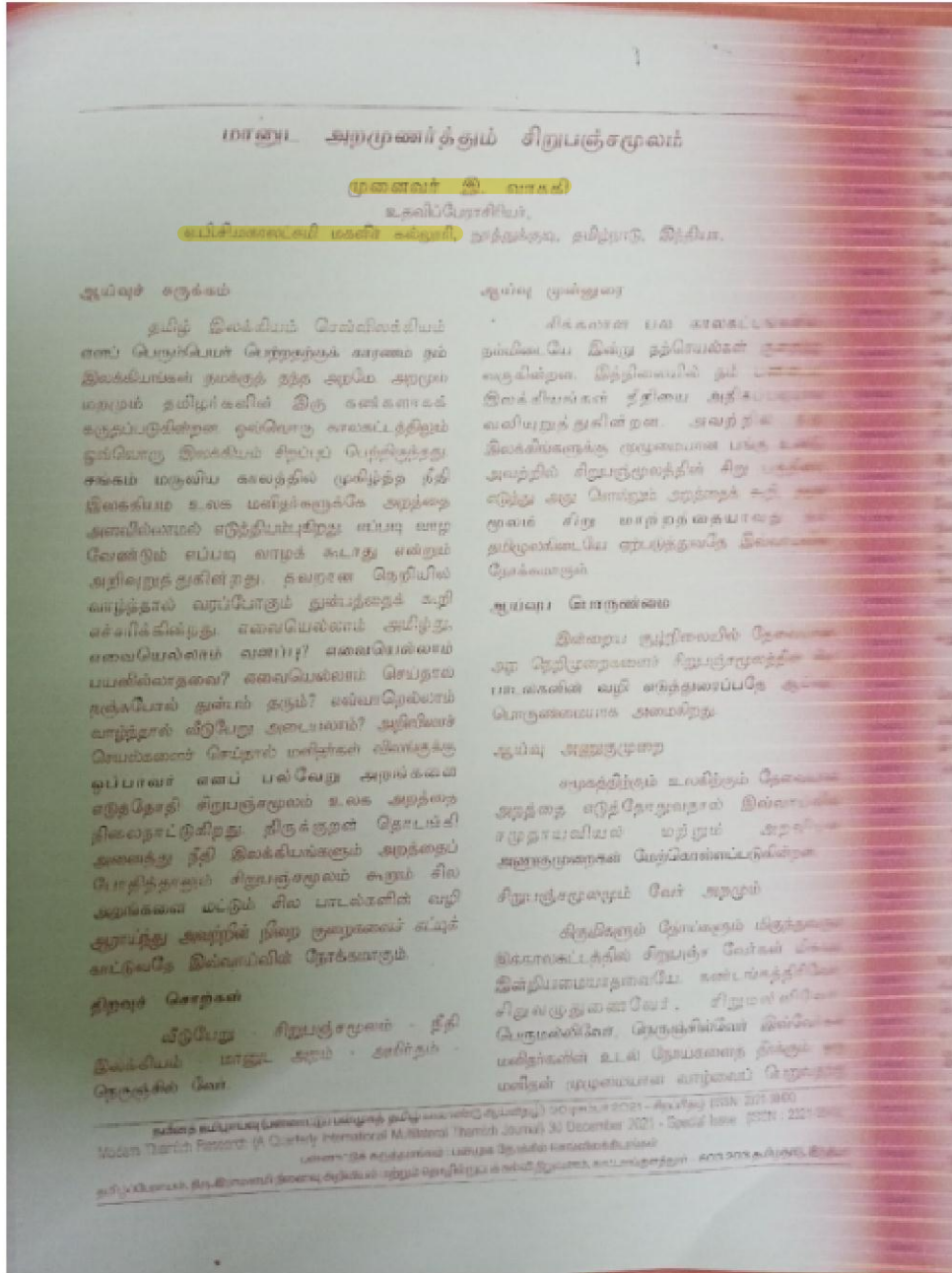
முன்னுரை

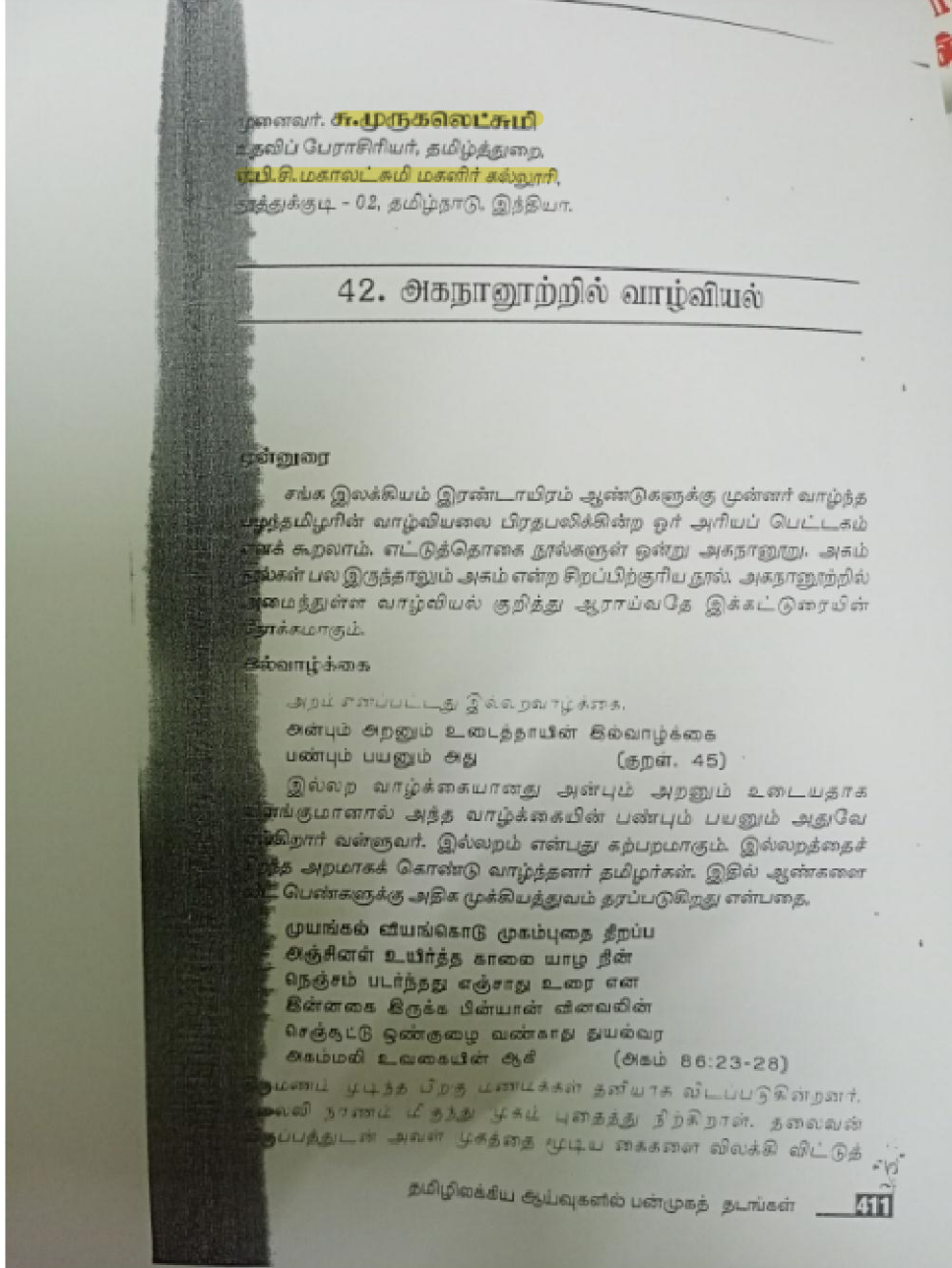
சூழ் மண்டலத்தில் (Eco-system) இயற்கை சார்ந்த சூழ்நிலைத் தொகுப்பு மிக முக்கியமானதாகும். இயற்கைச் சூழலும் உயிரினச் சூழலும் ஒன்றோடு ஒன்று பின்னிப்பிணைந்துள்ளன. இவை இரண்டும் ஒன்றை ஒன்று சார்ந்து இயங்குகின்றன. இந்தச் சூழல் பாகுபாட்டில், இயற்கைச் சூழலின்றி உயிரினச் சூழல் உருவாகியிருக்க முடியாது. உயிரினச் சூழலிலோ, தாவரங்கள், விலங்குகள் இன்றி மனித இனம் வாழ முடியாது. இவ்வகையில் சங்க இலக்கியம் எடுத்துரைக்கும் மானுக்கும் மானுடத்திற்கு இடையிலான தொடர்பினை ஆராய்வதே இக்கட்டுரையின் நோக்கம்.

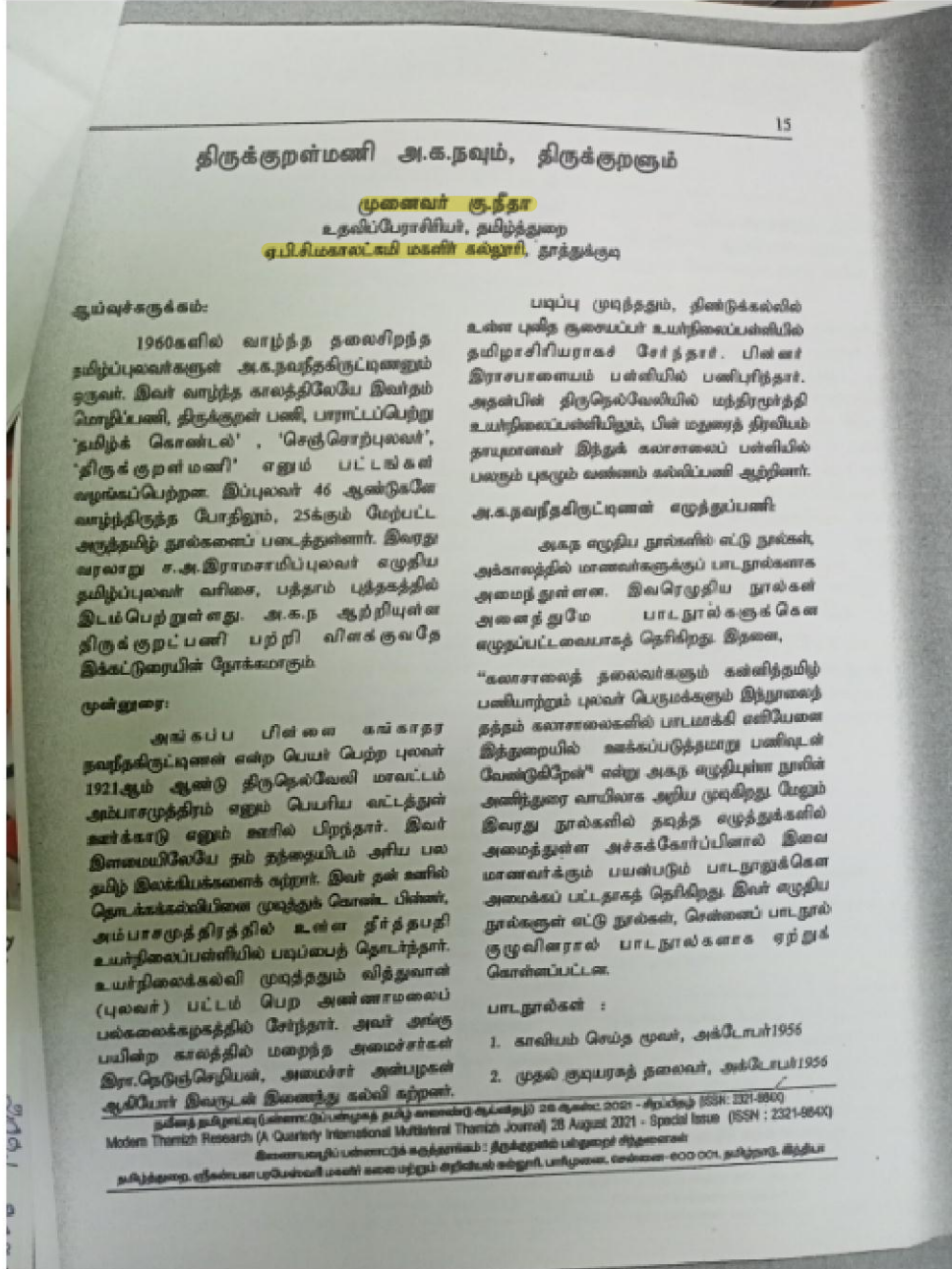
உயிரின வாழ்க்கைச் சூழல் இயல் (Ecology)

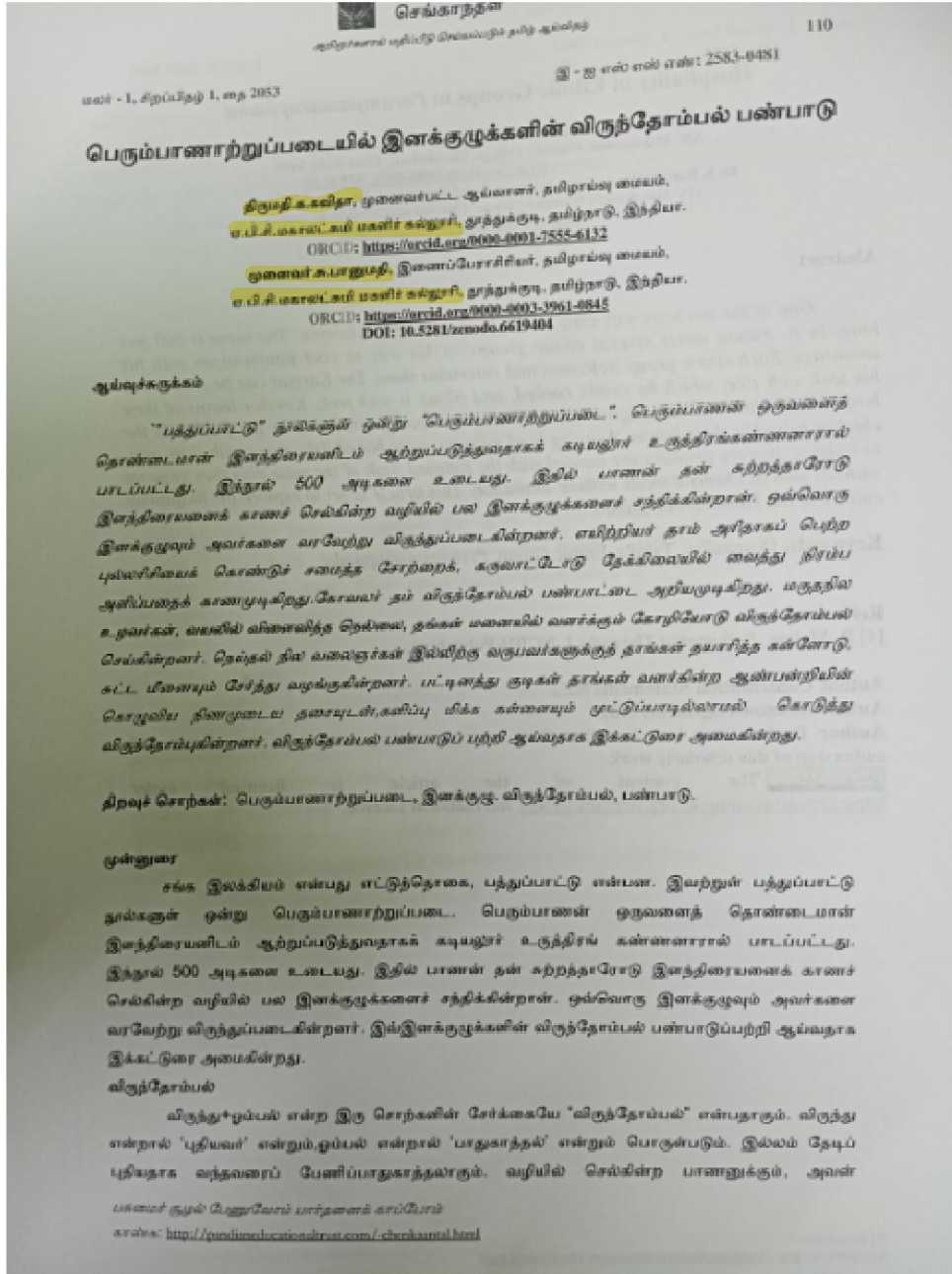
E.H.ஹேக்கல் (E.H.Heckel 1834-1919) என்ற ஜெர்மானிய இயற்கை ஆய்வாளரின் (naturalist) கூற்றுப்படி “உயிரின வாழ்க்கைச் சூழல் இயல் (Ecology) என்பது, ஓரிடத்தில்

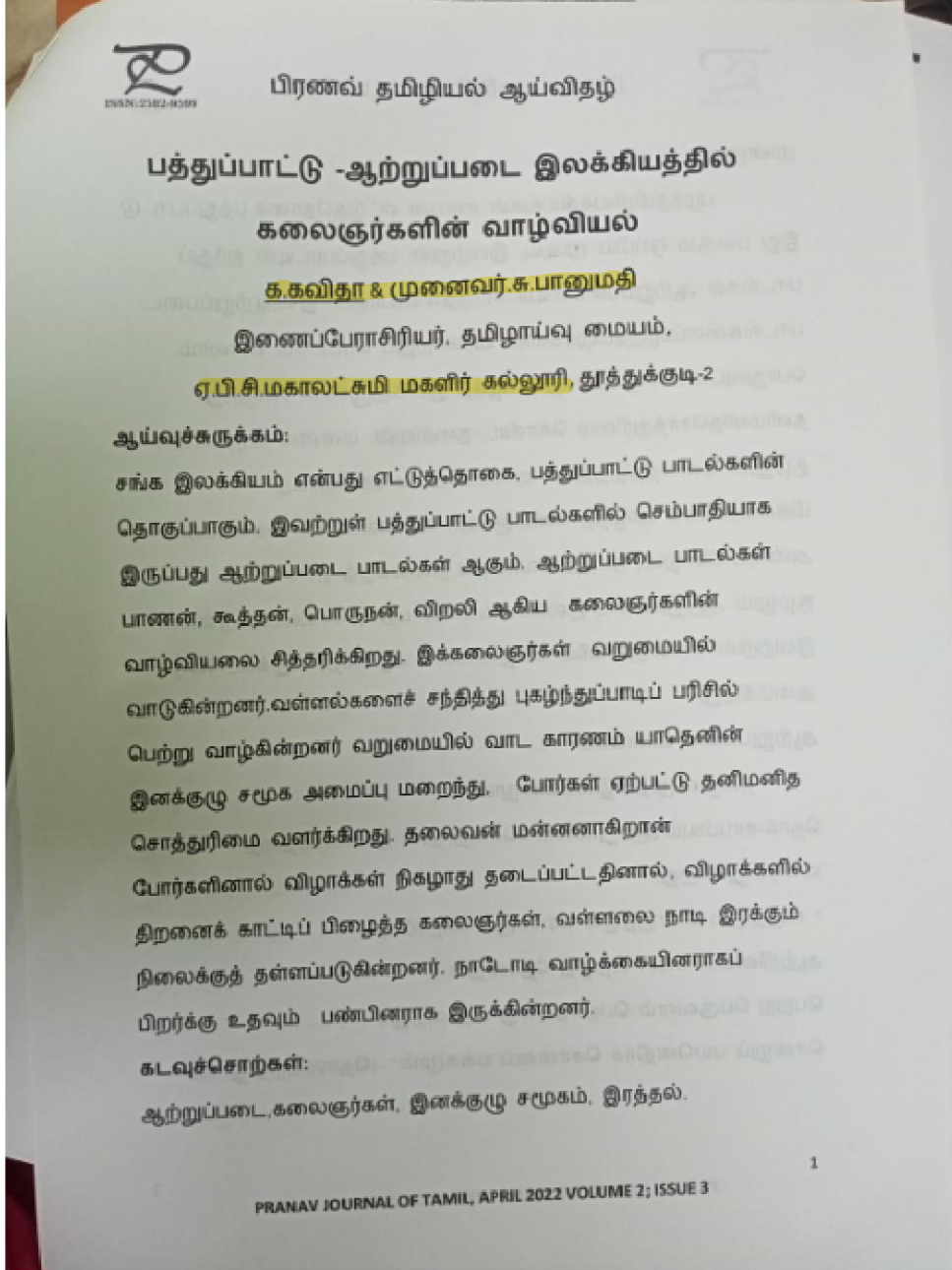














செங்காந்தள்

ஆறினாச்செவ்வாய்க்கிழமை செங்காந்தள் தம்பி ஆய்வகம்

404

மார்ச் - 1, சிறப்பிதழ் 1, சை 2053

இ - று எஸ் எஸ் என்: 2583-0481

உணவெனப்படுவது நிலத்தொடு நீரே

முனைவர் மு.புஷ்பகவலி, உதவிப்போசகியர், ஏ.பி.சி.மகாலட்சுமி மகளிர் கல்லூரி, நாத்துக்குடி.
 ORCID: <https://orcid.org/0000-0002-5061-6255>
 DOI: 10.5281/zenodo.6622293

ஆய்வுக்கருக்கம்

உயிரினங்கள் வாழ்வதற்கேற்ப உயிர்ச்சூழல் மிகமுக்கியமானதாகும். இச்சூழல் பஞ்சபூதங்கள் கொண்டு வரையறுக்கப்பட்டுள்ளது. நிலமும் பொழுதும் வாழ்வின் முதற்பொருளாக விளங்குகிறது. உயிர் களின் முதல் தேடல் உணவுத் தேடலாகும். நிலமும் நீரும் இணைந்ததே உணவு என்பதை புறநானூற்றுப் பாடல் வழி அறியலாம். குறிஞ்சி, முல்லை, மருதம், நெய்தல் என்ற நானிலம் அங்கு வாழும் மக்களுக்கு உணவுத் தேவையை நிறைவு செய்கிறது. குறிஞ்சி நிலவாழ் மக்களுக்கு அந்நிலமும் ஆடுவிற்கும் சேர்ந்து விளைகின்ற விளைபொருட்கள் உணவுப்பண்பாடாகிறது. முல்லை நிலத்தில் காட்டாறு கலந்து உருவாகின்ற உற்பத்திப் பொருட்கள் அம்மக்களுக்கு உயிர்த்தேவையை நிறைவு செய்கிறது. நீர்நிலைகளும் நீர்த்தேக்கங்களும் கொண்ட மருதநில வயல்வெளிகளின் விளைச்சல் அம் மக்களின் உணவு நாகரிகத்தை எடுத்துரைக்கிறது. நெய்தல் நிலமக்களுக்கு கடலில் இருந்து கிடைக்கின்ற பொருட்கள் உணவாகிறது. வாழும் சூழலில் கிடைக்கின்ற உணவு சிறந்த உணவாகவும் உயிரையும் உணர்வையும் வளர்த்து மரபை பேணிக் காப்பதற்கும் மீட்டுப்பதற்கும் உறுதுணையாக உள்ளது. நிலைத்த வாழ்விற்கும் வழிவகுக்கிறது. நிலத்தின் வழி உயிர்த்தேவை நிறைவு பெறுவதை எடுத்துரைப்பது இக் கட்டுரையின் நோக்கமாகிறதுமனிதன் உயிர் வாழ்வதற்கு உணவு மிக முக்கியமானதாகும். உணவானது உயிரை உணர்வை உடம்பை வளர்ப்பதாக அமைய வேண்டும் ஒரு நிலத்தில் வாழும் மக்கள் அந்நிலத்தில் விளைகின்ற விளைபொருட்களை உண்டு வாழ்வது இயற்கையின் நியதியாக உள்ளது. உயிர்கள் ஓர் அறிவு முதல் ஆற்றிவு உயிர் வரை ஒன்றையொன்று சார்ந்து வாழ்வது உயிரியியல் கொள்கையாகும்.. சார்ந்து வாழ்தல் என்பது உயிர்த்தேவை மட்டுமன்றி உற்றறிதல் முதல் மனதால் அறியும் சிந்திக்கின்ற ஆற்றிவு வரை அறிவைத்தீர்மானிக்கிறது.

திறவுச்சொற்கள்: உணவு, நிலம், நீர், சூழ்நிலை மண்டலம்.

முன்னுரை

உயிர்க்கோளத்தில் எண்ணற்ற உயிர்கள் பல்கிப் பெருகி வாழ்ந்து வருகின்றன. தமிழ் இலக்கியங்கள் வாழ்வதற்கான உயிர்ச்சூழல் மிகமுக்கியமானது என்பதை எடுத்துரைக்கின்றன. இச்சூழலை தொல்காப்பியர் பஞ்சபூதங்கள் தம்முள் தாம் கலந்து இருக்கும் தன்மை கொண்டு வரையறுத்துக் கூறுகிறார். இவ்வரையறையைப் பேணிக்காத்து வாழ்வது வளமான வாழ்வியலுக்கு அடித்தளமாகிறது. நீர், நெருப்பு, காற்று, வானம் போன்றவை நிலமாகிய முதற்பொருளுக்கும் முறைப்படுத்தப்பட்டு இருப்பதை அறியமுடிகிறது. வாழ்வின் முதற்பொருள் நிலமும் பொழுதும் என்பதை வலியுறுத்தி தொல்காப்பியரும், சங்க இலக்கியப் பாடல்களும் கருத்தாக்கங்களாகவும், கோட்பாடுகளாகவும் சான்று பகர்கின்றன. தொல்காப்பியரின் திணைக்கோட்பாட்டில் முதல் கரு உயிர்

புகழைச் சூழல் பேணுவோம் பார்த்தனைக் காப்போம்

கூடுதல்: <http://panduaeducationaltrust.com/shankaaatal.html>