

ON FUZZY b -CONNECTEDNESS AND FUZZY b -DISCONNECTEDNESS AND THEIR APPLICATIONS

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ABSTRACT

In this paper, by using fuzzy b -open (=fuzzy γ -open) sets we study the concept of fuzzy b -separated sets. With this concept we study the notion of fuzzy b -connected sets and fuzzy strongly b -connected sets. We give some properties of such concepts with some fuzzy b -separation axioms and compact spaces. Finally, we construct a new fuzzy topological space on a fuzzy connected graph.

KEYWORDS

Fuzzy b -separated sets, Fuzzy b -Connected sets.

1.INTRODUCTION

Fuzzy connectedness [8] is a well known notion in fuzzy topology. Numerous authors studied fuzzy connectedness. In P -spaces and extremal disconnectedness are studied. Fuzzy connectedness in [8] are used to expand some fuzzy topological spaces. In authors proved that neither first countable nor C -complete spaces are maximal Tychonoff fuzzy connected[10]. Many other fuzzy topologists defined and studied fuzzy connectedness in fuzzy bitopological spaces [9]. It is important to study some types of fuzzy connectedness in digital spaces. A fuzzy point with integer coordinates is called a digital point. The problem of finding a fuzzy topology for the digital plane and the digital 3-space is of importance in image processing and more generally in all situations where spatial relations are modeled on a computer. In all these applications it is essential to have a data structure on the computer which shares as many as possible features with the real fuzzy topological situation.

Fuzzy connectedness and fuzzy compactness are powerful tools in fuzzy topology but they have many dissimilar properties. The concept of fuzzy Hausdroff spaces is almost an integral part of fuzzy compactness. Investigations into the properties of fuzzy cut points of fuzzy topological spaces which are fuzzy connected, fuzzy compact and Hausdroff date back to the

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NEW TYPES OF FUZZY GENERALIZED CLOSED SETS IN FUZZY BITOPOLOGICAL SPACES

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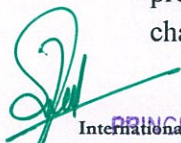
Abstract

In this paper, we introduce a new type of fuzzy closed sets in fuzzy bitopological space (X, τ_1, τ_2) , used it to construct new types of fuzzy normality, and introduce new forms of fuzzy continuous function between fuzzy bitopological spaces. Finally, we proved that the our new fuzzy normality properties preserved under some types of fuzzy continuous functions between fuzzy bitopological spaces.

Introduction and preliminaries

The concepts of fuzzy regular closed, fuzzy generalized closed (briefly, fg-closed), fuzzy preopen, fuzzy regular generalized closed (briefly, frg-closed), and fuzzy generalized preclosed (briefly, fgp-closed) sets have been introduced and investigated in [1, 12-17]. The concepts of fuzzy preopen sets and fuzzy regular open sets have been extended to fuzzy bitopological spaces [16] called *ij*-fuzzy preopen and *ij*-fuzzy regular open respectively. The mild fuzzy normality and almost fuzzy normality have been introduced in [1]. Weak form of fuzzy normal spaces has been introduced in [7] called mildly fuzzy normal spaces. In [9], author used the fuzzy preopen sets to define fuzzy prenormal spaces, recently, in [10] the author have continued the study of further properties of fuzzy prenormal spaces and also defined and investigated mildly fuzzy *p*-normal (resp. almost fuzzy *p*-normal) spaces which are generalization of both mildly normal (resp. almost fuzzy normal) spaces and fuzzy *p*-normal spaces. The concept of fuzzy generalized preregular closed (briefly, fgpr-closed) sets has been introduced in [16]. The concept of fuzzy binormal spaces has been introduced in [12]. In [13,14] extended the concepts of fuzzy *g*-closed, fuzzy *gp*-closed and fuzzy *rg*-closed sets, mildly fuzzy normal and almost fuzzy normal spaces to bitopological spaces.

In this paper, we extend the concept of fuzzy *gpr*-closed sets to bitopological spaces (X, τ_1, τ_2) called *ij* – fuzzy *gpr*-closed sets. Also, we construct a new types of fuzzy normality in bitopological spaces based on *ij*-fuzzy preopen sets called fuzzy prebinormal, almost fuzzy prebinormal and mildly fuzzy prebinormal. We use the class of *ij* – fuzzy *gpr*-closed sets to characterization these types of fuzzy normality and construct new types of fuzzy continuous



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**STABILITY CONCEPTS TO EVOLUTION OF THE ACTIVATION FUNCTIONS IN
RECURRENT NEURAL NETWORKS.**

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Abstract:

Stability problems of continuous-time recurrent neural networks have been extensively studied. The purpose of this paper is to provide a comprehensive review of the research on stability of continuous-time recurrent neural networks, including Hopfield neural networks, Cohen-Grossberg neural networks, and related models. Since time delay is inevitable in practice, stability results of recurrent neural networks with different classes of time delays are reviewed in detail. For the case of delay-dependent stability, the results on how to deal with the constant/variable delay in recurrent neural networks are summarized. The relationship among stability results in different forms, such as algebraic inequality forms, M -matrix forms, linear

M-CONTINUITY AND ITS DECOMPOSITIONS

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ABSTRACT

In this paper, we introduce the notions of R-locally m-closed sets and π -locally m-closed sets, some new subsets of minimal spaces and obtain decompositions of M-continuity. Also we investigate some properties and characterizations of these sets with some theorems, examples and counter examples.

KEYWORDS: m-kernel, Λ_m -set, (Λ, m) -closed, m-r-kernel, m- π -kernel, Λ_{mr} -set, $\Lambda_{m\pi}$ -set, locally M-continuous, R-locally M-continuous, π -locally M-continuous.

1. INTRODUCTION

In [3] Maki introduced the notions of minimal structures and minimal spaces. Popa and Noiri [5] introduced a new notion of M-continuous functions as a function defined between sets satisfying some minimal conditions. In 1970, the notion of generalized closed (briefly, g-closed) sets were introduced and investigated by Levine [2]. Recently, many modifications of g-closed sets have defined and investigated. One among them is mg-closed sets which were introduced by Noiri and studied in [4]. In [4], he also introduced locally m-closed sets in minimal spaces.

2. PRELIMINARIES

Definition 2.1 [6]

A subset A of a minimal space (X, m_x) is said to be m- π -open if it is the finite union of regular m-open sets of A.

[1]



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DECOMPOSITIONS OF CONTINUOUS FUNCTIONS IN MINIMAL SPACES

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ABSTRACT

In this paper, we obtain some important results in minimal spaces. In most of the occasions, our ideas are illustrated and substantiated by suitable examples.

KEYWORDS: m-A set, m-B set, m-C set, M-A continuous, M-B continuous, M-C continuous.

AMS Mathematics Subject Classification (2010): 54A05, 54D15

1. INTRODUCTION

Njastad [7] initiated the concept of nearly open sets in topological spaces. Following it many research papers were introduced by Tong [8,9], Hatir [4, 5, 6], Dontchev [2] and Ganster [3] in the name of "Decompositions of Continuity" in topological spaces. It is an effort based on them to bring out a work in the name of "Decompositions of M-continuity" in minimal spaces using the new sets like m-A set, m-B set and m-C set and the new mappings like M-A continuous, M-B continuous and M-C continuous. In this paper, we obtain some important results in minimal spaces.

2. PRELIMINARIES

Definition 2.1



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**ON SOME PROPERTIES OF
m-I-SUBMAXIMAL IN IDEAL MINIMAL SPACES**

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ABSTRACT

In this paper we introduce the notion α -m-I-open, pre-m-I-open, semi-m-I-open, strongly β -m-I-open, m^* -dense in Ideal minimal spaces and investigate some of their properties. Further we study m-I-submaximal spaces and derive some of their properties.

KEYWORDS

m-I-submaximal, m-dense, m-submaximal space, m^* -codense.

Mathematics Subject Classification: 54A05, 54D25, 54C05

1. INTRODUCTION

The concept of submaximality of general topological spaces was introduced by Hewitt [5] in 1943. He discovered a general way of constructing maximal topologies. In [1], Alas *et al* proved that there can be no dense maximal subspace in a product of first countable spaces, while under Booth's Lemma there exists a dense submaximal subspaces in $[0, 1]^c$. It is established that under the axiom of constructibility any submaximal Hausdorff space is σ -discrete. Any homogeneous submaximal space is strongly σ -discrete if there are no measurable cardinals. The first systematic study of submaximal spaces was undertaken in the paper of Arhangel'skii and Collins [2]. They gave various necessary and sufficient conditions

for a space to be submaximal and showed that every submaximal space is left-

[1]

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m g-CLOSED SETS WITH RESPECT TO AN IDEAL**¹R.Chitra, ²R.Malarvizhi**Asst.Professor, Dept. of Mathematics, Vivekananda College of Arts and Science for
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ABSTRACT

In this paper, we introduce and study the concept of mg-closed sets with respect to an ideal which is a generalization of the concept of generalized closed sets with respect to an Ideal.

KEYWORDS

Ideal Topological space, Ideal minimal space, I g-closed, $m I$ g-closed, m -separated, $m I$ g-open.

2000 Mathematics Subject Classifications: 54C10

1. INTRODUCTION

Levine [5] introduced the concept of generalized closed sets. This notion has been studied extensively in recent years by many topologists.

Valeiru Popa and Noiri [11] developed the notion of minimal structures which was introduced by Maki [6]. In [8], Noiri introduced the concept of mg-closed sets on spaces with minimal structures and studied basic properties of mg-closed sets under minimal conditions.

Indeed ideals are very important tools in General Topology. It was the works of Kuratowski [4], Vaidyanathaswamy [14], Newcomb [7], Rancin [12], Samuels [13] and Jankovic and Hamlett [3] which motivated the research in applying topological ideals to generalize the most basic properties in General Topology.

[1]



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ON SOFT GENERALIZED βb -CLOSED SETS IN SOFT TOPOLOGICAL SPACES

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ABSTRACT

In this paper, we introduce a new class of soft generalized closed sets in soft topological spaces called soft $g\beta b$ -closed sets is introduced and its soft topological properties is studied and investigated. Moreover, we discussed the relationship among, gb -closed, βg -closed, sw -closed, sg -closed, s^*g -closed, wg -closed, gp -closed, g -closed, rwg -closed, gpr -closed, rg -closed, gs -closed and nowhere dense sets. Finally, we defined and discussed the properties of soft $g\beta b$ -open sets and $g\beta b$ -neighborhood.

KEYWORDS: Soft $g\beta b$ -Closed, Soft β -Open Sets, Soft B-Open Sets, Soft B-Interior, B-Closure.

1. INTRODUCTION

The concept of soft set theory has been introduced in 1999 by Molodtsov [1] this set designed to solve the sophisticated problems in economic, engineering, environment, etc. It has been applied to several branches of mathematics such as operation research, game theory and among others.

The soft set theory and its applications increase after time to several researchers, especially in the recent years. This is because of the general nature of parameterizations expressed by a soft set. Therefore due to these facts, several special sets have been introduced in the soft set theory and their properties have been studied, within the soft topological space. The notion of topological spaces for soft sets was formulated by Shabir and Naz [2], which is defined over an initial

universe with fixed set of parameters. Levine [3] introduced generalized closed sets in general topology. Kannan [4] introduced soft generalized closed and open sets in soft topological spaces which are depend over an initial universe with a fixed set of parameters. He studied their some properties. After then Saziye et al. [5] studied behavior relative to soft subspaces of soft generalized closed sets and continued investigating the properties of soft generalized closed and open sets. Nazmul and Samanta [6] introduced neighborhood properties of soft topological spaces. Hussain and Ahmad [7] introduced soft topological spaces and the notions of soft open sets, soft closed sets, soft closure, soft interior points, soft neighborhood of a point and soft separation axioms.

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PRINCIPAL

FUZZY SOFT ALPHA-OPEN SETS AND FUZZY SOFT ALPHA-CONTINUOUS FUNCTIONS

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INTRODUCTION

In real life situation, the problems in Economics, Engineering, Social sciences, Medical science etc. do not always involve crisp data. So, we cannot successfully use the traditional classical methods because of various types of uncertainties presented in these problems. To exceed these uncertainties, some kind of theories were given like theory of fuzzy set, intuitionistic fuzzy set, rough set, bipolar fuzzy set, i.e. which we can use as mathematical tools for dealings with uncertainties. But, all these theories have their inherent difficulties. The reason for these difficulties Molodtsov [1] initiated the concept of soft set theory as a new mathematical tool for dealing with uncertainties which is free from the above difficulties. In [1], Molodtsov successfully applied the soft set theory in several directions, such as smoothness of functions, game theory, operations research, Riemann integration, Perron integration, Probability, theory of measurement, and so on. After presentation of the operations of soft sets [8], the properties and applications of soft set theory have been studied increasingly [7, 2]. Xiao et al [4] and Pei and Miao [5] discussed the relationship between soft sets and information systems. They showed that soft sets are a class of special information systems. In recent years, many interesting applications of soft set theory have been expanded by embedding the ideas of fuzzy sets [2,8,9]. To

develop soft set theory, the operations of the soft sets are redefined and a uni-intdecision making method was constructed by using these new operations [11].

Recently, 2011 Shabir and Naz[3] initiated the study of soft topological spaces. They defined soft topology on the collection τ of soft sets over X . Consequently, they defined basic notions of soft topological spaces such as open soft and closed soft sets, soft subspace, soft closure, soft neighborhood of a point, Soft separation axioms, Soft regular spaces and soft normal spaces and established their several properties. Min investigate some properties of these soft separation axioms. In [6], Kandil et al. introduced the notion of soft semi separation axioms. In particular they study the properties of the soft semi regular spaces and soft semi normal spaces. The notion of soft ideal was initiated for the first time by Kandil et al[6]. They also introduced the concept of soft local function. These concepts are discussed with a view to find new soft topologies from the original one, called soft topological spaces with soft ideal (X, τ, E, \tilde{I}) . Applications to various fields were further investigated by Kandil et al. The notion of b-open soft sets was initiated for the first time by El-Sheikh and Abd El-latif [12]. Maji et al [9] initiated the study involving both fuzzy sets and soft sets.

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A FUZZY TOPOLOGY FOR OPERATOR IN SPATIAL OBJECT QUANTITATIVELY IN FLOOD PREDICTION

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ABSTRACT

For the time being in GIS application fuzzy spatial objects have become extremely important. There have been many research developments on the conceptual description of the topological relation between spatial objects. In this paper a formal definition of the computational fuzzy topology is shown which is based on the interior operator and closure operators. In spatial object modeling the interior and exterior boundary are computed based on computational fuzzy topology. An example for determining interior boundary and exterior boundary of the flood affected area of Chennai based on data collected from Integrated Multi-Satellite Retrievals for GPM, a Global Precipitation Measurement Mission.

KEYWORDS: Fuzzy Topology; Fuzzy Spatial Objects; Closure Operator; Interior Operator.

1. INTRODUCTION

The topological relation between spatial objects is used in geographic information system with position and attribute information. Information on topological relations can be used for spatial queries, spatial analysis data quality control (e.g. Checking for topological consistency) and others. Topology relations can be crisp or fuzzy depending on the certainty or uncertainty of spatial objects and the nature of their relations. Originally in the modeling of spatial objects, such as rivers, roads, trees, and building in GIS, it was normally assumed that the measurement of the spatial objects was free of errors. But in reality the description of the spatial objects in GIS contains some uncertainties, such as random

errors in measuring spatial objects or vagueness in interpreting the boundaries of nature. For example vagueness or fuzziness in the boundary between states or between urban and rural areas is difficult to describe by traditional GIS. Therefore, there is a need to enhance existing GIS's by further coping with the uncertainties in spatial objects and the topological relation between uncertain spatial objects. Thus the classical set theory which is based on a crisp boundary, may not be fully suitable for handling such problem of uncertainty. On the other hand, fuzzy sets provide a useful tool to describe the uncertainty of a single object in GIS.

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Fractional Integro – Differential Systems in Complete Vector Space for Controllability

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Abstract: In this work, through the use of the theory of fractional calculus, fixed point technique and a new concept called (β, u) resolvent family, we have been established the controllability result of a class of fractional evolution nonlocal impulsive quasi-linear delay integro-differential system in a complete vector space.

Keywords: Fractional intrgro-differential systems, Controllability, Nonlocal and impulsive conditions, (β, u) -resolvent family, Complete vector space, Fixed point theorem.

1. Introduction

In the past decade, many authors investigated the existence result for fractional evolution equation; see [25, 26]. Moreover, there are different type of mild solutions that have been proved. For example, the first one was constructed in terms of a probability density function given by El-Borai [27] and was then developed by Zhou et al. [28, 29], and the second one was presented in terms of an β -resolvent family provided by Araya et al. [30] and then Mophou et al. [31]. But, in both senses, if the closed operator in the evolution equation is dependent on more then the considered case can be taken as an open problem. For this reason, we will introduce in this article a new concept called (β, u) - resolvent family, which is based on Araya-Lizama concepts [30], and Hill-phillips principles [32]. Our paper is organized as follows. Section 2 is devoted to a review of some essential results in fractional calculus and the resolvent operators that will be used in this work to obtain our main results. In section 3, we state and prove the controllability result. Section 4 deals with an example to illustrate the abstracts.

2. Preliminaries

Consider the fractional integro-differential control system of the form

$$\frac{d^\beta u(t)}{dt^\beta} + A(t, u(t))u(t) = (B\mu)(t) + \int_0^t g(t, s, u(\delta(s))) ds \dots\dots\dots (1)$$

$$u(0) + h(u) = u_0, \dots\dots\dots (2)$$

$$\Delta u(t_i) = I_i(u(t_i)), \dots\dots\dots (3)$$

Where the state $u(\cdot)$ takes values in the Complete Vector

Space X , $0 < \alpha \leq 1, t \in [0, a], u_0 \in X, i = 1, 2, \dots, m$ and $0 < t_1 < t_2 < t_3 < \dots < t_m < a$. We assume that $-A(\cdot, \cdot)$ is a closed linear operator defined on a dense domain $D(A)$ in X into X such that $D(A)$ is independent of t . It is assumed also that $-A(\cdot, \cdot)$ generates an evolution operator in the Complete Vector Space X , the control function μ belongs to the space $L^2(S, U)$, a Complete Vector Space of admissible control functions with U as a Complete Vector Space and $B : U \rightarrow X$ is a bounded linear operator. The functions $f : S \times X^2 \rightarrow X, g : \Lambda \times X^k \rightarrow X, \varphi : S \times X^2 \rightarrow X, h : PC(S, X) \rightarrow X, u(\gamma) = (u(\gamma_1), \dots, u(\gamma_r)), u(\delta) = (u(\delta_1), \dots, u(\delta_k)),$ and $\gamma_p, \delta_q : S \rightarrow S$ are given, where $p = 1, 2, \dots, r, q = 1, 2, \dots, k$. Here $S = [0, a]$ and $\Lambda = \{(t, s) : 0 \leq s \leq t \leq a\}$.

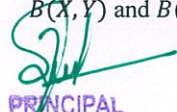
Let $pc(S, X)$ consist of functions u from S into X , such that $u(t)$ is continuous at $t \neq t_i$ and left continuous at $t = t_i$ and the right limit $u(t_i^+)$ exists for $i = 1, 2, \dots, m$. clearly $pc(S, X)$ is a Complete Vector Space with the norm $\|u\|_{pc} = \sup_{t \in j} \|u(t)\|$, and let $\Delta u(t_i) = u(t_i^+) - u(t_i^-)$ constitute an impulsive condition.

In recent years, fractional differential equations have attracted the attention of many mathematician and physicists, see for instance, Baleanu et al. [1-3], Agarwal and Lakshmikantham et al. [5-8] and Kilbas et. al. [9,10]. See also [11-15]. The existence results to evolution equations with nonlocal conditions in Banach spach was studied first by Byszewski [16, 17]. Deng [18] indicated that, using the nonlocal condition $u(0) + h(u) = u_0$ to describe for instance, the diffusion phenomenon of a small amount of gas in a transparent tube can give better result than using the usual local Cauchy problem $u(0) = u_0$. Let as observe also that since Deng's papers, the function h is considered

$$h(u) = \sum_{k=1}^p c_k u(t_k), \dots\dots\dots (4)$$

Where $c_k, k = 1, 2, \dots, p$ are given constants and $0 \leq t_1 < \dots < t_p \leq a$.

Let X and Y be two Complete Vector Spaces such that Y is densely and continuously embedded in X . For any Complete Vector Space Z , the norm of Z is denoted by $\|\cdot\|_Z$. The space of all bounded linear operators from X and Y is denoted by $B(X, Y)$ and $B(X, X)$ is written as $B(X)$.



A Study on Fuzzy Soft *Gamma*-Semiring Homomorphism

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Abstract: In this manuscript we study the notion of fuzzy soft *Gamma*-Semiring homomorphism and analyzed some properties of homomorphic image of fuzzy soft *Gamma*-Semiring.

Keywords: Soft set, Fuzzy soft set, Fuzzy Soft *Gamma*-Semiring, fuzzy soft ideal, fuzzy soft *Gamma*-Semiring homomorphism.

1. Introduction

The generalization of rings and distributive lattices are the best algebraic structure which was initially introduced by vandiver in 1934 but non trivial examples of semiring(S) had appeared in the studies on the theory of commutative ideals of rings by Dedekind in 19th century. Semiring is a universal algebra with two binary operations called addition and multiplication where one of them distributive over the other. If in a ring, we do away with the required of having additive inverse of each element then the resulting algebraic structure also semiring. Most of the semirings have an order structure in addition to their algebraic structure. The set of all natural numbers under usual addition and multiplication of numbers is the best example of semiring. In particular, if I is the unit interval on the real line then (I, max, min) in which 0 is the additive identity and 1 is the multiplicative identity. The theory of rings and the theory of semigroups have considerable impact on the development of the theory of semirings. In structure, semirings lie between semigroups and rings. The study of rings shows that multiplicative structure of a ring is independent of additive structure where as in semiring multiplicative structure of a semiring is not independent of additive structure of a semiring. Additive and multiplicative structures of a semiring play an important role in determining the structure of a semiring.

Semiring as the basic algebraic structure it is applied in many areas of theoretical computer science as well as in the solutions of graph theory, optimization theory and in particular for studying automata, coding theory and formal languages. Many papers on fuzzy sets appeared showing the importance of the concept and its applications to logic, set theory, group theory, ring theory, real analysis, topology, measure theory etc. Uncertain data in many important applications in the areas such

as economics, engineering, environment, medical sciences and business management could be semiring homomorphism and we study some properties of homomorphic image of fuzzy soft *Gamma*-Semiring.

2. Preliminaries

Definition 2.1: Let U be an initial universe set and E be the set of parameters. Let P(U) denotes the power set of U. A pair (f, E) is called a soft set over U where f is a mapping given by $f: E \rightarrow P(U)$.

Definition: Let U be an initial universe set E be the set of parameters and $A \subseteq E$. A pair (f, A) is called a fuzzy soft set over U where f is a mapping given by $f: A \rightarrow I^U$ where I^U denotes the collection of all fuzzy subsets of U.

Definition: Let (f, A), (g, B) be fuzzy soft sets over U. Then (f, A) is said to be fuzzy soft subset of (g, B) denoted by $(f, A) \subseteq (g, B)$ if $A \subseteq B$ and $f(a) \subseteq g(a)$ for all $a \in A$.

Definition: A set S together with two associative binary operations called addition and multiplication is called a Semiring.

- i. Addition is a commutative operation,
- ii. There exists $0 \in S$ such that $x + 0 = x$ and $x \cdot 0 = 0 \cdot x = 0$ for all $x \in S$,
- iii. Multiplication distributes over addition both from the left and from the right.

Definition: Let (M, +) and (Γ, +) be commutative semigroups. Then we call M as a *Gamma*-Semiring, if there exists a mapping $M \times \Gamma \times M \rightarrow M$ written x, α, y as $x\alpha y$ such that if satisfies the following axioms for all $x, y, z \in M$ and $\alpha, \beta \in \Gamma$,

- (i) $x\alpha(y + z) = x\alpha y + x\alpha z$,
- (ii) $(x + y)\alpha z = x\alpha z + y\alpha z$,
- (iii) $x(\alpha + \beta)y = x\alpha y + x\beta y$,
- (iv) $x\alpha(y\beta z) = (x\alpha y)\beta z$.

Definition: let S be a *Gamma*-Semiring and A be a non-empty subset of S. A is called a *Gamma*-SubSemiring of S if A is a sub-semigroup of (S, +) and $A\Gamma A \subseteq A$.

Definition: Let S be a *Gamma*-Semiring. A subset A of S is called a left (right) ideal of S if A is closed under addition and $S\Gamma A \subseteq A$. A is called an ideal of S if it is both a left ideal and



A Study on Fuzzy Differential Equations with Existence and Uniqueness Theorem

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Abstract

In this study, by means of the successive approximation method, the existence and uniqueness of a result of the fuzzy differential equation $y'(t) = f(t, y(t)), y(t_0) = y_0$. Existence of solutions for fuzzy integral equations and a fixed point theorem for a two of a kind of comprehensive non-exclusive fuzzy mappings.

Keywords: Convergence criterion of weierstrass, lipchitz condition, lebesque measurable, zadeh's principle

INTRODUCTION

The differential equation

$$y'(t) = f(t, y(t)), y(t_0) = y_0 \quad (1.1)$$

has a result provided f is unremitting and satisfies a Lipchitz condition[2]. This study contains the properties of differential fuzzy set valued mappings and gave the existence and uniqueness theorem for a solution of the fuzzy differential equation $y'(t) = f(t, y(t))$, while f satisfies the Lipchitz condition moreover the existence and uniqueness theorem of a solution to the fuzzy differential equation, where $f: \mathbb{I} \times \mathcal{E}^n \rightarrow \mathcal{E}^n$ is equable unremitting and satisfies a comprehensive lipchitz condition.

Definition 1

Fuzzy set valued mapping: A map $G(x) \in \mathcal{R}^m$ for each $x \in \mathcal{R}^n$ is called set valued mapping from $\mathcal{R}^n \rightarrow \mathcal{R}^m$ and it is denoted by $G: \mathcal{R}^n \rightarrow \mathcal{R}^m$. The set valued mapping G is said to be closed value, convex value, closed convex value if $G(x) \in \mathcal{C}(\mathcal{R}^m), G(x) \in \mathcal{K}(\mathcal{R}^m), G(x) \in \mathcal{CK}(\mathcal{R}^m)$, for any $x \in \mathcal{R}^n$ respectively.

Definition2

Fuzzy derivative: A Mapping $\mathfrak{q}: [0, t] \rightarrow \mathcal{R}^n$ is called fuzzy differentiable at $x \in [0, t]$ for any $\alpha \in [0, 1]$ the set valued mapping $\mathfrak{q}_\alpha(x) = [\mathfrak{q}(x)]^\alpha$ is differentiable at in any point x with $\mathcal{D}\mathfrak{q}_\alpha(x)$ and the function $\{\mathcal{D}\mathfrak{q}_\alpha(x): \alpha \in [0, 1]\}$ defines a fuzzy number $\mathcal{D}_g\mathfrak{q}(x) \in \mathcal{R}^n$ or $\mathcal{D}_g\mathfrak{q}(x) \in \theta^n$. If $\mathfrak{q}: [0, t] \rightarrow \mathcal{R}^n$ is fuzzy generalize differentiable at $x \in [0, t]$ then we say that $\mathcal{D}_g\mathfrak{q}(x)$ is the fuzzy derivative of $\mathfrak{q}(\cdot)$ at a point $x \in [0, t]$.

PRELIMINARIES

Hausdorff Metric

Let $\mathcal{P}_k(\mathcal{R}^n)$ denote the family of all nonempty condensed convex subsets of \mathcal{R}^n and describe the adding and scalar multiplying in $\mathcal{P}_k(\mathcal{R}^n)$ as normal. X and Y be two subsets of \mathcal{R}^n . The distance between XY is described by the hausdorff metric,

Reflected Backward Stochastic Differential Equations Driven by Countable G-Brownian Motion

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Abstract: In this paper, we deal with a new-fangled class of reflected backward stochastic differential equations driven by G-Brownian motion, the existence and uniqueness of the backward stochastic differential equations are obtained by way of snell covering and fixed point theorem.

Keywords: Levy process, fixed point theorem, monotone convergence theorem, Gronwall's inequality, Lipchitz condition.

1. Introduction

The nonlinear BSDE were introduced by Pardoux and Peng [1] who proved the existence and uniqueness of the result in the Lipchitz condition for benevolent the probabilistic elucidation of the semi linear parabolic partial differential equations. Firstly, studied the backward doubly stochastic differential equations which are driven by two kinds of G- Brownian motions. Then, Boufoussi et. al.[10] established BSDE and semi linear stochastic partial differential equations with a Neumann boundary condition. We deliberate the reflected backward doubly stochastic differential equations driven by Levy process and the equations driven by finite G-Brownian motion.

2. Notations

Q is the positive constant. Throughout the paper $(\Lambda, \mathcal{K}, \mathbb{P})$ is complete Probability space prepared with the ordinary filtration $\{\mathcal{K}_q\}_{q \geq 0}$ satisfying the usual conditions. $\{\alpha_i(q)\}_{i=1}^\infty$ are mutually independent one dimensional standard Brownian motion on the probability space. $W^G(q)$ is the standard G-Brownian motion on \mathcal{R}^d which is independent of $\alpha_i(q)$.

$$\text{Assume that } \mathcal{K}_q = (\bigvee_{i=1}^\infty \mathcal{K}_{q,i}^{\alpha_i}) \vee \mathcal{K}_q^{W^G} \vee \mathbb{N} \dots(1)$$

Where any process $\{\mu_q\} \mathcal{K}_{r,q}^\mu = \delta\{\mu_p - \mu_r : r \leq p \leq q\}$

$\mathcal{K}_q^\mu = \mathcal{K}_{0,q}^\mu$ and \mathbb{N} denotes the class of \mathbb{P} null sets of \mathcal{K} .
 Let us initiate a few spaces:

(i) $\mathcal{H}^2 = \{(\phi_q)_{0 \leq q \leq Q}$ an \mathcal{K}_q gradually measurable \mathcal{R} valued process such that $\mathbb{E} \int_0^Q |\phi_q|^2 dq \mathcal{H}^2 < \infty\}$

(ii) $\mathcal{J}^2 = \{(\eta_q)_{0 \leq q \leq Q}; \mathcal{K}_q$ gradually measurable \mathcal{R}^d valued continuous process such that $\mathbb{E}(\sup_{0 \leq q \leq Q} |\eta_q|^2) < \infty\}$

(iii) $\mathcal{J}^2 = \{(\mathbb{K}_q)_{0 \leq q \leq Q}$ an \mathcal{K}_q adopted continuous increased process such that $\mathbb{K}_0 = 0, \mathbb{E}[\mathbb{K}_q]^2 < \infty\}$

with the preceding measures, we deliberate the following RBSDES:

$$X_q = \zeta + \int_q^Q f(r, X_r, Y_r) dr + \sum_{i=1}^\infty \int_q^Q g_i(r, X_r, Y_r) d\alpha_i(r) - \int_q^Q Y_r dW^G(r) + \mathbb{K}_Q - \mathbb{K}_q, 0 \leq q \leq Q \dots(2)$$

where $f: \Lambda \times [0, Q] \times \mathcal{R} \times \mathcal{R}^d \rightarrow \mathcal{R}$ and $g_i: \Lambda \times [0, Q] \times \mathcal{R} \times \mathcal{R}^d \rightarrow \mathcal{R}$

Definition 1: A Solution of (2) is a triple of $\mathcal{R} \times \mathcal{R}^d \rightarrow \mathcal{R}_+$ value process $(X_r, Y_r, \mathbb{K}_q)_{0 \leq q \leq Q}$ which satisfies (2) and

- (i) $X_r \geq R_r;$
- (ii) $(X_r, Y_r, \mathbb{K}_q)_{0 \leq q \leq Q} \in \mathcal{J}^2 \times \mathcal{J}^2 \times \mathcal{A}^2$
- (iii) \mathbb{K}_q is a incessant and growing process with $\mathbb{K}_0 = 0$ and $\int_0^Q (X_r - R_r) d\mathbb{K}_q = 0$

To facilitate get the solution of (2), we intend the following assumptions:

- (a) ζ is an \mathcal{K}_Q assessable square integrable random variable;
- (b) the obstacle $\{R_r : 0 \leq r \leq Q\}$ is an \mathcal{K}_Q progressive measurable incessant real valued process which satisfies $\mathbb{E} \sup_{0 \leq q \leq Q} (R_r)^2 < \infty$. we always assume that $R_Q \leq \zeta$;
- (c) $f(\cdot, x, y)$ and $g_i(\cdot, x, y)$ are two progressive measurable functions such that , for any $q \in [0, Q], x_1, x_2 \in \mathcal{R}, y_1, y_2 \in \mathcal{R}^d$
- (2a) $f(r, \dots)$ is incessant and $|f(r, x, y)| \leq \mathcal{M}(1 + |x| + |y|)$;
- (2b) $\mathbb{E} \int_0^Q |f(q, o, o)|^2 dq < \infty$.
- (2c) $|f(r, x_1, y_1) - f(r, x_2, y_2)|^2 \leq P|x_1 - x_2|^2 + |y_1 - y_2|^2, |g_i(r, x_1, y_1) - g_i(r, x_2, y_2)|^2 \leq P_i|x_1 - x_2|^2 + \beta_i|y_1 - y_2|^2$



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Nuclear Refuge on the Cosmos towards Fusion Energy

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Abstract: International Thermonuclear Experimental Reactor (ITER) is the first fusion provision which will have enough radioactive inventory to be possibly dangerous for the public environment. Fusion reactors produce more energies than fission reactors. It is an experimental technology for producing power. Fusion process requires fuel and a highly confined environment with high temperature and pressure to plasma in which fusion can occur. As a source of energy, nuclear fusion is expected to have several theoretical advantages over fission. The flow of a stream of neutrons of a fusion reactor is essential in the conceptual design of all in-vessel components and overall design of the reactor. In order to prepare the next step towards fusion power production Test Blanket System will be operated. The next decades are crucially important to putting the world on a path of reduced greenhouse gas emissions.

Keywords – Deuterium, tritium, tokamak, magnetic confinement, cryostat.

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I. INTRODUCTION

According to the law of energy, "Energy can neither be created nor be destroyed. The total amount of energy in the universe remains constant. Energy and mass are inter-convertible." Nuclear Fusion is based on the principle of Energy-Mass inter-convertibility. As the name Thermo-Nuclear suggests, International Thermonuclear Experimental Reactor (ITER) uses thermal energy generated from Nuclear fusion. Nuclear fusion is a reaction in which two nuclei fuse together and forming a single nucleus releasing some amount of energy equivalent to the mass difference between the sum of original nuclei and the final nucleus. ITER uses deuterium and tritium as fuel. Whereas both are isotopes of hydrogen which are abundantly available in nature. Tritium is generated in the plants by itself and Deuterium is produced by water bodies having D₂O in larger amounts. It is the world's largest nuclear fusion power plants its construction is undergoing in France, nearby Cadarache. The seven members of ITER are the European Union (EU), India, China, Japan Russia, South Korea and the United States. It is being an experimental reactor, it will allow the study of fusion reaction which governs the Sun and other Stars.

II. Fuel Of Iter

The fuel of an ITER is the deuterium and tritium. Where both are isotopes of hydrogen whereas isotopes are those elements having the same atomic number but different mass numbers the atomic number of deuterium is 2 and an atomic number of tritium is 3 but the mass number for both are 1 is same as that of hydrogen. Where deuterium and tritium are abundantly available in nature. Deuterium is produced from heavy water whereas light water has two hydrogen atom in its molecule while heavy water has two deuterium atom in its molecule. Naturally occurring tritium is extremely rare on earth, where some amounts are formed by the interaction of the atmosphere with cosmic rays. There are three types of tritium production facility they are the fissile type, accelerator production tritium and fusion type. Tritium is a radioisotope of hydrogen produced in small level in nature by cosmic rays and decays at the amount of about 5.5% per year. Both fusion and fission facilities produce tritium by the absorption of thermalized neutrons in lithium target materials, via the reaction ${}^6\text{Li} (n, \alpha) {}^3\text{H}$. Mostly it can be produced by irradiating lithium metal or lithium-bearing ceramic pebbles in a nuclear reactor. Charging will happen in three stages that is hydrogen operation, followed by deuterium operation, and finally full deuterium-tritium operation. Only fewer grams of fuel is being in the plasma at any provided instant. This makes a fusion reactor especially concerned in its fuel consumption and also gives important safety advantages to the foundation.

III. Working Of Iter

Take two forms of isotopes of hydrogen, squash them together and you get a helium atom and a very energetic subatomic particle called a neutron. The product of the reaction is a fraction lighter than its atomic

Nuclear Power Plant Accidents and Climate Change

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Abstract: The global warming frequently is caused by greenhouse gases and nuclear wastages. Nuclear energy is main source of generate an electricity at the same time De carbon method can be maintained. Nuclear fission, fusion give significant to diminish radiation emission. Global temperature increases by 2°C In 2009, CO₂ level is 39.6%, in 2025 to 2065, CO₂ level is reduced by 26.1%. The nuclear waste management is synchronized and forbidden by international atomic energy agency (IAEA) started on 1968. The Nuclear Industry at shipping port going expansion of ATF used to safety management for Nuclear Power Plant.

Keywords - nuclear fission reaction, climate change, Paris climate change conference, nuclear waste, nuclear reactor.

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I. INTRODUCTION

Nuclear power is presently a significant factor of energy safety and global economic development [11]. Nuclear energy source is essential for our world. Nuclear energy is seen as a major prospect for the decarbonization of global economic due to its low carbon system. International governments give to control global warming. Paris climate change conference held on 2015 about scheming global warming. Nuclear technology is only developed GHG emission free energy source able of replacing fossil fuel energy source in the given time scale safely, economically, reliably and in a sustainable way [8]. Nuclear fission reactor in the civil sector, considerable knowledge has also been accumulated in the military sector. Shipping port was designed to be a civilian nuclear power plant. It was weary. The large pressurized water reactor constructed at the time the first intended solely for commercial operation. The PWR was the s1w, the land based prototype reactor for U.S navy's, nautilus submarine on march 30, 1953 an reactor power of 50-70 MW [2]. Would entail that the reactor core be much larger than the previous naval reactor cores.

II. Global Warming Causes

Green house gases in the atmosphere created by human activities. GHG is increases concentration the international community to instantaneously effect political progress & discuss about controlling. They can select scenarios A, B, C, D. Scenarios held around 2025-2100. The global average surface warming in the 21st century and subsequent period would mainly depend on the cumulative emission of CO₂. The air temperature range per 1000 Gtc. Group 3 provided the most viable scenario to achieve the goal of keeping the global temperature rise until 2100 within 2°C compared with an industrial level. To limit the GHG concentration to 450ppm CO₂. It will reduce net zero in 2100. This report also assessed the improvement and technical choice in transport, building, human settlements, infrastructure spatial planning under this goal. The mass of emitted CO₂ obtained by coal combustion amounts to up to three times the mass of coal used so every year storing twenty billion tons of CO₂ are measured. The coal industry to continue burning coal this create an effect of climate change.[8]

2.1 Decarbonizes in nuclear power:

The nuclear energy had greatly the increase of rate of global warming recorded in the past four decades, as its use prevented the release of over 60 billion tons CO₂ after 1970. It is currently estimated that nuclear power is preventing the yearly discharge of 1.2-2.4 Gt CO₂ emission globally, assuming that, without this process, more than 2400 TWh significance of nuclear power would be formed by natural gas incineration. Nuclear power is considered to be an essential involvement to the decarbonization of the global energy system. Now a day's average level of CO₂ emission in electricity generator is currently 15 g CO₂/kwh. Similarly this value can be more than 70 times equal emission generated by oil, gas, coal compare to wind power emission. In Paris conference has during china their lack of scientist join to give the ideas. The conference team is low

Remodeling of Nuclear Power Plant using Accessible Resources and New Generation Safety Mechanism

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Abstract: Energy grows increasingly important with globalization. An analysis of existing nuclear power plant models and possible renovations to increase their efficiency has been reviewed. Spent fuel is considered to be most hazardous. Reuse of spent fuels and rods can lead to supplementary production of power. Partnering of two power generation system can also be constructed to solve major domestic needs of people. Even after countless technological advancement in our day to day life, the safety over nuclear energy is still debatable. Hence a hazardous useful energy production can be made safe through a smart support system which can easily predict accidents in a nuclear power plant. Thus this is going to be an overview of efficient nuclear power production in a safe environment and what makes a hybrid nuclear power plant the most efficient and user friendly.

Keywords - Nuclear power plant, nuclear energy, supplementary production, spent fuel and rods.

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I. INTRODUCTION

Nuclear energy has one of the lowest environmental impacts since; it does not emit carbon-di-oxide during its production. According to a recent evaluation, a nuclear power plant can supply electricity each year to serve 60 million homes. At present, about 11% of world's electricity is provided by nuclear energy and is increasing rapidly. Though the cost of construction and maintaining of a nuclear power reactor is very high, the efficiency of it is only 35%. The main shortcomings of the nuclear power plant are its low efficiency and its safety. The International Atomic Energy Agency (IAEA) defines nuclear safety as "the achievement of proper operating conditions, prevention of accident consequences, resulting in protection of workers, the public and the environment from undue radiation hazards". The increase in population and globalization has magnified the demands of people in the past decade. The only solution to all these afflictions is by building an efficient nuclear power plant which not only produces power but at the same time can meet the needs of people and work with a complete range of protection and stability. Thus in this article, we are about to review the possible ways of enhancing the efficiency of a nuclear power plant and the partnering of a nuclear plant with other plants and providing a safe environment.

II. Enhancing Efficiency Of A Npp By Using Solar Power

Solar power is the most widely available renewable energy source. Various power production plants have been built and used to convert solar energy into electricity. Even though the efficiency of these plants are comparatively low, they are still supported as they don't cause any harm to the environment and the solar heat is available at free of cost. Various ways to enhance its performance are still being studied. Few Promising structures are discussed below.

Nuclear Power Plant	Year of Commencing	Net Capacity	Type of Reactors Used	Number of Units in NPP
Kashiwazaki-Kariwa NPP, Japan	1997	7,965 MW	BWR	Five units
Bruce Nuclear Generating Station, Canada	1987	6,234 MW	PHWR	Eight units
Hanul Nuclear Power Plant, South Korea	2005	6,189 MW	PWR	Six units
Hanbit Nuclear Power Plant, South Korea	1986	6,164 MW	PWR	Six units
Zaporizhzhia Nuclear Power Plant, Ukraine	1985	6,000 MW	VVER	Six units

Table 1: Top 5 Nuclear power plants with high capacities

PREPARATION AND CHARACTERIZATION OF PRASEODYMIUM AND HOLMIUM OXIDE DOPED BORATE GLASS

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Abstract: Holmium and Praseodymium doped borate glasses were prepared by conventional rapid melt-quench method. The XRD pattern indicates the amorphous nature of holmium and Praseodymium doped borate glass. Photoluminescence spectrum gives an idea of the optical properties of Holmium and Praseodymium doped borate glass. Determination and differentiation of the various vibrational modes were done using FTIR spectroscopy and Raman spectroscopy studies. The dielectric properties such as dielectric constant and the dielectric loss were studied at different frequencies and temperature.

Index Terms - FTIR, Holmium, Praseodymium, Photoluminescence

I. INTRODUCTION

Glass is a non-crystalline amorphous solid that is often transparent and has widespread practical, technological, and decorative usage in things like window panes, tableware, and optoelectronics. Scientifically, the term "glass" is often defined in a broader sense, encompassing every solid that possesses a non-crystalline structure at the atomic scale and that exhibits a glass transition when heated towards the liquid state. Glasses doped with transition metal and rare earth ions have attracted a lot of attention for their applications in visible and mid-infrared regions of the electromagnetic spectrum such as lasers, optical fibers, sensors, biomedical diagnostics, infrared detectors, marine optical communications, up-conversion lasers, optical data storage, atmospheric probing and high density memory storage devices [1-4]. As boron has the highest glass forming tendency because it is in the form of B₂O₃ that does not crystallize by itself even when cooled at the slowest rate, the Borate glasses these glasses have been widely investigated due to their technological applications [5].

High transparency, low melting point, high thermal stability and good rare earth solubility make the borate glass as a suitable optical material. Considering the other naturally occurring elements, holmium possesses high magnetic moment. In nature, it occurs in trivalent oxide state.

Like other rare earth ions, holmium ions also yield fluorescent properties [6]. In the present work, structural, optical, spectral and electrical properties of the holmium doped borate glass were discussed.

II PREPARATION OF GLASS SAMPLES:

The proposed Holmium oxide doped yttrium oxide contained borate glasses were prepared by melt-quenching method. The basic composites like H₃BO₃, Li₂CO₃, Y₂O₃ and Ho₂O₃ All the basic composites were taken in 99.99% of purity and in appropriate proportion which has been calculated using Glass batch calculation. After weighing, the composites were mixed together to get fine powders. The desired mixture was taken in a silica crucible and heated in a muffle furnace at 1300°C for 3 hrs. The sample was melted at 1170°C and suddenly poured into preheated dye, which was kept in another furnace. After 4 hrs of annealing process, samples were obtained bubble free and crystal clear. The temperature inside the furnace gradually decreased to room temperature, and then the samples were taken outside and polished. The prepared samples are further used for different characterization studies.

Praseodymium is a rare earth metal with atomic number 59 and considered as third element of lanthanide series. The electrons are arranged in the configuration [Xe] 4f³6s². It is first lanthanide which obeys the Aufbau principle. According to Aufbau principle 4f level as lowest energy than of 5d. The trivalent rare earth ions are easily incorporated in glasses. Praseodymium shows efficient luminescence in triplet state and forms 3⁺ oxidation states. Hence, the prepared borate glass can be used for some applications like optical data reading, colour display etc. Praseodymium is more resistant to corrosion in air than other Rare earth metals, can develop green oxide coating when exposed to air. Praseodymium compounds give glasses a yellow color [7,8]. The Praseodymium oxide doped glasses called as didymium glasses, used in welding goggles because it blocks infra red radiation [9].



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Comparative Study of Pure and Doped Single Crystals of Pure and Strontium Doped Cadmium Tartrate Oxalate Single Crystals by Sol Gel Technique

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Abstract: A single test tube technique coupled with gel again conferred maximum size crystals by controlled the nucleation rate. It was found that the P^H and age of gel greatly influenced the crystal quality, their size and transparency. In the gel preparation process sodium Meta silicate (Na_2SiO_3) is mixed with the mixed solution of oxalic acid ($C_2H_2O_4$) and tartaric acid ($C_4H_6O_6$) in the desired mole fraction. The harvested crystals were characterized by X- ray powder Diffractogram, Fourier Transform Infrared Spectroscopy, quantitative elemental analysis of EDAX and Scanning Electron Microscope. Powder XRD results indicates the polycrystalline nature of this materials. FTIR for these crystals show all the bands expected from the metal Tartrate oxalate with water of crystallization. Further the presence of cadmium, carbon and oxygen is confirmed by EDAX. SEM images shows the structure in the form of flat and the plates with the sharp edges. The thermal behavior of the grown crystals has been investigated by DTA and TGA analysis.

Keywords: Crystal growth, Cadmium tartrate oxalate, Strontium chloride, XRD, FTIR, EDAX, SEM, TG and DTA.

1. Introduction

Single crystals are the backbone of the modern technology of logical revolution [1-3]. The impact of single crystal, is clearly visible in industries like semiconductors, optics etc. Growth and characterization of Cadmium Tartrate Oxalate single crystals, both pure and doped have attracted many researchers single crystals of Strontium mixed Cadmium Tartrate Oxalate crystal have been grown and reported. Cadmium Tartrate crystals, $CdC_4H_4O_6 \cdot 3H_2O$, structural with other electroseramic divalent metal ions. Some divalent metal ion tartrates are exhibiting non-linear optical and spectral characteristics and hence are used in transducers and many linear and non-linear mechanical devices. Now a day great attention has been devoted on the growth and characterization of doped Cadmium Tartrate Oxalate crystal with the aim of identifying new materials for practical purposes [4, 5]. The effect of doping on various purpose of crystal is of great interest from solid state science as well as technological point of view. The crystals of Cadmium Tartrate oxalate grown in silica gel medium in doped with barium have already been reported [6,7]. Comparative of pure and Strontium doped Cadmium Tartrate oxalate crystals yet had not been reported. In the present work we have attempted to grow pure and Strontium doped Cadmium Tartrate oxalate crystal by Gel Technique.



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Comparative of Structural, Spectrum and Thermal Properties of Pure and Barium Doped Cadmium Tartrate Oxalate Single Crystals by Sol Gel Technique

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Abstract: In this research work mixture of two acids were used for changing the P^H of the solution. Cadmium Tartrate Oxalate single crystals doped with barium was grown by controlled diffusion in silica gel at ambient temperature. In the gel preparation process sodium Meta silicate (Na_2SiO_3) is mixed with the mixed solution of oxalic acid ($C_2H_2O_4$) and tartaric acid ($C_4H_6O_6$) in the desired mole fraction. SEM images shows the structure in the form of flat and the plates with the sharp edges The harvested crystals were characterized by X-ray powder Diffractogram, Fourier Transform Infrared Spectroscopy, quantitative elemental analysis of EDAX and Scanning Electron Microscope. Powder XRD results indicates the polycrystalline nature of this materials. Further the presence of cadmium, carbon and oxygen is confirmed by EDAX. The thermal behavior of the grown crystals has been investigated by DTA and TGA analysis.

Keywords: Crystal growth, Cadmium Tartrate Oxalate, Barium Chloride, SEM, XRD, FTIR, EDAX, TG and DTA.

1. Introduction

Gel growth in aqueous solution is now a wide spread technique for production of high quality crystals in a large range of solubilities and temperatures [1-3]. The impact of single crystal, is clearly visible in industries like semiconductors, optics etc. In this method, two soluble reactants are diffused into a gel where they react to form an insoluble product. Growth and characterization of Cadmium Tartrate Oxalate single crystals, both pure and doped have attracted many researchers single crystals of barium mixed Cadmium Tartrate Oxalate crystal have been grown and reported. Cadmium Tartrate crystals, $CdC_4H_4O_6 \cdot 3H_2O$, is isostructural with other electroseramic divalent metal ions. Now a day great attention has been devoted on the growth and characterization of doped Cadmium Tartrate Oxalate crystal with the aim of identifying new materials for practical purposes [4, 5]. The effect of doping on various purpose of crystal is of great interest from solid state science as well as technological point of view. The crystals of Cadmium Tartrate oxalate grown in silica gel medium in doped with Barium, Strontium, Lithium and Calcium have already been reported [6,7]. Comparative of pure and Barium doped Cadmium Tartrate oxalate crystals yet had not been reported. Hence, the growth of pure and Barium doped Cadmium Tartrate oxalate crystal by single diffusion method is attempted and reported in the present paper. These crystals were also grown by doping impurities like Barium.



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Improved Photocatalytic and Electrochemical Performance of Hydrothermally Synthesized Mg_2SnO_4 Nanocubes and their Effect on Loading with Activated Carbon

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Abstract

Highly crystalline Mg_2SnO_4 nanocubes were successfully synthesized using a facile hydrothermal method. Further activated carbon was loaded with Mg_2SnO_4 nanoparticles in order to enhance the photocatalytic performance. Photocatalytic performance of Mg_2SnO_4 nanocubes and activated carbon loaded Mg_2SnO_4 nanocomposites were examined by methyl green and methylene blue dye degradation under the exposure of UV light. However, results suggest that activated carbon loaded Mg_2SnO_4 nanocomposites has significantly enhanced the photocatalytic performance over Mg_2SnO_4 nanocubes. It is assumed that better photocatalytic activity is caused by the higher specific surface area of activated carbon loaded Mg_2SnO_4 nanocomposites. Furthermore, cyclic voltammetry was used to analyze the electrochemical properties of the samples. Results indicate that activated carbon significantly enhanced the electrochemical properties of Mg_2SnO_4 nanoparticles. Copyright © VBRI Press.

Keywords: Photocatalysis, hydrothermal synthesis, Mg_2SnO_4 , activated carbon.

Introduction

Ternary metal stannates A_2SnO_4 (A=Zn, Mg, Cd, Co, Ni) are one class of metal oxides with interesting properties towards various applications. Mg_2SnO_4 (MTO) is one of the A_2SnO_4 compounds having cubic spinel structure with space group $Fd\bar{3}m$. Most of the research on MTO was mainly focused on its application as phosphor and as lithium-ion battery anodes [1, 2]. Recently, Yuan Quin et al. explored the photocatalytic property of MTO/ SnO_2 nanostructures using degradation of methylene blue (MB) dye under UV light irradiation. They found that MTO/ SnO_2 polyhedral nanocomposites exhibited an excellent photocatalytic activity against MB dye [3]. However, reports on MTO in photocatalytic applications are scarce. Activated carbon with its rapid adsorption kinetics, huge adsorption capacity, and luxury of regeneration, is mostly utilized in industries as a support meant for heterogeneous catalysis. [4]. In this work, MTO nanoparticles and activated carbon loaded MTO nanocubes (AC/MTO) have been successfully synthesized via simple hydrothermal method.

Photocatalytic performance of the samples was analyzed through degradation of methylene blue and methyl green dyes. Additionally, electrochemical characteristics of the synthesized powders were examined. To our knowledge best, this is the first attempt on analyzing the photocatalytic and electrochemical performance of AC/MTO nanoparticles.

Experimental

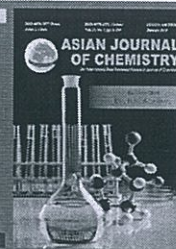
Chemicals of analytic grade were used in this work without any additional purification. Here, 50 ml of deionized water was added with 0.06M of magnesium chloride hexahydrate and 0.03M of tin chloride pentahydrate and stirred continuously, later slowly 2M of KOH solution was added dropwise leads to the formation of a white colored solution. This mixed solution then moved into a Teflon coated stainless steel autoclave and kept at 180 °C for 12 hours in a hot air oven. Then, the resultant product was filtered and washed by deionized water and absolute ethanol repeatedly. Lastly, the product was dried at 80 °C for



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FT-IR Spectroscopic Detection of Biochemical and Structural Changes Associated with Early Tumor Transformation in Hamster Oral Carcinogenesis

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FT-IR spectroscopy is a vibrational spectroscopic technique that can be used to investigate the biochemical changes at the molecular level in various tissue transformation conditions [hyperplasia, dysplasia and well differentiated squamous cell carcinoma (WDSCC)] with respect to control tissues in DMBA-induced hamster oral carcinogenesis. The results revealed that a significant increase in the amount of proteins and nucleic acid contents and a decrease in the amount of lipids contents are observed in WDSCC when compared to control, hyperplasia, dysplasias. In addition, the detailed secondary structure of proteins in the control and various tissue transformation conditions is also presented. Further, the diagnostic algorithms based on PC-LDA achieved an overall sensitivity of 80-100 % and specificity of 81-100 %. The present study further shows a great potential of FT-IR spectroscopy as a complimentary tool, which may provide a rapid screening method and have potential use in the diagnosis of dysplasia and early, non-invasive oral cancer.

Keywords: Oral carcinogenesis, FT-IR spectroscopy, Principal component-linear discriminant analysis.


INTRODUCTION

Oral cancer is the major cause of mortality and morbidity in developing as well as developed countries with an annual estimated incidence of 275,000 cases, two-thirds of which are from developing countries. Oral squamous cell carcinoma (OSCC) accounts for 90 % of all oral cancers and the risk of developing oral cancer has been shown to increase with age [1]. There is considerable geographical heterogeneity in incidence rates that can be attributed to the differences in the distribution of associated risk factors Betel quid chewing with tobacco, a common practice in India, has been identified as the single most important factor in the aetiology of oral cancer. Recent progress in diagnostic techniques and medical treatments for oral cancer has improved the 5 year survival rate after treatment. The 5-year survival in advance stage cancer after treatment is less than 40 and 80 % in early stage disease. This indicates that detection of oral cancer at an early stage is essential for better outcome of the cancer therapy. Therefore,

it would be of imperative clinical value to develop a real-time, non-invasive, biomolecular and sensitive optical diagnostic technique for improving the early detection of oral precancer and cancer during clinical oral inspections. In this context, a non-invasive optical diagnostic technique providing a direct assessment of biochemical information from suspicious lesion would represent a significant advance in the early detection of oral cancer. These methods are widely used as a tool for analysis of many biological tissues and the technique has been referred to as an "optical biopsy" or "spectral cytopathology" because of its capacity to show features of underlying pathological tissues when compared with normal tissues.

Recently, Fourier transform infrared (FTIR) spectroscopy has emerged as a novel technique that provides information about biochemical changes within cells and tissues *via* characteristic spectral signature changes and can be applied without the use of additional reagents. An FT-IR spectrometer is the instrument used to detect IR light absorbed by molecules. The mid-IR (4000-400 cm^{-1}) is the most commonly used region

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Impact of Cu concentration on the properties of spray coated Cu-MoO₃ thin films: evaluation of n-CuMoO₃/p-Si junction diode by Norde and Cheung's methods

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**Impact of Cu concentration on the properties of spray coated Cu-MoO₃ thin films:
evaluation of n-CuMoO₃/p-Si junction diode by Norde and Cheung's methods**

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Abstract

We reported that sub-microsized rod-like Cu doped MoO₃ thin films were prepared by jet nebulizer spray (JNS) pyrolysis technique at an optimized substrate temperature of 500 °C. The prepared Cu-MoO₃ films were characterized by XRD, SEM, EDX, UV-Vis and I-V characteristics. The single phase orthorhombic crystal structure of MoO₃ was observed by XRD pattern. SEM results showed that the sub-microsized rod-like structure was obtained by adding Cu concentration. The expected elements of Mo, Cu and O were confirmed using EDX spectrum. From UV-Vis and I-V characteristics, the 6% of Cu doped MoO₃ film revealed minimum band gap energy and maximum conductivity. All the n-CuMoO₃/p-Si junction diodes exhibited the high photo-conducting nature. The significant diode parameters such as ideality factor (n), barrier height (Φ_b) and sheet resistance (R_s) were investigated along with Norde and Cheung's methods for different doping concentrations (0, 3, 6 and 9 wt.%) of Cu in darkness and under illumination.

Keywords: Cu doped MoO₃, thin films, n-CuMoO₃/p-Si junction diodes, darkness, illumination, ideality factor

1. Introduction

Transition metal oxides (TMOs: WO₃, MoO₃ and V₂O₅) based P-N junction diodes have attracted many researchers in recent years. Particularly, molybdenum trioxide (MoO₃) is an essential TMO for fabrication of good quality P-N junction diode owing to its excellent properties of optical, structural, electrical, charge transport and high stability [1-9]. The MoO₃ is one of the unavoidable materials in gas sensor application because of its high sensitive for detecting different gases (NO₂, CO, CO₂, SO₂, H₂S) [10-15]. Structural and morphological stability of the MoO₃ as





Effect of Organic Additives on the Characteristics of Al/Organic Additive:ZrO₂/p-Si Metal–Insulator–Semiconductor (MIS) Type Schottky Barrier Diodes

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Abstract

In this work, zirconium dioxide (ZrO₂) thin films were prepared on glass substrates with organic additives such as polyethylene glycol-6000 (PEG), polysorbate-80 (P80), triton X-100 (T100), citric acid (CA), tartaric acid (TA), and oxalic acid (OA) by sol–gel spin coating technique. The prepared thin films were annealed at 600 °C and their structural, morphological, optical and dc electrical properties were studied. From the XRD pattern, the crystal structure of the ZrO₂ films was found to be monoclinic. The SEM micrographs of PEG:ZrO₂ and CA:ZrO₂ thin films exhibited rod-shaped and square-shaped grains, respectively. The EDX analysis confirmed the presence of Zr and O elements in the ZrO₂ films. The UV–Vis analysis showed a higher transmittance for the PEG:ZrO₂ and T100:ZrO₂ films. The optical band gap (E_g) varied in the range of 5.66–5.83 eV. DC electrical conductivity (σ_{dc}) increased with a decrease of activation energy (E_a) for organic additive:ZrO₂ thin films compared to pure ZrO₂. A maximum value of σ_{dc} was noticed for the PEG:ZrO₂ thin film. Metal–insulator–semiconductor type Schottky barrier diodes (Al/organic additive:ZrO₂/p-Si) were fabricated and their electrical characteristics were studied. Results showed that the barrier height (Φ_B), series resistance (R_s) and ideality factor (n) decreases for Al/organic additive:ZrO₂/p-Si SBDs from that of the Al/Pure ZrO₂/p-Si.

Keywords Thin films · ZrO₂ · Insulating layer · Organic additives · Schottky barrier diode

1 Introduction

Transition metal oxides are potential materials, used as insulating layer in metal–insulator–semiconductor (MIS) structure. Based on this MIS structure, research is progressing for electronic device applications [1–4]. Recently, zirconium dioxide (ZrO₂) is a prominent material for many optoelectronic applications because of its wide band gap (~5.8 eV), high dielectric constant ($k=25$), high breakdown field (7–15 MV/cm), good thermal stability with Si substrate, and also accepted as insulating layer in the MIS type Schottky

barrier diodes (SBDs) [5, 6]. The ZrO₂ is used in numerous applications, which include dynamic random access memory (DRAM), gate dielectrics in CMOS devices, optical filters, and thermal barrier coatings [7–10].

The structural properties such as grain size, crystallinity, and homogeneity of the insulating layer have an impact on the electrical performance of the SBDs. The charge transport through the insulating layer is governed by barrier height at the metal–insulator interface of the SBDs, which depends on the grain size of the insulating layer [11–13]. In current–voltage (I – V) characteristics of the SBDs, an increase in forward current is owing to the grain size [13]. Many researchers have reported that the annealing process controls the grain size and stabilizes the crystal structure of the insulating layer, which results in improvement of the barrier height [14–17].

Sol–gel process is more reliable and versatile than many other solution techniques to prepare the metal oxide thin films, because of its low cost, high purity precursor, ability to prepare diverse materials, good control over stoichiometry, and low processing temperature [18]. A variety of

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PRINCIPAL



High stable with efficient dye-sensitized solar cell-based Al₂O₃/graphene hybrid photoanode fabricated by simple household microwave irradiation technique

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Abstract

A facile and one-step microwave irradiation approach was adapted to fabricate the hybrid photoanode of aluminum oxide (Al₂O₃)/graphene (GR) nanocomposite and scientifically investigated their structural, morphological and optical properties by XRD, TEM, Raman, UV, PL and BET analysis. XRD and TEM results exposed that crystal symmetry and exhibited face centered lattice with uniform plate-like nanoparticles are homogeneously covered on the surface of the graphene sheets. Mesoporous with nature with high pore size and huge surface area of Al₂O₃/GR is identified by N₂ adsorption–desorption analysis. A significant reduction in the band gap energy (4.42–3.62 eV) and rapid electron–hole pair generation process of the hybrid materials was found by UV-DRS and PL spectra analysis. Sandwich type solar cell was fabricated by deposition the hybrid materials on FTO glass substrate and technically studied the photovoltaic (PV) parameters through J–V characteristics. The results express that Al₂O₃/GR hybrid photoanode show fabulous photo conversion efficiency (PCE) of (8.21%) and high stability than compared with bare Al₂O₃.

1 Introduction

The energy crisis and common defilement makes it crucial to examine renewable and clean vitality sources [1–3]. As one of the first promising renewable and clean energy sources inside the world, sun oriented energy offers a free, clean, non-polluting, boundless resource [4–6]. Among all of the renewable energy advances, tallying hydro, sun based, wind, geothermal warm, and biomass, photovoltaic (PV) development which changes over solar energy into power is expected to be the preeminent promising procedure for temperate energy supply. Due to the energy emergency and natural contamination, solar energy is considered the foremost promising elective to traditional fossil fuels. Solar cell could be a simple strategy to straightforwardly gather and change over solar energy to power to meet the basic societal

require. Over the decades, numerous materials and numerous strategies have been connected to promote the control proficiency of quantum dab sensitized sun oriented cells (QDSSCs) [7] and huge advance has been made [8–11]. The photoanode consists of distinctive morphology of ZnO [12] and TiO₂ [13], and counter electrode incorporates Cu₂S [14], CuS [15], and PbS [16] and so on. Because the metal oxide based photo anodes are superior electronic conductivity, suitable physic-chemical properties and easily tuning the band gap energy of these materials. Most importantly rapid generation of photo-generated electron–hole pairs, which absorb the more light (both UV and visible) from the solar energy further, will convert to electrical power.

Among the various kinds of metal oxides, aluminum oxide (Al₂O₃) is the foremost broadly considered lattice for graphene-ceramic composites. Al₂O₃ has amazing properties counting compression quality, hardness, wear resistance, chemical solidness, mechanical resistance, temperature steadiness, and corrosion resistance indeed at tall temperatures [17, 18]. In specific, Al₂O₃ has been broadly examined basically at high temperatures for auxiliary applications such as aviation, electrical, biomedical, and catalysis [19]. Many attempts has been utilized to improve the optical and electronic properties of these compounds for the further utilize the various kinds of applications such as bio sensors, gas

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A facile synthesis of hydroxyl functionalized graphene oxide as an electrode material for energy storage devices

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ABSTRACT

In this case, a facile synthesis of alcohol functionalized graphene oxide (GO) material has been made using water soluble, non-toxic, biocompatible tris buffer (TB) and diethenolamine (DEA). This functional material was characterized by various techniques such as, XRD, TEM, XPS, Raman, TGA and Cyclic voltammetry (CV). The molecular level grafting of amines to graphene has been occurred due to the functionalization of alcohol by the enlargement of interlayer spacing and specific surface area. The synthesized material shows high specific capacitance value of 372 and 252 F g⁻¹ at a current density of 1 A g⁻¹ in 6% KOH solution.

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1. Introduction

The ever increasing consumption of fossil fuels, causing energy demands and environmental issues such as global warming have led to the search for clean renewable energy sources and sustainable development in recent years [1]. In this context, supercapacitors (SCs) are devices used to store energy at an interface between an electrode material and electrolyte and it has a wide attraction due to their high energy, power density and low cost [2]. Generally, carbon based materials are considering widespread attention due to their considerable properties such as high electron transport, wettability with electrolyte, high porosity, excellent chemical and electrochemical stability [3]. Thus, these devices inherently have faster and higher charge–discharge cycles and high power density.

Graphene oxide materials have been extensively studied [4] for the applications of bioimaging, removal of rhodanine B by cubic Cu₂O wrapped with reduced GO [5] and enhancement in the performances of light-controlled conductive switching in hybrid cuprous oxide/reduced graphene oxide (Cu₂O/rGO) nanocomposites. Recently, graphene oxide (GO) has considered as a promising materials for EDLC and pseudo capacitors, because of their unique physical and chemical properties. The structure of graphene oxide

with oxygen functional moieties such as epoxy, hydroxyl and carboxyl group on the base plane and edges tend to hinder the close stacking of layers [6]. It prevents the sheets from aggregation, which facilitate dispersion in aqueous medium tend to enhance the individual layers. Graphene oxide and graphene are generally obtained by the oxidation of graphite by using strong acids and oxidants [7]. Studies on the incorporation of functionalization by grafting of organic moieties for supercapacitors applications are limited though oxygen functionalities seems to be increase the capacitance range [8]. In our previous reports [9], tunable inter-layer space of GO has been made by using Bis (phthalimidoethyl) amine, which involved mainly on nucleophilic attack *via* ring opening of epoxide in order to accommodate more amine moieties in GO surface to enhance the inter-layer spacing. Herein, we made facile synthetic route for the covalent functionalization of GO sheets by using tris buffer and diethenolamine through ring opening of epoxy groups.

2. Experimental methods

All the chemical were purchased from were purchased from Sigma-Aldrich and used as such. The covalent functionalization of TB and DEA on the surface of graphene oxide has been performed in two steps. In the first step GO sheets has been prepared by using sodium metaperiodate. In the next step, the epoxy group can be easily modified *via* ring opening by the addition of alcohol moieties (TB and DEA) in GO at room temperature on the basis of

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Selective α -bromination of aryl carbonyl compounds: prospects and challenges

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ABSTRACT

The α -bromination of carbonyl compounds is one of the most important transformations and also important precursors in synthetic organic chemistry. Particularly, the side chain monobromination of carbonyl compounds has been a challenging task, because during the reaction a small amount of disubstituted or ring brominated products as an impurity is always accompanied with monosubstituted product in the reaction mixture. In recent years substantial advances have been made for the synthesis of brominated aromatic carbonyl compounds with high selectivity. In this review, we have summarized various methods for the synthesis of α -bromo aromatic carbonyl compounds.

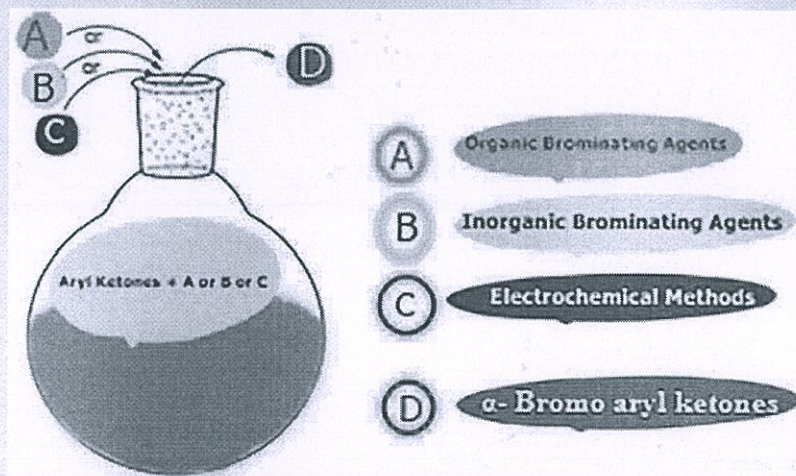
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KEYWORDS

α -bromo aryl ketones; electrochemical method; mono bromination; selective bromination

GRAPHICAL ABSTRACT



Introduction

Selective bromination of aromatic ketones is a significant reaction in synthetic organic chemistry.^[1] The side chain bromination of aromatic ketones has attracted much attraction, because the resulting bromo ketones are versatile synthetic intermediates for a

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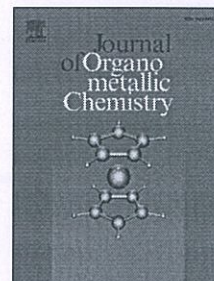


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Journal Pre-proof

Half-sandwich ruthenium(II) complexes containing biphenylamine based Schiff base ligands: Synthesis, structure and catalytic activity in amidation of various aldehydes

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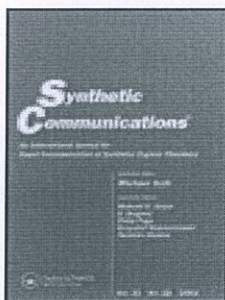
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Exclusively explored electrochemical halogenation of aryl compounds; periodical updates: Since 2000

R. Jagatheesan, C. Christopher, P. Ramesh & S. Sambathkumar

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Journal Pre-proof

HYDROTHERMAL SYNTHESIS OF HIERARCHICALLY STRUCTURED COBALT DOPED BISMUTH TUNGSTATE WITH IMPROVED PHOTOCATALYTIC ACTIVITY

B. Monisha, S. Kavipriya, A. Silambarasan, R. Arulmozhi, N. Abirami, R. Ramesh



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A handwritten signature in green ink, appearing to be 'S. Kavipriya', is written over the printed name of the Principal.

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**HYDROTHERMAL SYNTHESIS OF HIERARCHICALLY STRUCTURED
COBALT DOPED BISMUTH TUNGSTATE WITH IMPROVED
PHOTOCATALYTIC ACTIVITY**

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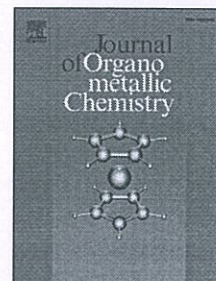
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Binuclear half-sandwich ruthenium(II) Schiff base complexes: Synthesis, characterization, DFT study and catalytic activity for the reduction of nitroarenes

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Binuclear Half-Sandwich Ruthenium(II) Schiff Base Complexes: Synthesis, Characterization, DFT Study and Catalytic Activity for the Reduction of Nitroarenes

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ABSTRACT

The binuclear ruthenium(II) *p*-cymene complexes containing Schiff base ligands of general composition [(Ru(*p*-cymene)Cl)₂L₁₋₆] (1-6) have been synthesized. The complexes were characterized by analytical and spectral (FT-IR, UV-Vis & ¹H-NMR) methods. The molecular structure of the representative complex [(Ru(*p*-cymene)Cl)₂(L₆)] (6) was determined by single-crystal X-ray diffraction and density functional theory (DFT) calculations. Further, these half-sandwich ruthenium complexes are active catalysts for the mild hydrogenation of nitroarenes to aromatic anilines in the presence of NaBH₄ in ethanol. The most efficient catalyst 6, was found to be compatible with nitroarenes of various functional groups.

Keywords: Binuclear Ruthenium; Schiff base; Synthesis; Crystal Structure; DFT; Reduction of Nitroarene.

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/ Original Research Article

BIODIVERSITY OF FRESHWATER ALGAE FROM SELECTED PONDS OF COIMBATORE CITY – TAMIL NADU, INDIA

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Abstract

Phytoplankton communities of algae are essential of the water bodies. The aim of present studies to assess the biodiversity of freshwater algae from selected ponds of Coimbatore city in the year of 2018 and 2019. Collection of microalgae was followed as a random sampling method and the images were captured with digital photomicrograph and identified with the help of standard well known monographs. The phytoplanktons are recorded from the study area as 21 species belongs to Chlorophyceae, 2 species belongs to Bacillariophyceae and 2 species from Cyanophyceae were identified and documented. The commercially important species are isolated and maintained at culture collection of algae for future application studies.

Keywords:



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A study on medicinal and commercial uses of sacred groves of Namakkal district, Tamil Nadu, India

Bhuvanewari Manoharan and Ravinder Singh Chinnappan

Abstract

Conservation of biodiversity is essential and major goal for us to protect the environment. Traditional belief with sanctified manners had a vital role in the conservation of plants and their habitat. People across the Nations had an immense belief in their spiritual habitation and sustainability. It promotes us to protect the plants and utilize them in different medicine from the sacred groves to the level of *in-situ* type of conservation. Indigenous people and the local communities depend on the sacred grooves for their spiritual and medicinal purpose. But in recent years the urbanisation plays an adverse impact on the loss of plant diversity and destruction rate also be increased gradually.

In this present investigation, we conducted periodic field survey during the months of December 2018 to July 2019. This study was performed to expose the conservation strategy of floristic diversity of sacred groves and its associated species were recorded in the entire Taluks of Namakkal district, Tamil Nadu, India. Also the medicinal and commercial value of all the plant species were documented for future reference. We found 88 miniature Sacred Groves in our study area. Totally 77 species belongs to 37 families were documented. From this study the family Fabaceae species were found to be dominant and *Azadirachta indica* is keystone species, it is found in 63 groves in the study area.

Keywords: Sacred groves, urbanization, medicinal plants and conservation

Introduction

Sacred forests are often referred as Sacred Groves, which sites cultural and spiritual significance for the people who lived around them. They have been protected by local communities around the world for a variety of reasons, including religious practices, burial grounds and watershed value. India has the world estimated to be over 100,000 Sacred grove species. These are disappearing due to cultural changes and pressure to utilize the natural resources in the daily life. The size of the sacred groves varies greatly from small plots less than one hectare to larger tracts of small plots less than one hundred of hectares (Alison Ormsby., ss 2013) [1]. The term 'sacred' denotes extra ordinary and it stimulate feelings of power, mystery, awe, transcendence, peace and healing. Trees are the custom of nature which represent life and the sacred community of spiritual, cosmic and physical worlds that were considered the first temple of gods. Trees may be 'holy' 'blessed' or 'sacred', depending upon the religious attitude of people toward them and nature (Arti Garg., 2013) [4]. Sacred grove culture was one of the ancient cultures, since the age of Rig Veda, their concept of worship to trees was pioneer of sacred grove (Negi., 2005) [5].

Nature worship is one of the important phenomenon in human beings across the World and mainly in India. Indian indigenous people dedicated themselves to local deities and conserve vegetation along with nature worship. Sacred groves named differently in different places of India like 'Devarakadu', 'Devarabana', 'Nagabana', 'Buthadabana' in Kannada, 'Kavu in Kerala, 'Kovilkadu' in Tamil Nadu, 'Sarna' or 'Dev' in Madhyapradesh, 'Devrai or Devrahati' in Maharastra, 'Sarnas' in Bihar, 'Orans' in Rajasthan, 'Lai Umang' in Manipur, 'Dev van in Himachalpradesh, 'Sarana' or 'Jayathavi' in Jharkhand and 'Ki Law Lyngadoh' or 'Ki Law kyntang' in Meghalaya (Rajesh., 2016) [16]. Sacred groves are one of the important natural resources to obtain medicine, food and fuel wood from the plants, interlinking the human and nature with ecological relationship. Sacred groves are outstanding and excellent examples of the collective attitudes and beliefs of a rural society. These are the aesthetic symbols of the interaction of man with nature, a rich blend of natural and cultural values. These are believed to be the sites, where the ancestors and forefathers lived and the abode of

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in vitro conservation of mangrove for pharmaceutical interest

Chinnappan Ravinder Singh*

+ Author and article information

+ Abstract

Mangroves are halophytic species with unique morphological features, habituated in the intermediate zones of coastal area. They had better ecological community and serve as natural barriers. Since ancient times, mangrove forests are considered as the source of drugs, where tradition medicine and several healing practices were derived from the mangrove species. This potentiality was due the secretion of secondary metabolites to endure the extreme environmental conditions. In the recent years the utilization of mangroves was tremendously increased due to their variety of uses in industries and medicine. By this anthropogenic activity, severe loss and degradation of the mangrove forest area had been observed, which leads to negative ecological impact. To conserve these



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Review Article

Review on Problems and its Remedy in Plant Tissue Culture

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Abstract

Plant tissue culture is the finest method to propagate in large scale and to protect the rare, endangered and important plant species. It is in urgent to concentrate on conservation of rare, endangered medicinal and commercially important plant species. But the success rate of propagation in this method is attenuate in particular with a few medicinal plants. Also the researchers are facing lot of troubles with propagation of plant tissues and acclimatization of *in vitro* raised plants in the natural habitat. There are many reasons behind these problems. This review covered all that difficulties right from laboratory construction up to field adaptation of tissue cultured plants along with remedies to elucidate all the complications in this technique.

Key words: Plant tissue culture, propagation of plant tissues, *in vitro* raised plants, rare, endangered and important plant species

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Data Availability: All relevant data are within the paper and its supporting information files.



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Molecular docking studies of *delonix elata* heat shock protein (HSP70) ATPASE: An enzyme target for brain attack

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Abstract

Heat Shock Protein (HSP 70) Atpase enzyme is neurological disorder enzyme present human brain cells. Quercetin (QU), Rutin (RU) and Hesperitin (HE) was taken as ligand for molecular docking with brain targets. Heat Shock Protein (HSP 70) Atpase whose crystallographic structures are available on the PDB database 2E1Q was used for the docking analysis using the Schrödinger Suite tool. The docking studies of the enzyme Heat Shock Protein (HSP 70) Atpase with two ligand quercetin, rutin and hesperitin reveals that these lead molecules can be used in drug development for brain attack. Phytochemical screening of alkaloid, steroid, triterpenoid, flavonoid, protein, amino acid, tannins, phenolics, glycosides, saponins, carbohydrates, volatile oils, fatty acids, emodins of phytoconstituents have been carried out.

Keywords: heat shock protein, *Delonix elata*, quercetin, rutin, hesperitin and brain attack

1. Introduction

Heat shock protein 70 (Hsp70a) is a molecular chaperone that is expressed in response to stress. In this role, Hsp70 binds to its protein substrates and stabilize them against denaturation or aggregation until conditions improve [1]. In addition to its functions during a stress response, Hsp70 has multiple responsibilities during normal growth; it assists in the folding of newly synthesized proteins [2, 3] the sub cellular transport of proteins and vesicles [4] the formation and dissociation of complexes [5] and the degradation of unwanted proteins [6, 7]. Thus, this chaperone broadly shapes protein homeostasis by controlling protein quality control and turnover during both normal and stress conditions [8]. Consistent with these diverse activities, genetic and biochemical studies have implicated it in a range of diseases, including cancer, neurodegeneration, allograft rejection, and infection. This review provides a brief review of Hsp70 structure and function and then explores some of the emerging opportunities (and challenges) for drug discovery. The 70 kDa group of heat shock proteins or HSP70 is a highly conserved family of proteins, being present from bacteria to man. In most species, there are multiple genes for [9]. Members of this protein family include constitutive or cognate (HSC70) and the stress inducible forms (HSP70).

The term HSP70 is used here, unless otherwise specified, to refer to inducible as well as the cognate forms. These proteins are believed to function mainly as molecular chaperones helping in protein transport and translocation [10, 11]. Among the very diverse and wide-ranging roles of the HSP70 family proteins, an emerging field of considerable significance concerns their expression in neurons. Several isoforms of HSP70, including the constitutively present cognate forms (HSC70), are known to exist in neurons [12,

13]. In fact, one of the first glimpses of the function of HSP70 came from studies on bovine brain showing an interaction of HSP70 family protein with folded proteins like clathrin [14]. Clathrin uncoating of the synaptic vesicles (SV) is an important step in SV recycling pathway [15, 16]. Before the vesicle is recycled and can fuse to early endosomes, its clathrin cover has to be removed. β -internexin, a cytoskeletal-associated protein, with clathrin-uncoating ATPase activity in rat brain is a member of the HSP70 family [12]. This HSP70 family protein interacts with conformationally flexible regions of clathrin light chains and allows the release of bound clathrin while ATP is hydrolyzed [17].

2. Materials and methods

Plant Material

Plant material of *Delonix elata* (L.) was collected from Narthamalai, Pudukottai, Tiruchirappalli, Tamil Nadu, during the month of December 2008. The plant specimen was identified with Gamble, Flora of the Presidency of Madras and the identity is confirmed with the herbarium specimen deposited in Department of Botany, Periyar EVR College (Autonomous) Tiruchirappalli, Tamil Nadu.

Preparation of the Extract

Plant materials leaf and root was washed with distilled water and shade dried. The dried samples were manually ground to a fine powder. The plant materials was identified and authenticated by Botanical Survey of India (Southern Circle, Coimbatore Tamil Nadu, India). A voucher specimen of both has been deposited for future reference in the Department of Botany, Vivekanandha College of Arts and Sciences for Women (Autonomous), Elayampalayam – 637 205, Tiruchengode - 637 205, Tamil Nadu. *Delonix elata*

EFFECT OF LEAD ON THE WATER , LENGTH AND PROTEIN CONTENT OF COMMON CARP

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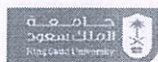
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Abstract

Lead as a divalent cation, has strong binding capacity for various nucleophilic functional groups (e.g., COOH, NH₂, SH) and attains maximum stability with sulf hydryl groups. The physical parameters temperature, EC and chemical oxygen demand increased and pH, dissolved oxygen and biological oxygen reduced with addition of lead. All the nutrients estimated nitrate, phosphate, sulphate and silicate increased with addition of lead. Measurement of length though increased with time they decreased with addition of lead and the decrease was steep up to 15 days and slowed down further. Protein estimation also showed increase with time but addition of lead decreased when compared with control experiment. However, this decrease in protein concentration was steep up to 20 days and slowed further.

INTRODUCTION

Lead (Pb) is one of the mostly used industrial metals. The anthropogenic release of Pb to the environment is the highest of all heavy metals (Salomon and Forstner., 1984). Although the release of lead into the environment has been little reduced in the past decade, e.g., Introduction of lead-free gasoline and recycling of lead, is still performed by fishermen and hunters in large quantities. Indeed, hunting and fishing activities are responsible for 86% of the yearly lead emission of about approximately 375 tones into Dutch surface waters (Stouthart *et al.*, 1994). In buffered and eutrophic water, the bioavailability of lead is reduced because of complication with water-borne organic particles. In contrast, lead compounds are powerfully enhanced at decreasing water pH (Tepe *et al.*, 2004) by ever-increasing the toxicity of lead for fish and microorganisms. However, the effects of this phenomenon on the early developmental stages have received little attention. Eggs and larvae, are considered much more sensitive to heavy metals than adults (Ahamed., 2007). The analysis of the effects of varying lead concentrations at water pH - 5.6 increases in comparison to pH - 7.5 on the development of eggs and larvae of the common carp (*Cyprinus carpio*).



Original article

Purification and characterization of carboxymethylcellulase from *Bacillus pumilus* EWBCM1 isolated from earthworm gut (*Eudrilus eugeniae*)



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ABSTRACT

The present work describes purification and characterization of an extracellular cellulase from a newly isolated cellulolytic bacterial strain *Bacillus pumilus* EWBCM1. The candidate strain was tested for its abilities to hydrolyze the structural polysaccharides through the depolymerising activities of carboxymethylcellulase. The purification of cellulase was carried out by ammonium sulphate precipitation, DEAE cellulose and sephadex G-100. Purified cellulase was found to be 47.56 fold along with 1.46 U/mg of protein and the molecular weight of cellulase was 47 kDa through SDS-PAGE electrophoresis. The optimum activity of cellulase was registered at pH 10 at 50 °C. In the present study, metal ions inferred the addition of 5 mM CaCl₂ (128%) was recorded good activity than the other tested metal ions. Maximum activity of purified cellulase was recorded in 3% of NaCl and 5% of surfactants medium. The bioactive of purified cellulase was carried out with various commercial detergent and antimicrobial activity.

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1. Introduction

Cellulose is an important structural material of living cells and it is profusely found on the earth because they are the chief component of plant biomass in terrestrial as well as aquatic ecosystem. These are the renewable polymeric substances which are hydrolyzed it into soluble sugars by the synergistic action of cellulase enzymes. Cellulase is a multifaceted biological molecule to breakdown the cellulose into simplest glucose residues (Darabzadeh

et al., 2018). The functional mechanism of cellulase enzymes are combined action of three vital constituents such as *endo*- β -glucanase (EC 3.2.1.4), *exo*- β -glucanase (EC 3.2.1.91) and β -glucosidase (EC 3.2.1.21) in order to make simple units (Mostafa et al., 2020).

In general, cellulose is made up of *D*-glucose units that are associated by β -1,4-glycosidic linkage; mostly, crystalline and amorphous structures. Usually, the numerous microorganisms are found in the environment and they are repeatedly used as potential source to hydrolyze the cellulose by using the cellulase enzyme for the agricultural along with industrial purpose (Nehad et al., 2019). Several earlier literatures have been reported that the breakdown of lignocellulosic waste material through the cellulase is a cost effective method and it is believed to be good bioactive potential for the reduction of cost along with improvement of bioprocess technology. At the same time, current estimated and decreasing of processing charge up to 13% by the way of bioprocess technology for the reduction of cellulase cost (Willis et al., 2010).

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STATISTICAL OPTIMIZATION OF FUCOIDAN PRODUCTION FROM BROWN SEAWEED *SARGASSUM CINEREUM*

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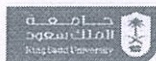
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Abstract

Brown seaweed was collected from the Tuticorin, (latitude 8° 48' N, longitude 78° 11' E) Tamilnadu, India. The collected seaweed sample was identified as *Sargassum cinereum*. Fucoidan was extracted from *Sargassum cinereum*. In this present study, the optimum cultural conditions for the extraction of fucoidan from *Sargassum cinereum* were studied by Response Surface Methodology (RSM) using central composite Design with three variables pH, Time and Temperature for maximizing the production of fucoidan. The optimum level of the key variables (pH, Temperature and Incubation Time) used to determine the effect of their interactions on fucoidan yield using the statistical tool (Central composite Design (CCD) of RSM). The second order quadratic model with the optimum conditions (pH -8, Temperature - 100° C and Incubation Time – 5 hours). The nearness of the coefficient of determination ($R^2 = 0.9866$) to 1 ensures the satisfactory adjustment of the quadratic model to the experimental data. The fucoidan recovered from optimized medium was 9.44 ± 1.47 % of dry weight respectively.

Keywords: Central Composite Design, Fucoidan, Optimization, Response Surface Methodology, *Sargassum cinereum*, Seaweed.



Original article

Biomedical and therapeutic potential of exopolysaccharides by *Lactobacillus paracasei* isolated from sauerkraut: Screening and characterization

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ABSTRACT

The intention of the study was evaluated for purification and characterization of exopolysaccharides from *Lactobacillus paracasei*; was isolated from homemade Sauerkraut sample collected from Sivakasi, Tamil Nadu, India, confirmed by biochemical and gene sequencing (16S rRNA). The purification and characterization of exopolysaccharides from candidate bacterium were studied on appearance, solubility of the EPS, carbohydrate estimation, emulsifying activity, sulphate, protein, uronic acid content, FTIR, HPLC and GC-MS analysis. The percentage of elemental carbon, (54.36%) hydrogen (21.74%), nitrogen (9.63%) and sulphur content (18.03%) were recorded in exopolysaccharides. The emulsification index (E24) of EPS was higher in toluene (79.20) and benzene (78.867) supplemented medium. FTIR spectrum of the candidate bacterial EPS confirmed presence of sulphate compounds, carboxyl group, and hydrogen bonded compounds etc. EPS exhibited 76.34% of Total Antioxidant Capacity (TAC), 71.15% of reducing power, 68.65% of Hydrogen Peroxide scavenging activity and also 60.31% DPPH radical scavenging activity. The potential antioxidant properties observed in exopolysaccharides from *Lactobacillus paracasei* is considered as valuable drugs.

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1. Introduction

Past few years, water soluble exopolysaccharides from microbes have attracted more interest, because of various indus-

trial appliances (Bueno and Garcia-Cruz, 2006). Exopolysaccharides from microbial origin are the long chain compounds composed of various kinds of sugar units for their growth and development. These substances are structurally & functionally diversified on all taxa and secreted by bacteria into the external environment (Dogsa et al., 2005). Bacterial exopolysaccharides are the mixture of complex macromolecular polyelectrolyte substances with various molecular structural. They may be either homopolymeric or heteropolymeric in composition and are diversified with high molecular weight (Nwodo et al., 2012).

Microbial exopolysaccharides possess an important ecological and physiological function in order to protect the microorganisms from the unfavourable conditions. These substances are protect the candidate bacterial cells against antimicrobial substances, desicca-

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FT-IR analysis and total antioxidant capacity of crude polysaccharide isolated from the red algae *Kappaphycus* sp.

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Abstract

Especially, marine algae have attracted interest due to the presence of a significant amount of polysaccharides, which are recognized as having a number of biological and physiological activities, including anticancer, antioxidant, antiviral and blood coagulation activities. In this present study, crude polysaccharides from *Kappaphycus* sp. were obtained through hot water extraction. The isolated crude polysaccharide from *Kappaphycus* sp. contains carbohydrates (53.01 + 0.425 %) and protein (06.23 + 0.753 %) was found. The structural feature of crude polysaccharides was studied through FT-IR analysis and total antioxidant free radical scavenging activity (74.23 + 0.17%). Crude polysaccharide demonstrates good emulsion stabilizing capacities, with various hydrophobic compounds and that it could be a potential source of natural antioxidants and emulsifiers.

Keywords: Crude polysaccharides, Antioxidant activity, emulsifying activity, FT-IR analysis and *Kappaphycus* sp.

Introduction

The sulfated polysaccharide from marine algae constitute an vital components of cell walls of species belongs to phaeophyta, rhodophyta and chlorophyta and it is usually extracted by the suitable methods followed by purification, characterization and biological studies¹. In recent years, much awareness has been concentrated on sulphated polysaccharides due to the presence of biologically active principles such as antitumor, antioxidant, anticoagulant, antiviral, inflammation, immunomodulatory, antibacterial, antiprotozoan, antilipemic from marine algae. In addition to that, the tissue engineering and regenerative medicine is an important application of the sulphated polysaccharide has become a current topic.

Sulfated polysaccharides from marine algae have received much attention due to their various biological functions used in functional food and are extensively considered by many biochemical and nutritional researchers. The polysaccharides from various bioresources including microorganisms, plants and animals have been found a wide range of applications in food, cosmetic and pharmaceutical industries due to their spectrum of biological activities and relatively low toxicity. Brown algae are a group of marine algae that contains nearly 2000 species with bioactive potential². Marine algae

EFFECT OF MULTIPLE FACTORS ON AZO DYE DECOLORIZATION USING A MODERATE HALOPHILIC BACTERIUM *EXIGUOBACTERIUM AURANTIACUM* (ESL52)

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Key words : Carbon sources, Nitrogen sources, Central composite design, Plackett-Burman design, Textile dye decolorization.

Abstract – Halo-tolerant dye decolorizing bacteria ESL52 was isolated from a textile sludge contaminated with dye and the strain was identified as *Exiguobacterium aurantiacum* using 16S rRNA sequencing method. This strain showed 96.78 % decolorization efficiency within 48 hours in LB broth. The significant factors that influence dye decolorization process were obtained using Plackett-Burman design: starch, yeast extract and pH. These factors were optimized using central composite design, which was followed by response surface methodology (RSM). The dye removal rate was found to vary from 5.06 to 88.30%. The established optimal concentration of the variables was found to be as follows: starch - 0.49% (w/v); yeast extract - 0.60% (w/v); and pH - 7.10. This optimal condition yielded 88.26% of decolorization under experimental setup, which was in agreement with the predicted value of 89.73%. This study confirmed that the specific interactions of co-substrates with pH would be a key factor for effective decolorization of remazol golden yellow dye under halophilic culture condition.

INTRODUCTION

The availability of freshwater has become a serious alarm worldwide, due to the decline in water quality. Imbalance in the accumulation of nutrients in water bodies due to the serious input of wastewater from domestic, agricultural and industrial sectors has evoked an alarming condition (Ma *et al.*, 2013; Stavenhagen *et al.*, 2018). Azo-dyes constitute the largest and the most versatile class of dyes used in textile, paper, food, cosmetic and pharmaceutical industries due to its high stability, cost effectiveness and color range. About 60 – 70% of the produced azo dyes are consumed by textile industries (Chacko and Subramaniam, 2011). More than 100,000 marketable dyes are accessible globally and around 7×10^5 tones of the dye ingredients are manufactured annually for the dyeing processes (Das and Mishra, 2017). Among the various dyes in market sectors, reactive dyes such as anthroquinone and triphenylmethane are generally used in the dyeing processes (Sudha *et al.*, 2014).

Mixed reactive dyes in water are resistant to evaporation when exposed to light and other chemicals. According to an assessment done by the Ecological and Toxicological Association of the Dyestuffs Manufacturing Industry, about 90% of the dyes used in textile industries have an LD50 value greater than 2000 mg kg⁻¹. The discharge of such dyes into the surrounding can cause significant environmental pollution and serious health risk (Ayed *et al.*, 2017). Azo dye chromophores are resistant to photo-oxidation therefore they bio-accumulate quickly. They affect the photosynthesis of aquatic plant and consequently the ecosystem (Wang *et al.*, 2012). Azo dyes and their breakdown products pose a serious health hazard: leading to devastating health effects such as nausea, hemorrhage, ulceration of the skin and mucous membrane and adverse affects on the kidney, reproductive system, liver, brain and central nervous system (Tyagi *et al.* 2001; Jin *et al.* 2007). Recently various physical, chemical and advanced chemical oxidation treatment methods have been


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A review on current and future prospective of Cancer Classification through Deep Learning

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Abstract

Cancer is the second foremost origin of death in the world, next to heart disease. The name cancer refers to more than a thousand sicknesses illustrate by out of direct development & replication of multiple cells. Due to this reason of cancer analysis, utilization of microarray datasets along with machine learning methods escalating in the current research scenario. Classification is one of the very broadly used datamining techniques to build a model that describes & distinguishes data classes in a manner to be used to predict the class of unseen instances. In machine learning, features are chosen manually for a classifier. With Deep learning features, extraction and modelling steps are automatic. Deep learning is one of the most significant among machine learning that requires computing system to iteratively perform calculations to identified patterns by itself. Deep learning use training data to discover underlying patterns, build models & make predictions based on the best fit model. In the last decades, there has been a growing interest of addressing cancer classification using deep learning due to their positive revival of neural networks and connectionism from the genuine integration of the latest advances in parallel processing enabled by coprocessors. Here the review of deep learning for classification in bioinformatics presenting examples of current research. Additionally, we discuss Deep learning and convolutional neural network working principles to provide a useful and comprehensive perspective, this paper presents three works DeepGen, SDAE, Enhance Feature learning in a brief description of each study. We believe that this review will provide valuable insights and serve as a starting point for the researcher to apply deep learning approaches for classification in Gene expression dataset.

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Keywords : Deep learning, DNA Microarray, Conventional Neural Networks, cancer cells, DeepGene, SDAE



REMOVAL OF Cr(VI) FROM TANNERY EFFLUENT UTILIZING THE CARBONIZED RINDS AND NUTS OF SAPINDUS EMARGINATA

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Abstract

A new process for the hexavalent chromium removal by unconventional adsorbents is described. The paper has a double purpose. The first part described how to obtain few adsorbents using a different material Sapindus emarginata. The preparation of novel adsorbents from rind and nut of Sapindus emarginata is explained. In the second part removal of hexavalent chromium by the above adsorbents are studied. Chemical analysis for the adsorbents is carried out and explained. The morphology of the prepared charcoals and activated carbons of Sapindus emarginata were characterized by SEM and XRD. The influence of the following parameters such as pH, agitation time, adsorbent dosage, concentration of adsorbate is taken into account for the batch experiments. The adsorption efficiency of the chromium removal from tannery effluent also studied. The result showed that prepared adsorbent can be used efficiently for the treatment of tannery wastewater containing chromium.

Keywords: Cr(VI) ion; Tannery effluent; Sapindus emarginata; Activated carbon; XRD; SEM.

Introduction

A tremendous increase in human population and the rapid growth of industries in India have created more problems of waste disposal and fresh water contamination mainly in last few decades (Ramesh Chandra mishra et al. 2010). Among several heavy metals chromium compounds are used extensively in industrial process such as leather tanning, textile dyeing, electro plating, and manufacture of paints, dyes, paper, explosives and ceramics (Shanmugavalliet al. 2007). In last 2-3 decades chromium toxicity in potable water has rapidly increased (Shiny et al., 2004). Leather industry provides the necessities such as leather shoes and garments, while using the byproducts of the meat industry. However the leather making process in turn generates byproducts and wastes (Alexander et al. 1991). Chromium is considered as one of the top sixteen pollutants because of its carcinogenic characteristics for humans (Terresdey et al., 2000). This creates a number of environmental and health problems. It increases toxicity of soil and decreases the quantity and quality of agro products. The aim of this work is to study the hexavalent chromium adsorption capacity by novel adsorbents such as SERC, SENC, ACSER and ACSEN from Sapindus emarginata rind and nut. The studies are systematically carried out in a batch work covering various parameters.

Materials and methods

Sapindus emarginata dry fruits were collected from the local market and washed thoroughly with distilled water. Then they are dried in sunlight until the moisture was partially evaporated and further dried in a hot air oven at 120°C for 48 hours. From the dried material the rind and nut were separated. They are grounded into fine powder in a ball mill. One part of the rind was pyrolysed at 400°C & the nut was pyrolysed at 550°C for three hours. After burning the yield charcoal were collected. Another part of these Nut & Rind were subjected to physiochemical treatment with 50% H₃PO₄ with vigorous stirring. Charred material were kept in oven at 160 ± 5°C for 24 hours and washed with double distilled water. Then the charcoal was soaked in 5% NaHCO₃ solution over a night after the material was steamed for 15 minutes and dried. The dried materials were sieved to get the particle size of 10-20 µm and were used in this study. The nomenclature of novel adsorbents is given in Table 1.

Characterization of adsorbent

The characterization of SERC, SENC, ACSER & ACSEN were carried out using chemical analysis and the results are presented in Table 2. XRD patterns of adsorbents were recorded on Shinabzu XRD-6000 Japan. The X-ray source was copper with a voltage of 40kV and a current of 30mA. The measurement was in the scanning range of 4-90 at a scanning speed of 10°/min. The surface morphology of all the four adsorbents was visualized via scanning electron microscope. The corresponding SEM micrographs being obtained using a JSM-6090 JEOL JAPAN. The SEM of metal loaded and unloaded samples were taken at an accelerated voltage of 10kV.

Preparation of stock solution

1000ppm of stock solution of K₂Cr₂O₇ was prepared by dissolving 2.82g of K₂Cr₂O₇ in double distilled water. The above stock solution contains few drops of concentrated HCl to prevent hydrolysis of chromium ions (Sara khatoun et al. 2009).

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MICROPROPAGATION OF *Hybanthus Enneaspermus* (L.) F. Muell

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ABSTRACT

Objective: The present exploration is a prioritized attempt put forward to optimize callus induction of *Hybanthus enneaspermus* (L.) F. Muell through a internode and nodal through different plant growth regulators and to standardize and optimize the effective reproducible protocol for the regeneration of *Hybanthus enneaspermus* (L.) F. Muell through a shoot tip segment culture using different growth regulators and hardening of rooted plantlets.

Methods: The stock and working solutions of Murashige and Skoog medium, vitamins, growth regulators (hormones) was prepared and the culture was established in a medium under aseptic condition. The callus was then induced and multiple shoots and root tip was obtained from explants. Finally, the explants were taken for hardening.

Results: The synergistic effect of BAP, Kinetin and 2-4 D for *in vitro* mass propagation from nodal explants of *Hybanthus enneaspermus* (L.) F. Muell. In individual form, the BAP concentration above 2.0mg/l level caused poor shoot induction in shoot tip was best studied. The effect of BAP in conjunction with Kinetin was more effective in multiple shoot formation than the long shoot in the shoot tip explants. BAP (2mg/l) Kinetin (2mg/l) and BAP (2mg/l) and 2,4-D (2mg/l) induces the callus in a considerable percentage from the node and internodes leading to the hardening of explants.

Conclusion: We supposed to found that the combined effect of hormones (at different concentration) in the growth of callus leading to the conduction of root and shoots from the nodes and internodes which was more effective for hardening of the explants in the fields.

Key words: Callus, Nodes, Internode, explants and hardening

INTRODUCTION

The idea of tissue culture was first proposed in 1902, since the start of 19th century. Haberlandt (1902) a German botanist, tried but in vain to obtain plant tissue from isolated mesophyll cells on artificial media in controlled laboratory conditions. Though he did not succeed in attempts, he sprinted towards a new technique, Plant Tissue Culture. The principle involved in plant tissue culture are very simple and primarily attempts where by an explants can be some extent freed from inter organ, inter tissue and inter cellular interactions and subjected to direct experimental control. The cells or tissue obtained from any part of the plant like stem, root, leaf, etc. Which are encouraged to produce more cells or tissue are grown in different types of glass vials containing medium with mineral nutrient, vitamins and phytohormones. Therefore, to carry out the experiments, using culture technique a well-equipped laboratory is first required. Because of the minute size of the propagation, the technique is known as "micropropagation". Tissue culture techniques are being exploited by many commercial laboratories. Plant biotechnology plays a vital role of multiplying the medicinal plants rapidly through tissue culture technique. Medicinal plants have attracted global interest they constitute a rich treasure improve of cultural information and are source of natural product, which provide health security to millions in rural communities. Rapid propagation methods of essential plant, especially those which possess medicinal, ornamental and aromatic properties, have become an urgent need for commercial uses. This popularity of herbal medicine enhanced due to the persistently increasing realization of the health hazards associated with the indiscriminate use of modern medicine. So that demand of plant based medicines, health products, pharmaceuticals, food supplement, cosmetics etc., are increasing in both developed and developing countries. The success of many of *in vitro* culture techniques on plants in general and medicinal and aromatic plants in particular depends on the response of the species to plant regeneration. Multiple shoots can be initiated from number of explants namely stem segments, roots, anther, hypocotyls, cotyledon, shoot buds and seedling. The production and establishment of multiple shoots and maintenance of multiple shoots for long term use depends to a large extent on the culture conditions, genome and origin of the explants materials. Dicotyledonous medicinal plants were used to a large extent in the initiation of callus since their interaction between exogenous and endogenous growth factors is well understood.

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Preliminary phytochemical and high performance thin layer chromatography fingerprinting of *Leucasvestita*

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Key words: *Leucasvestita*, chromatography, HPTLC, Phytochemistry.

Abstract

The time immemorial, plants and plant products have been used as medicine and food. In ancient times the plants have been used in crude form and later they have been converted into different types of formulations including decoction, macerate etc., Even though the allopathic system has been developed into a fool proof and trustworthy system of medicine, many side effects have also been faced by the consumers. The herbal system of medicine become the alternate due its less toxicity and side effects. The herbal medicine would also be cheaper and anybody can reach it. However, understanding the nature of phytochemicals present in the plants and developing quality parameters for the drugs is quite indispensable. Hence this study concentrates on identifying of phytochemical nature of *Leucasvestita* Wall ex. Benth. The HPTLC finger printing not only provides an idea about the Phytochemistry of the extract but also serves as a quality parameter.

1. Introduction

The medicinal plants are potential source of therapeutic aid all over the world. The ethnic knowledge of medicinal plants becomes a valuable source for the discovery of new drugs and nutraceuticals. However, the ethnic knowledge should be authenticated scientifically. The branches involved in the scientific authentication of this folklore knowledge are Pharmacognosy and Pharmacology. The pharmacological actions of plants are attributable to the secondary metabolites present in them¹. Many of these secondary metabolites are used as medicine either in raw form or in isolated form from the source. They have many medicinal activities such as anti-bacterial², anti-cancer, anti-diabetic, anti-inflammatory, anti-allergic, anti-fertility, anti-hypertensive, anti-coagulative, analgesic, hepato-protective, cardio-protective, neurotransmitter modulation, psychoactive, diuretic activities to mention a few. There are several techniques of isolating the secondary metabolites from the plant parts. The simplest and oldest technique is extracting the active principles in the form of a decoction. The cold percolation is another simple and widely used technique. However, the development of science and technology has given opportunity to study and isolate the active principles present in the plant. High performance thin layer chromatography (HPTLC) is one such technique used in the identification, separation, isolation and purification of various phytochemicals. This technique also provides better resolution, hence estimation of active principles can be done in a short period of time³. The present study deals with the HPTLC finger printing of *Leucasvestita* Wall.ex. Benth. The *L. vestita* is a herbaceous plant belongs to the family Lamiaceae. This plant is less abundant and endemic to India. It is mostly distributed in hilly regions of Kerala and Tamil Nadu above 1000MSL.

IN SILICO TRANSGENECITY STUDIES OF POLY HYDROCARBON DEGRADING GENES

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Abstract

The Catechol 2, 3- dioxygenase from *Staphylococcus aureus*, *Bacillus cereus* and *Pseudomonas stutzeri* were highly effective in degrading the Carbazol followed by Phenanthrene, Chrysene, Anthracene and Pyrene as sole source of carbon or along with other naturally occurring carbon sources. Further the transgenecity of poly hydrocarbon degrading gene nahH encoding Catechol-2, 3-dioxygenase is characterized by clone design using vector NTI database. The constructed map of clone is reveals that the number of copies of the Catechol-2, 3-dioxygenase gene can be multiplied be transferred to another bacteria. The insertion site of these map can enlightes to produce the clone with the site specific genes insertions that favours the high rate of transgenecity.

Introduction

Soils contaminated with petrol will contain microbes that could survive in high hydrocarbon environment (Okerenttugba and Exeronye, 2003) and utilize these hydrocarbons as carbon source for their metabolism and degrade them. In soils contaminated with petrol will have poly aromatic hydrocarbon (PAH) which are hydrophobic compounds with low solubility in water with greater tendency to bind with organic matter and soil limiting their availability to microorganisms (Yun, *et al.*, 2003; Kayode, *et al.*, 2009).

Cloning were a regularly honed sub-atomic system for portraying bacterial groups because of its capacity to distinguish substantial quantities of microbes in a group in a productive way. In cloning, group DNA was intensified with PCR. The subsequent amplicons were ligated into vectors that were utilized to change host microorganisms called clones. The quantity of times a specific grouping is recuperated can be utilized as a method for evaluating the plenitude of the life forms from which the arrangement was acquired (Hill, *et al.*, 2002).

Catechol and its substituted subordinates were basic intermediates in oxygen consuming degradation pathways of various characteristic and xenobiotic aromatic contaminations (Harwood & Parales, 1996). These mixes can be liable to intradiol or

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Biogenic Synthesis of Gold Nanoparticle from *Encostema axillare* and Their In Vitro Cytotoxicity Study Against MCF-7 Cell Line

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Abstract

In the present study, the green synthesis of gold nanoparticles by using *Encostema axillare* (Lam) extract was employed as a reducing agent. In the green approach of gold nanoparticles is a more stable, reliable, and eco-friendly method. The structural analyses of AuNPs were determined by various analytical methods like UV-Vis spectroscopy, SEM, TEM, FTIR. The shape and size of the nanoparticles were measured between 0.5 μm and 1 nm. The reducing agent so maintained by UV-Vis spectroscopy analysis; the functional groups and area were analyzed ranging from 400 to 4000 cm^{-1} . X-ray diffraction intense peaks at 2 θ values of 38°, 44°, 65°, and 77° that correspond to the ind [200], [220], and [311] were recorded. AuNPs showed a decrease in cell viability with the inhibition of growth in the cell line (MCF-7). Different doses of green-synthesized AuNPs were added at concentrations of 100, 50, 25, 12.5, 6.1562, and 0.781 $\mu\text{g/ml}$ in the MCF-7 cancerous cell line. The present study reports a contribution of green synthesized nanoparticles, and it can be moved to another metal.

Keywords AuNPs · SEM · TEM · XRD · FTIR and MCF-7

1 Introduction

Cancer is one of the death-causing diseases in the world. Breast cancer is a major public health issue in developed and developing countries like the USA and India [1, 2]. Breast cancer has affected women due to many factors such as age, hormonal, genetic, and environmental causes [3–5]. It is the most common cancer in women that leads to death among 25–60 years of age [6]. The National Cancer Institute (USA) had motivated the investigation made on the potential antitumor activities of plant extracts in the way to avoid undesirable side effects [7, 8]. In developing countries, herbal medicines are used as a primary source for medical treatment. Recent research has been developed

from the terrestrial plant extract for the synthesis of nanomaterial-based drugs for diseases such as cancer. According to the World Health Organization (WHO), countries are utilizing the benefits of compounds from medicinal plants for therapeutic purposes [10].

Nanoparticles play a critical role in the treatment of various disorders including cancer. Nanotechnology is employed to transform cancer diagnostic methods and therapeutic approaches [11]. In an efficient drug delivery system, the size of particles ranging between 10 and 100 nm is considered as a target drug carrier. The particle size less than 10 nm is quickly eliminated by the reticuloendothelial system. Nanoparticles are surface coated which maintain and essential for the circulation time of nanoparticle target delivery system [13]. Nanoparticles can be synthesized by using a chemical or biological method. Chemical synthesis is not advisable due to the presence of toxic chemicals on the surface. Synthesis of nanoparticles using biological methods includes microorganisms [14, 15] [16], fungus [17], and plants or plant extract [18]. The use of chemical and physical methods. The eco-friendly synthesis of nanoparticles is approvable in the field of nanotechnology, especially for synthesizing AuNPs [20–22].

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Fucoidan serves a neuroprotective effect in an Alzheimer's disease model

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Article

Green Synthesis and Characterization of Zinc Oxide Nanoparticles Using *Eucalyptus globules* and Their Fungicidal Ability Against Pathogenic Fungi of Apple Orchards

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Abstract: *Eucalyptus globules* belonging to the Myrtaceae family was explored for the synthesis of zinc oxide nanoparticles and for biological applications. The aqueous extract of the synthesized zinc nanoparticles (ZnNPs) was characterized using UV-visible spectrophotometer, FTIR, SEM and TEM. The aqueous broth was observed to be an efficient reducing agent, leading to the rapid formation of ZnNPs of varied shapes with sizes ranging between 52–70 nm. In addition, antifungal activity of the biosynthesized ZnNPs was evaluated against major phytopathogens of apple orchards. At 100 ppm of ZnNPs, the fungal growth inhibition rate was found to be 76.7% for *Alternaria mali*, followed by 65.4 and 55.2% inhibition rate for *Botryosphaeria dothidea* and *Diplodia seriata*, respectively. The microscopic observations of the treated fungal plates revealed that ZnNPs damages the topography of the fungal hyphal layers leading to a reduced contraction of hyphae. This considerable fungicidal property of ZnNPs against phytopathogenic fungi can have a tremendous impact on exploitation of ZnNPs for fungal pest management and ensure protection in fruit crops.

Keywords: *Eucalyptus globules*; zinc nanoparticles; apple; antifungal activity; FTIR; SEM; TEM; Fruit crops

1. Introduction

Nanoparticles are designated as an extension stuck between bulk material and atomic or molecular compositions. The lesser mass and widespread surface to volume ratio of nanoparticles reveal



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A STUDY ON STRESS MANAGEMENT AMONG THE WOMEN NURSE WITH SPECIAL REFERENCE TO NAMAKKAL TOWN

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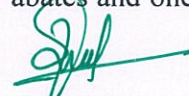
ABSTRACT

Stress is a biological term which refers to the consequences of the failures of human or physical threats to the organism. It includes a state of alarm, short term resistance as a coping mechanism and exhaustion. Occupation stress is the major hazard for many employees. Increased workloads, downsizing, overtime, hostile work environment, shift work etc. A stressor is an event or set of conditions that causes a stress response. The occupational stress has a greater impact on the work environment which leads to behavioural problem of nurses. The objective of this research paper is to review the literature on factors related to stress and the impact of stress among women nurses in Namakkal town. Data was collected from the nurses of both day and night shifts. The sample size is 180 respondents of women nurses from Namakkal town.

KEY WORD : Stress management, word abuse, hospitals, nurse.

INTRODUCTION OF THE STUDY

'Stress' refers to the responses, body and mind have to the demands placed on them which is a normal part of life and a normal part of any job. Without stress, one would not meet deadlines, strive to hit sales or production targets, or line up new clients. Meeting the demands and challenges of a job is part of what makes work interesting and satisfying, and it is often what allows people to develop new skills and advance in their careers. In the workplace, people regularly experience stress-causing situations, react to them with heightened tension, and then return to a more relaxed state when the crisis, big or small, is resolved. However, problems occur when stress is so overwhelming or constant that the tension never abates and one can never get to relax.



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WOMEN EMPOWERMENT- A PERSPECTIVE STUDY ON NAMAKKAL DISTRICT

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ABSTRACT

Empowerment of women has been designated as a *change* in the context of a woman's life that helps her to increase capacity for leading aattaining human life.Its exterior attributes are health,mobility,literacy and a wareness, statusinthe family, involvement in decision making, and material security. It also comprises internal qualities such as self-awareness and self-confidence.This present study attempts to find the demographic factors of the respondents in the study area and to analyze the factors affecting women empowerment in Namakkal District. Women's economic empowerment is the process of achieving women's equal access to and control over economic resources, and ensuring they can use them to exert increased control over other areas of their lives. It is concluded that there is a significant relationship between the age of the respondents and their level of satisfaction of work and family commitment of working women employees.

INTRODUCTION

Through centuries, we have developed various types of customs, traditions and practices. These customs and traditions, good as well as bad which has now become a part of our society's collective consciousness. Our society consists of people belonging to almost all kinds of religious beliefs. In every religion , women have been given a privileged place and every religion teaches us to treat women with respect and dignity. But somehow the society has so developed that various types of ill practices, both physical and mental, against women have become a norm since ages. For instance, practice of dowry, sexual harassment at work place, domestic violence,

CONSUMERS' PERCEPTION TOWARDS PACKAGED DRINKING WATER (A STUDY WITH SPECIAL REFERENCE TO METTUR TOWN)

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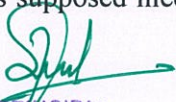
ABSTRACT

Water is the most important need for life. Usually, pipe water spread by the municipalities has been the trusted water supply for drinking purpose. In the earlier days, bottled water industry just like other buyer items. Shortage of portable and wholesome water at railway stations, tourist's spots, and role tourism crop etc., has also added to the enlargement and different types of bottles are accessible to filling the water. Packaged drinking water is easy to handing and customer buy the water bottle before they think many about worth, cost, comfortable etc. since; water has the ability to reach the customer's home. For the present study, the data was collected with the help of a prepared questionnaire from 150 respondents the study brought to the fore that customers are un educated, students and business people, customer prefer various brands of packaged drinking water that the brands. Some of the customer buy occasionally like at the time of function, meeting and at the time of travelling. Generally customers spend very low amount to obtain of packaged drinking water. The complete findings and implications are discussed in the paper.

Key words: brands of package, packaged drinking water

INTRODUCTION

The earliest bottled water company was founded in the United States in the middle of the 19th century. In 1845, the Ricker family of Maine from anonymous basis bottled and sold water. Their small operation quickly grew; capitalizing on the spring's supposed medicinal properties,


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GST - Sway On Small Scale Industries

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Abstract: GST (Goods and Service Tax) is the biggest tax transformation in the Indian economy. The main concept of undergoing such a huge economic change was to avoid the cascading of tax and to uniform the tax system throughout the country. This research paper tries to highlight the impact of this tax reform (GST) on MSMEs. The paper also throws light on the problems faced by the msme pre and post GST structure.

Key words: Transformation, cascading, economic change, msme.

I INTRODUCTION TO GOODS AND SERVICE TAX (GST):

India being a democratic and republic country, has witnessed the biggest indirect tax reform after much exploration, GST bill roll out on 1 April 2017. The concept of this reform is for a unified country-wide tax reform system. Enterprises particularly SMEs are caught in a state of instability. Several taxes such as excise, service tax etc., have been subsumed with a single tax structure. It is the responsibilities of both centre and state government to shoulder the important responsibility to cater the needs of the people and the nation as a whole. The main basis of income to the government is through levy of taxes. To meet the so called socio-economic needs and economic growth, taxes are considered as a main source of revenue for the government. As per Wikipedia "A tax is a mandatory financial charge or some other type of levy imposed upon tax payer by the government in order to fund various public expenditure" it is said that tax payment is mandatory, failure to pay such taxes will be punishable under the law. The Indian tax system is classified as direct and indirect tax. The indirect taxes are levied on purchase, sale, and manufacture of goods and provision of service. The indirect tax on goods and services increases its price, this can lead to inflationary trend. Contribution of indirect taxes to total tax revenue is more than 50% in India, therefore, indirect tax is considered as a major source of tax revenue for the government, which in turn is one of source for GDP growth. Though indirect tax is a major source of revenue, it had lot of hassles. To overcome the major issues of indirect tax system the government of India subsumed most of the indirect tax which in turn gave birth to the concept called Goods and Service Tax.

The introduction and implementation of Goods and Service Tax is considered to be one of the most essential tax reforms to be employed by the Indian government since 1947 and aims to bring all indirect tax under one roof. Goods and Service Tax is commonly described as indirect, comprehensive, board based consumption tax. The Dual Goods and Service Tax which is implemented in India will subsume many consumption taxes. GST stands for "Goods and Service Tax" and it is comprehensive indirect tax levied at the national level on manufacture, sale and consumption of goods and on services as well. It is a consumption based tax. The concept of Goods and Service Tax is to rationalize the indirect tax regime. The concept behind implementing Goods and Service tax is to remove the multiplicity of tax and to remove the cascading effect. It is an accepted fact that Goods and Service Tax was first implemented in France in 1954 and now more than 150 countries are following Goods and Service Tax system. It is the great initiative taken by the Government of India. Experts suggest that Goods and Service Tax will rise up the Indian Economy and will increase the government revenue by improvised tax collection system as it will pull down all

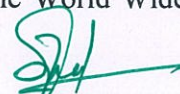
NETIZEN'S BEHAVIOUR TOWARDS DIGITAL MARKETING.A STUDY WITH SPECIAL REFERENCE TO NAMAKKAL TOWN

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ABSTRACT:

The latest generation of commerce is one that can be done over the internet .The internet provides a virtual platform where sellers and buyers can come in contact for sale and purchase of goods and services. Netizens use of the Internet around the world has been has been marked by (Wikipedia) Email: Delivery of letters by means of the Internet, as a replacement to the traditional based paper correspondence letters. Online chat: Establishing of one-on-one or group conversations by means of the Internet. Instant messaging: Software which enables real time conversations without the need of using a website (in contrast to online chats). Internet forums: Web Sites which serve to hold discussions in defined subjects. Online games: Multiplayer Computer games which are played through the Internet. Blog: A personal diary, which its owners writes in it in every possible subject in which he desires to talk discuss, and its content is available to all. Feedback comment system: A Mechanism used in web sites to post responses from the internet users, which is mostly used in the news web sites, in blogs and in the other additional sites. File sharing: A technology which enables the internet users to share files from their computers with other internet users, and in return the same internet user is capable of downloading files from the computer of other internet users. This enables the fast distribution, not always legal, of software, music, etc. Asian Culture and History July, 2009 141 x Gopher: A distributed document search and retrieval network protocol designed for the Internet. Its goal is to function as an improved form of Anonymous FTP, enhanced with hyperlinking features similar to that of the World Wide Web. Wiki: A



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Healthcare Plan

(b)

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Abstract The purpose of this paper is to develop a perspective on what is important or critical to the discipline of healthcare marketing by analyzing the marketing plan from the institutional (or organizational) perspective. This "salience issue" is complicated by the structural problems in healthcare such as new advertising programs, advances in medical technology, and the escalating costs of care in the recent economic situation of world economic crisis. Reviewing a case study, the paper examines how marketing managers face increasingly difficult management and it emphasizes one more time the importance of marketing in the internal organizational structure. Also it shows the direct connection between the marketing strategy, the Quality of Healthcare and marketing planning in the internal organization of Private Healthcare Practice in Romania. Also it concludes that marketing planning in healthcare has to be very precised in order to achieve some major objectives: customer care, financial stability, equilibrium between stakeholders and shareholders and future improvement in communication to customers. The marketing strategies and programs discussed in this paper follow the analysis of the 4Ps of Healthcare Marketing Services and propose call to action plans and possibilities that might result in a more particular case study analysis of the Romanian Healthcare Market.

Key words: marketing planning, healthcare marketing, quality healthcare, best practice in healthcare marketing

INTRODUCTION

The hospital industry has taken some major changes in the last years according to some famous researchers in the literature like Dawley et al. 1999 and Egger 1999[2]. All these changes since the 2000 faced the latest economical crises, and the price paid by consumers in order to get access to the healthcare services on for fee revenues. In the newly developed

economies, attacked by economic crises, the hospitals had to undergo major restructuring or even closure trying to survive by emerging, acquiring facilities or marketing planning. In particular this paper analyses the marketing plan on healthcare markets in order to obtain better results which may serve the stakeholders and shareholders' interests. It might be considered a base for a future analysis in healthcare marketing planning in quality of services. Reviewing a case study, the paper examines how marketing managers face increasingly difficult management decisions and it emphasizes one more time the importance of marketing in the internal organizational structure. Also shows the direct connection between the marketing strategy, the Quality of Healthcare and marketing planning in the internal organization of Healthcare Hospital Practice in Romania. The methodology used proposes a model of analysis between 4 selected variables (price strategy, promotion strategy, quality of healthcare and marketing planning) and a structural equation model tested afterwards in Eviews program. The results are concluding to the analysis and presented in the body of the paper.

MARKETING PROGRAMS IN HEALTHCARE

1. Product Strategy

For hospitals, the product – meaning the healthcare service- is an intangible combination of hospital service offerings, staffing precision and revenue, doctor's reputation, social offerings and the 'quality' of patient life like the quality of the services offered. Each and every healthcare institution is offering a unique product. A hospital product is so complex and it is difficult to define. Also the hospital must look to the careful hiring of good management, medical staff for the preservation of the hospital integrity. Part of the product is most obviously the program services at a particular institution or healthcare organization. Healthcare institutions are also facing demands to increase research activities especially to the Hospital

Global Business

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Abstract : The Global economy is changing at a rapid rate. The change and reduction of both geographical and political borders, coupled with the growing interdependence of economically, politically, socially, and legally diverse countries, have caused multinational corporate entities to revise various policies. These revisions include revisions in marketing strategies, strategic alliances, product and service strategies and, perhaps most importantly as it affects all strategies, a MNC's approach to systems. The truly global company must come to grips with the legal and moral atmosphere in which it operates. The concept of moral rights, those transcending legal or political rights, drives us to review four international codes of conduct and to attempt to develop one international uniform code that might be applicable to any business, in any country or culture.

Key Words: (Global Markets Reduce Risk and Open Opportunities)

Introduction

The international economy is changing through the alteration and reduction of geographic and political borders. The substantial direct investment increases by companies in foreign countries demands that multinational corporations (MNCs) be aware of the legal, political, and ethical climates of host countries. One estimate of the monetary benefit to be gained worldwide by less restrictive trade is more than \$500 billion, perhaps made possible by the acceptance of the World Trade Organization (Lenzner, 1994). Additionally, the growing interdependence of socially, politically, economically, and legally diverse countries has caused multinational corporate entities to reexamine a variety of their existing policies. These reviews have often created the need for revisions in strategies about marketing, strategic alliances, competitive focus, customer service, and product and service offerings and quality. These revisions result from the need to view the

organizational environment from both a domestic and global perspective, with ever-increasing awareness of alternative cultures, governments, and traditions.

In considering the opportunities available and strategies for competing in the global business arena, an overriding concern for many MNCs is the complexity of trying to transfer a domestic ethical system to nondomestic operations or adapting to the various ethical perspectives of host countries. Is such a transfer possible or would adaptation of ethical standards, in effect, destroy the ethical base established in the home country? According to Ferrell and Fraedrich (1994), the ethical problems of MNCs arise because of the conflicting demands made from opposing viewpoints. Thus, the attitude of a MNC's management toward ethical decision making and any defined code of ethics will have important effects on the judgments made relative to all other strategies.

MEANING OF GLOBAL BUSINESS

International trade is the purchase, sale or exchange of goods and services across national border. International trade produces many benefits to countries both exporting and importing products. For countries importing products, the benefits are that they get goods or Service she cannot produce enough of on their own. Like wise, for the exporter, one of the benefits is though the trade they can also get either the goods or services they need or the money in which to purchase these goods from another country or source. International trade also helps the economic of the countries.

Traded intermediate goods

Ricardian trade theory ordinarily assumes that the labor is the unique input. This has been thought to be a significant deficiency for Ricardian trade theory since intermediate goods comprise a major part of world international trade. This deficiency is now wiped out by the new construction of the Ricardian

Impact of Sustainable Business

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Abstract This study investigates the importance of sustainable business practices in accommodation businesses in Vienna. Research and industry initiatives mainly focus on environmental measures while ignoring the economic and socio-cultural dimension of sustainability. A mixed method approach was chosen and the results of the quantitative questionnaire (n= 59) and the qualitative in-depth semi-structured interviews (n=7) were integrated to ensure a more complete understanding of the data. The results showed that the general attitude towards sustainability was very positive for all businesses. Also the awareness and demand from guests for sustainable business practices were perceived as low. Consequently the study shows that the communication between public and private sector as well as the awareness raising and marketing of sustainability to consumers need to be improved.

Keywords: The results showed that the general attitude towards sustainability was very positive for all businesses.

Introduction

Sustainable business, or a green business, is an enterprise that has minimal negative impact on the global or local environment, community, society, or economy—a business that strives to meet the triple bottom line. Often, sustainable businesses have progressive environmental and human rights policies. In general, business is described as green if it matches the following four criteria:

1. It incorporates principles of sustainability into each of its business decisions.
2. It supplies environmentally friendly products or services that replaces demand for nongreen products and/or services.
3. It is greener than traditional competition.
4. It has made an enduring commitment to environmental principles in its business operations.

A sustainable business is any organization that participates in environmentally friendly or green activities to ensure that all processes, products, and manufacturing activities adequately address current environmental concerns while maintaining a profit. In other words, it is a business that "meets the needs of the present without compromising the ability of future generations to meet their own needs." It is the process of assessing how to design products that will take advantage of the current environmental situation and how well a company's products perform with renewable resources.

Everyone affects the sustainability of the marketplace and the planet in some way. Sustainable development within a business can create value for customers, investors, and the environment. A sustainable business must meet customer needs while, at the same time, treating the environment well. To succeed in such an approach, where stakeholder balancing and joint solutions are key, requires a structural approach. One philosophy, that include many different tools and methods, is the concept of Sustainable Enterprise Excellence.

Meaning OS Substainable Business

Do you make purchases from companies that claim to produce green or environmentally friendly products? Perhaps you drink certified organic coffee or send greeting cards made from recycled paper. For many businesses, going 'green' is a lot more than a popular trend. It's part of a strategy to improve business sustainability, meaning they're seeking to minimize negative environmental and social impacts and ensure that future generations will have adequate resources to meet their needs.

Sustainable businesses are not just good stewards of the environment; they're also well-positioned to succeed in the competitive global marketplace. Today's investors, consumers, and even job seekers pay attention to a company's reputation for social and

**A STUDY ON USER PREFERENCE TOWARDS SELECTED ONLINE
PAYMENT APPLICATIONS WITH SPECIAL REFERENCE TO
MADURAI CITY**

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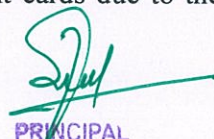
ABSTRACT:

A payment system facilitates the acceptance of electronic payment for online transactions. Also known as a sample of Electronic Data Interchange (EDI), e-commerce payment systems have become increasingly popular due to the widespread use of the internet-based payment and banking. The wind of change in payment system in India is gaining strength by government accelerating financial inclusion, opening new business models and providing impetus to digital payment system, the system offers an unprecedented opportunity to people, most of whom live in rural India or are migrants in big cities. The anonymity of cash transaction is a non-trivial barrier to online payment and is a constant between government and those who evade taxes.

Key words: online payment, system facilities

INTRODUCTION

Over the years, credit cards have become one of the most common forms of payment for e-commerce transactions. In North America almost 90% of online retail transactions were made with this payment type. Turban et al. goes on to explain that it would be difficult for an online retailer to operate without supporting credit and debit cards due to their widespread



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FDI in healthcare sector

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Abstract Given the growing importance of the health care sector and the significant development of trade in health services, foreign direct investment (FDI) in this sector has gathered momentum with the General Agreement on Trade in Services. Despite extensive case-based research and publications in recent years on health care markets and the rise of private sectors, it is surprisingly difficult to find evidence on the relative importance of the largest multinational corporations (MNCs) operating in the health care sector. The objective of the paper is to identify some of the determinants of foreign investment of the largest MNCs operating in this industry. The list of the largest MNCs has been compiled using company websites and data is available for 41 developing economies for which at least two MNCs have an office (branch and/or affiliate). The results of this study have some important implications. They indicate that location-specific advantages of host countries, including good governance, do provide an explication of the internationalization of firms in some developing countries rather than others.

Keywords: FDI Globalization Governance

INTRODUCTION

The health care sector is a growing sector in the world economy and although of minor importance for statistics on foreign direct investment (FDI) in services, the potential for globalization and trade has expanded rapidly over the recent decades. FDI may strengthen or weaken the health care system and is likely to be contributing strongly to market segmentation and at present it is mainly concentrated in higher income segments of markets. The 1993 World Development Report "Investing in Health" (recommending a public-private mix for financing and organization of health systems) had a great conceptual impact on health systems reforms during the 1990s. During the same period, the rapid growth

of FDI flows from 5% of the world gross fixed capital formation in 1990 to almost 20% in 2000 [during the same period FDI stocks as a percentage of the Gross Domestic Product (GDP) have increased from 9 to 20%] has spurred a large body of literature examining the determinants and effects of FDI.

Problem Statement:

Foreign direct investment, or FDI, is investment, a controlling ownership, of a foreign company in a country other than the one it is based in. It affects the home country inevitably. But economists do not have a general agreement as to which of its effects are more: positive or negative. Some term it favorable for economic growth while others disagree and stand in its opposition. The advocates believe it creates employment opportunities, impart technical skills to the residents, and, above all, increases the GDP, which we call economic growth, of the host country. On the other hand, it is said that through this FDI these investors manipulate care productive resources of the host country: though it has some positive effects, yet they are minimal as compared with the negative ones. Nonetheless, its effects desirability vary from country to country. In case of Pakistan, it is needed because it can play a significant role in economic growth.

Objectives of the study

1. To study the trend and pattern of FDI into manufacturing.
2. To study the opportunities available for FDI in health care sector.
3. To study the need of FDI in health care sector.
4. To understand the constraints to FDI flow in health Care sector

Review of literature

Rajalakshmi K. and Ramachandran F., (2011)
"Impact of FDI in India's automobile sector"

A STUDY ON EMPLOYEES JOB SATISFACTION OF EMPLOYEES TOWARDS VISAKA INDUSTRY REFERENCE TO NAMAKKAL

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ABSTRACT:

Job satisfaction is one of the most crucial but controversial issues in industrial Psychology and behavioural management in organization. It ultimately decides the extent of employ motivation through the development of organizational climate or environment satisfaction is specific subset of attitudes held by organizational members. It is the attitude one has towards his or her job. Stated another way, it is one's effective response to the job. Job satisfaction in a narrow sense means attitudes related to the job. It is concerned with such specific factors has wages, supervision, steadiness of employment, conditions of work, social relation of the job, prompt settlement of grievances, fair treatment of employer and other similar items. Job satisfaction is related to different Socio-economic and personal factors, such as: Age, Sex, Incentives, Working Environment, Education, duration of work etc.

Keywords: Job Satisfaction, Incentives, Skill, Social Security, Working Conditions.

INTRODUCTION

Due the popularity of job satisfaction within the field of occupational and organisational psychology, various researchers and practitioners have provided their own definitions of what job satisfaction is. However, the two most common definitions describe job satisfaction as: "the pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values"; and "the extent to which people like (satisfaction) or dislike (dissatisfaction) their jobs

In general, most definitions cover the affective feeling an employee has towards their job. This could be the job in general or their attitudes towards specific aspects of it, such as:



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GST Impact on Healthcare Industry in India

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Abstract GST (Goods and Services Tax) is defined as a uniform indirect tax levied on goods and services across a country. More than 160 countries have implemented GST. The GST rolled out from July 1, 2017. GST, as an umbrella tax has replaced central taxes such as Central Excise Duty, Service Tax, Additional Duties of Excise & Customs, Special Additional Duty of Customs, and cesses and surcharges on supply of goods and services. There was a huge hue and cry against its implementation. In present paper it has been shown that which sectors are positively or negatively affected by GST.

Keywords Goods and service tax, Indian economy, GST

INTRODUCTION

Health care is one of the fastest growing sectors of the Indian economy with lots of potential in terms of revenue and employment. Health care is a wider term that mainly includes pharmacy, medical devices, medical insurance, diagnostics and other components of medical care. The GST is going to affect all the components of health care in various ways.

GST and Pharmaceutical industry

About two thirds of the out of pocket expenditure on healthcare is on drugs in India. The burden of all the taxes on drugs in general was about 13 percent in the pre GST period and the current GST is 12 percent as a whole including ayurvedic drugs. The medicines for HIV-AIDS, malaria, tuberculosis and diabetes will be imposed 5 percent GST. The GST on the drugs produced under excise free manufacturing zone is yet to be clarified. The best thing for the pharma companies is that their cost of purchase is going to reduce. Moreover the burden of multiple tax and complexities associated with multiple tax system slowed down the business. GST will give hassle free business environment to the pharma companies. For the consumer the cost of drugs will come down.

GST and Medical devices and Equipment

The manufacturers of medical devices are also joining the party as medical devices and surgical equipments are proposed to be taxed 12 percent under the GST. The previous burden of taxes on the medical devices and equipment was over 13 percent including all the bunch of taxes. So one percent tax benefit is clearly visible under the new tax system for the medical device and equipment industry. This will clearly give a boost to the industry in the near future. The consumer will also share the benefits in terms of lower price and affordability.

GST and Health Insurance

There is lot of scope of for health insurance in the country like India where the coverage under health insurance is only 18 percentage in urban and 14 percent in rural India in 2016. The GST rate on the insurance sector is 18 percent as against 15 percent service tax in the pre GST era. It clearly indicates that the health insurance premiums are going to increase.

GST and diagnostics

There is expected rise in the prices of diagnostics such as blood tests, X-rays, MRI and strip based diagnostics as they are put under either 12 or 18 percent slab which is higher than the previous tax rate on these services. In the pre GST era the 10-15 percent of out of pocket expenditure is on diagnostics which is expected to increase in the post GST period.

GST will certainly increase the Government revenue in the country with more transparency in the tax system that will further simplify the tax structure. The economy is expected to grow at a faster rate. Every sector of the economy would have its share in the growth of the economy including healthcare sector. In a broad spectrum, it is an analysing phase for the healthcare sector to see the impact of GST. The experts of the healthcare sector are confident that the post GST period will bring the strategic change and will create a positive environment by minimizing the

Insurance and Risk Management

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Abstract Over the years the general insurance companies have been undertaking extensive risk management activities to safe guard the investor as well as investment. In the present day scenario the two aspects which are of great importance to the general insurance industry are firstly the opportunities in the Indian general insurance market and the resulting focus of players on achieving business growth and secondly the ongoing process of calibrated de-tariffing. Though de-tariffing has provided players with significant opportunities in tapping markets and in coming times may result into providing even more opportunities, it has placed the onus of correct pricing on the players themselves. This has resulted in players preparing and emphasizing more on identifying risk parameters and pricing products based on risks. The players under the immediate response to the pressure of a free market scenario, has dropped the rates even in hitherto non-profitable businesses. An efficient risk assessment and management in general insurance industry lays great emphasis due to entry of private players, corresponding policy changes and the present day fact of unprofitable books, erosion of capital resulting from unmanageable claim ratios.

analyzing, assessing, treating, monitoring and communicating risks, which allow continuous improvement of decision making (Standards Australia). By implementing risk management organization can reduce unexpected & costly surprises and effective allocation of resources could be more effective. It improves communication and provides senior management a concise summary of threats, which can be faced by the organization, thus ultimately helping them in better decision making.

DEFINITION

The practice of identifying and analyzing loss exposures and taking steps to minimize the financial impact of the risks they impose. Traditional risk management, sometimes called "insurance risk management," has focused on "pure risks" (i.e., possible loss by fortuitous or accidental means) but not business risks (i.e., those that may present the possibility of loss or gain). Financial institutions also employ a different type of risk management, which focuses on the effects of financial risks on the organization. For example, interest rate risk is a bank's most important financial risk, and various hedging tools and techniques such as derivatives are used to manage banks' exposure to interest rate volatility.

OBJECTIVE OF THE STUDY

- To study the Integrate business risk management with our strategy formulation and business planning processes;
- To study the Articulate our strategies so that they are understood throughout our organization.
- To study the Establish KPIs designed to drive behaviors consistent with our strategy.
- To study the Reward effective articulation and management of key risks.

INTRODUCTION

Due to globalization and intense competition, risks are increasing and risk management is becoming an integral part for the success of almost every organization, especially for the insurance sector because of their high-risk businesses, as the risks are associated with every client in the business and their own risk. Insurance companies are in the core business of managing risk. The companies manage the risks of both their clients and their own risks. This requires an integration of risk management into the companies' systems, processes and culture. The risk management process consists of a series of steps, which are establishing the context, identifying,

INNOVATION IN WASTE MANAGEMENT GREEN SCREEN FUTURE FOE DEVELOPMENT

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ABSTRACT

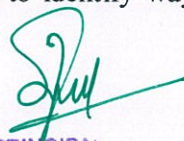
Nowadays, governments and companies are looking for solutions to increase the collection level of various waste types by using new technologies and devices such as smart sensors, Internet of Things (IOT), cloud platforms etc. In order to fulfil this need, this paper presents solutions provided by a research project involving the design, development and implementation of fully automated waste collection systems with an increased usage degree, productivity and storage capacity. The paper will focus on the main results of this research project in turning the automated waste collection system into a smart system so that it can be easily integrated in any smart city infrastructure. For this purpose, the Internet of Things platform for the automated waste collection system provided by the project will allow real time monitoring and communication with central systems. Details about each module are sent to the central systems: various modules' statuses (working, blocked, needs repairs or maintenance etc.); equipment status; storage systems status (allowing full reports for all waste types); the amount of waste for each module, allowing optimal discharging; route optimization for waste discharging etc. To do that, we describe here. it cloud solution integrating device connection, data processing, analytics and management.

Key words;

* Waste management

INTRODUCTION

Waste is anything your business intends to discard, or handles or produces and is not wanted or required. Disposing of waste can have a significant impact on the environment in Northern Ireland. Producing excessive amounts of waste is often a sign that your business processes may be inefficient. It is in your interests to identify ways of reducing the amount of waste your business generates.



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Sales Promotion Techniques

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Abstract This study analyzes the relationship between net sales revenue and Integrated Marketing Communications (IMC) viz. advertising, sales promotion, personal selling and direct marketing. It attempts to find the existence of a long-term relationship between the two variables and goes on to analyze the impact of one variable on the other and its possible implications. Seven year quarterly data of ten firms in the Indian industry when analyzed reveals that there is no evidence of co-integration between the above mentioned variables, but the Vector Autoregression (VAR) model suggests that although past sales do not influence current advertising, advertising and sales promotion have a significant effect on the sales of after one year.

Keywords: Advertising, Sales, Personal selling

Introduction of the Study

Adverting is only one element of the promotion mix, but it often considered prominent in the overall marketing mix design. Its high visibility and pervasiveness made it as an important social and enconmia topic in Indian society. Promotion may be defined as "the co-ordination of all seller initiated efforts to set up channels of information and persuasion to facilitate the scale of a good or service." Promotion is most often intended to be a supporting component in a marketing mix. Promotion decision must be integrated and co-ordinated with the rest of the marketing mix, particularly product/brand decisions, so that it may effectively support an entire marketing mix strategy. The promotion mix consists of four basic elements.

They are:-

1. Advertising
2. Sales Promotion,
3. Personal Selling
4. Publicity

1. Advertising is the dissemination of information by non-personal means through paid media where the source is the sponsoring organization.
2. Sales promotion is the dissemination of information through a wide variety of activities other than personal selling, advertising and publicity which stimulate consumer purchasing and dealer effectiveness.
3. Personal selling is the dissemination of information by non-personal methods, like face-to-face, contacts between audience and employees of the sponsoring organization. The source of information is the sponsoring organization.
4. Publicity is the disseminating of information by personal or non-personal means and is not directly paid by the organization and the organization is not the source.

DEFINITION

Sales promotions are the set of marketing activities undertaken to boost sales of the product or service. In the words of **Roger A. Strong**, "Sales promotion includes all forms of sponsored communication apart from activities associated with personal selling. It, thus includes trade shows and exhibits, combining, sampling, premiums, trade, allowances, sales and dealer incentives, set of packs, consumer education and demonstration activities, rebates, bonus, packs, point of purchase material and direct mail."

MEANING

Sales promotion refers to 'those marketing activities that stimulate consumer shows and expositions. Purchasing and dealer effectiveness such as displays, demonstration and various non- recurrent selling efforts not in the ordinary routine.' According to A.H.R. Delens: "Sales promotion means any steps that are taken for the purpose of obtaining an increasing sale. Often this term refers specially to selling efforts that are designed to supplement personal selling and advertising and by co-ordination


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**A STUDY ON CUSTOMERS BEHAVIOUR TOWARDS ONLINE SHOPPING WITH
SPECIAL REFERENCE TO SALEM DISTRICT**

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ABSTRACT:

Online shopping was started at 1994 by pizza Hut. In the same year a German company Inters hop Communication introduced world's first online shopping system. After that Amazon (1995) and e - Bay (1996) was launched one by one. Now online shopping is so much popular that E-commerce B2C product sale in USA touched around \$200 billion, it is almost 1/10 of total retail product sale in USA. Research says that online retailer in USA will worth around \$300 billion by 2015. Not only in the USA, online shopping is now becoming too popular to all nations and all kinds of people.

Here is no need to go to crowd supermarkets or shopping malls during festival seasons. You just need to have a PC or a laptop and one necessary payment sending option to perform an online shopping. All types of items like-cars, books, apparel, jewelers, baby care, gifts, tools, etc. can be shipped using online shopping system. Not only that, you can shop from foreign countries with a few clicks. And of course here you will receive your favorite's items at your home. Just take a look what type of facilities you'll get by using the online shopping.

It has become the most efficient way to offer valuable information to the customers like discounts, promotions, new and existing products as per the customer requirements and past shopping behavior. Availability of plenty of information about the products has increased the confidence level among the consumers. The increasing purchasing power of the Indian

Role of Accounting in Science and Technology

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Abstract Technological developments changed methods for carrying out tasks within the scope of accounting activities and transactions related to accounting was started to being carried out through electronic media. Growth and development growing rapidly in information technologies day by day have brought digital revolution in economic, social and cultural fields. Our era is information era and when we acknowledge that accounting is an information system, the way and processes of transacting businesses of enterprises have changed with usage of information technologies in enterprises and this influenced accounting closely. Necessity of keeping up with changing conditions of accounting led educators and practitioners to new pursuits. Enabling inclusion of information era and technologic factors in education by benefiting from digital resources as well as theoretical information in accounting education provided in universities and generating an interactive environment to keep student wakeful and preferring educational model in which information technologies are used is necessary. In order to achieve that, students should be provided to take target-driven accounting courses and an educational order should be generated in which students can evaluate and interpret information beyond recording and make difference through information and communication technologies.

Key Word: Growth and development, social and culture, Communication Technology.

INTRODUCTION

Complying with technology-based living and work environment of individuals is imperative in information and technology era. Separating and keeping accounting education away from such developments are not possible. "E- learning environments" that is one of the main education and communication means of today present many new facilities to practitioners and learners in every field of

accounting education. Our era requires being educated in a manner being equipped with characteristics to evaluate, interpret information, to draw attention to issues and determine information necessary for manager and present it and to be able to use information and communication technologies well of individuals to operate as accountant. In front of new formations that information and communication technologies caused and facilities created by such technologies, "a strategic alteration" in accounting education and applications became indispensable. E-accounting became an important need in educational system because it enables those learning and to learn accounting limitless and many information sources and versatile interaction. Usage of technology in accounting has increased as a result of developments concerning with usage of computer technologies so as to produce administrative-purpose information on the basis of integrate information system of accounting information of enterprises and at the same time usage of e-accounting in enterprises has started to become widespread. Along with usage of computers in accounting, information was transferred to electronic media. Existing in electronic media of accounting information has made carrying out of supervision of electronic information environments in question indispensable. Legal infrastructure transferring all transactions to electronic environment completely through electronic signature, electronic declaration and other arrangements in our country recently has been being generated. Appearing in electronic media of accounting makes carrying out supervision in the same environment obligatory.

Usage of the technology

- Start of being used of computers in many fields from daily activities of enterprises to generating statements made processing and storing information in electronic environment and carrying out many transactions in

Review of Literature on Empowerment of Women College Teachers through Information and Communication Technology

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Lynn M. Martin, Len Tiu Wright, (2005) conducted a study titled on "No gender in cyberspace". Empowering entrepreneurship and innovation in female run ICT small firms. The objective of the study is to explore how information communication technologies (ICT) and the internet offer new opportunities for women to develop as entrepreneurs and innovators. To add to the literature and provide updated research to raise awareness about female run ICT small businesses. They used qualitative research methodology for case studies of female entrepreneurs and thematic grid analysis to form a major part of text analysis. The approach is influenced by the need to examine closely the nature of the enterprises or phenomena under investigation and to ask pertinent questions related to their particular mode of operations. They found that the background of small firm development and innovation as well as personal and company characteristics, personal contacts and IT networking in obtaining information and customers. It will also reflect the concern of female entrepreneurs from ethnic minorities in gaining financial backing and recognition of themselves as committed and successful entrepreneurs.

Sylvia Maier and Usha Nair-Reichert (2007) studied "Empowering Women Through ICT-Based Business Initiatives: An Overview of Best Practices in E-Commerce/E-Retailing Projects". This study was motivated by the potentially powerful role that information and communication technologies (ICTs) can play in the empowerment of women in the poor and underdeveloped societies in the world. Despite the challenges faced by women in e-commerce/e-retailing and other ICT-based businesses, they have come across several projects run by women that have successfully navigated the impediments to establishing and developing e-commerce/ e-retailing projects. They classify their best practices into

training and empowerment of women, expanding market access and generating profit making opportunities, government and institutional support, societal involvement, and appropriate managerial practices.

Carlos Rodriguez Casal, (2007) has published an article titled on "ICT for education and development" he made the study with the objective to assess the contribution that information communication technology (ICT) can make in development and education, covering different application fields. They looked into the practical application of ICTs covering the application possibilities, the limitations and the methodological application. Information has been taken from multiple real experiences. He found that there are significant opportunities for improving the benefits of integrating ICTs within development programs. Limitations should be accepted at present while a holistic approach should be taken to consider the real local needs

Charles Noir, Geoff Walsham, (2007) examined the great legitimize: "ICT as myth and ceremony in the Indian healthcare sector". The objective of the paper is to explore how and why information and communication technologies (ICT) are enrolled in the Indian healthcare sector for reasons over and above perceived efficiency gains. They explored qualitative field data collected in the Indian states of Karnataka and Andhra Pradesh, and the city of New Delhi from an epistemological perspective of interpretivism. New institutional theory is employed to illustrate the mythical and ceremonial roles that ICT for development play in legitimizing development initiatives. The analysed challenges the simplistic view that implementing health management information systems will translate directly to efficiency gains.

A STUDY ON PASSENGERS SATISFACTION TOWARDS SOUTHERN RAILWAYS WITH SPECIAL REFERENCE TO SALEM DIVISION

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ABSTRACT:

Transport is an important infrastructure in the economy of india. It assumes a grater role in developing countries since all the sectors of the development are closely dependent upon the existence of suitable transportation network. Indias transport industry has been organised with a mixed pattern of public and private sector ownership. The evident economic growth in india over the last two decades has increased demand for al ltransport services, particularly land transport through road and rail .The developing of railways is one of the landmarks in the progress of human civilisation. Indian Railways, a historical legacy,is a vital fource in Indian economy. India is a country with the largest railway network in asia. Railways is the most convenient mode of transport for large scale goods movement as well as for long distance travel. Indian railways has envisaged provision of various automated facilities oriented towards interfacing and guiding passengers to comfortably board trains and for providing enquiry in the stations. Provision of ticketing machines ,water vending machines, platform shelters at stations, pay and use toilets, provision of improved cost effective lighting, good retiring rooms with modern furniture, coach indication boards, signage, security and enquiry counters are also provided to fulfill the needs of the railway passengers.

KEYWORDS:

Passengers, Railways, Satisfaction, Services and Transport

INTRODUCTION

Southern Railway is the second largest railway in the whole world. southern railway is one of the most effective networks established in 1853 to operate both, long distance and

Health Care Planning and Marketing

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Abstract The purpose of this paper is to develop a perspective on what is important or critical to the discipline of healthcare marketing by analyzing the marketing plan from the institutional (or organizational) perspective. This "salience issue" is complicated by the structural problems in healthcare such as new advertising programs, advances in medical technology, and the escalating costs of care in the recent economic situation of world economic crisis. Reviewing a case study, the paper examines how marketing managers face increasingly difficult management and it emphasizes one more time the importance of marketing in the internal organizational structure. Also it shows the direct connection between the marketing strategy, the Quality of Healthcare and marketing planning in the internal organization of Private Healthcare Practice in Romania. Also it concludes that marketing planning in healthcare has to be very precised in order to achieve some major objectives: customer care, financial stability, equilibrium between stakeholders and shareholders and future improvement in communication to customers. The marketing strategies and programs discussed in this paper follow the analysis of the 4Ps of Healthcare Marketing Services and propose call to action plans and possibilities that might result in a more particular case study analysis of the Romanian Healthcare Market.

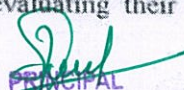
Key words: marketing planning, healthcare marketing, quality healthcare, best practice in healthcare marketing.

INTRODUCTION

The hospital industry has taken some major changes in the last years according to some famous researchers in the literature like Dawley et al. 1999 and Egger 1999[2]. All these changes since the 2000 faced the latest economical crises, and the price paid by consumers in order to get access to the healthcare

services on for fee revenues. In the newly developed economies, attacked by economic crises, the hospitals had to undergo major restructuring or even closure trying to survive by emerging, acquiring facilities or marketing planning. In particular this paper analyses the marketing plan on healthcare markets in order to obtain better results which may serve the stakeholders and shareholders' interests. It might be considered a base for a future analysis in healthcare marketing planning in quality of services. Reviewing a case study, the paper examines how marketing managers face increasingly difficult management decisions and it emphasizes one more time the importance of marketing in the internal organizational structure. Also shows the direct connection between the marketing strategy, the Quality of Healthcare and marketing planning in the internal organization of Healthcare Hospital Practice in Romania. The methodology used proposes a model of analysis between 4 selected variables (price strategy, promotion strategy, quality of healthcare and marketing planning) and a structural equation model tested afterwards in Eviews program. The results are concluding to the analysis and presented in the body of the paper.

Health planning represents the first step in an orderly process to accomplish the things necessary to improve the health status of individuals and populations. The planning and evaluation cycle, however it is structured, allows us to be successful in identifying and solving health problems. Efforts to understand health problems and approach their solutions in an orderly fashion are fundamental to successful disease control and prevention. This is the basis and key to health planning. The ability to undertake a thoughtful consideration of problems, work to identify solutions, and measure success or failure, whether for midcourse correction of programs or for evaluating their success, is important to our


PRINCIPAL

**A STUDY ON WORKLIFE BALANCE AMONG THE WOMEN
TEACHING EMPLOYEES IN ARTS AND SCIENCE COLLEGES WITH
SPECIAL REFERENCE TO NAMAKKAL**

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Abstract:

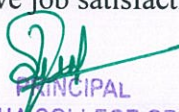
Work Life Balance has become one of the most issues in these days in every educational institution. There is a need to know the balance level of teachers with regard to both their work and family or personal life. If the work life is good, the functioning of the institution will be in a smooth and proper manner. This study will definitely help teachers on balancing towards work –life. Both career development on one side and the family care on the other side, it is necessary to know how the people balance the professional demands and domestic compulsions. Teachers in India have broken barriers and built bridges in the professional flat forms. Work- life balance focuses on two main aspects called achievement and enjoyment. This means that a teacher should be able to have job satisfaction (Enjoyment) and at the same time be able to grow up in his career (Achievement) when a working teacher is able to achieve and enjoy the professional and personal life; it means they have a positive Work- Life Balance.

Key words: Work life balance, Importance, Issues

INTRODUCTION

Work – life Balance of women employees has become an important subject since the time has changed from men earning the family living in today's world where both men and women equally share the responsibility of earning for the betterment of their family life. Hence it is very necessary to know how the women balance their professional and domestic life. In the initial stages, women had to struggle a lot to establish their identity in this competitive world, both in the society as well as in the professional life. But with the advancement in educational and training institutions, things have improved to a great extent.

Women in India have broken barriers and built bridges in the professional flat forms. Work-Life Balance focuses on two main aspects called Achievement and enjoyment. This means that a woman should be able to have job satisfaction (Enjoyment) and at the same time


PRINCIPAL

**A STUDY ON MARKETING PRACTICES AND CONSUMER
SATISFACTION IN THE HOTEL INDUSTRY WITH SPECIAL
REFERENCE TO NAMAKKAL TOWN**

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ABSTRACT

Customer satisfaction is the key driver for any organization to sustain in current competitive era. Service providers need to understand their customers and design their services in such a way that maximum possible satisfaction is attained by the customer. The purpose of the present study is to measure customer satisfaction in the hotels of the Kashmir valley. The study will also provide various suggestions to the customers so as to make their services more efficient and effective. For conducting the survey, a well-structured Questionnaire is used to collect primary data from the respondents. The sample size for the study is 150 Sample variance and confidence methods are used for Determining sample size. Simple random sampling technique has been adopted by the researcher to collect the data. On the basis of results 40 % of the respondents are highly satisfied with safety and security of the hotel while 20 % are highly dissatisfied with the location of the hotel. With every attribute the level of satisfaction changes, thus making it clear that customers rate their satisfaction differently with every single attribute. finally, it has been proved that the customer satisfaction in the hotels are high.

Keywords: Customer satisfaction, hotel industry, services.

1.1 INTRODUCTION

One of the greatest contemporary difficulties of the executives in administration enterprises is giving and keeping up Consumer fulfillment. Overpowering Consumer interest for quality items and administration has as of late turned out to be progressively obvious to experts in the travel industry and Hotel industry. Buyer fulfillment speaks to a cutting-edge approach for quality in endeavors and associations and serves the advancement of a really Consumer-centered administration and culture. Buyer fulfillment estimates offer a significant and target criticism about consumer's inclinations and desires. Promoting and the executive's sciences now-a-days are concentrating on the coordination of all the association's exercises so as to give merchandise or administrations that can fulfill best explicit needs of potential Consumers. Hotels are one piece of neighborliness industry, which has advanced from the humble start of families and landowners who opened their homes to explorers.



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Customer Perception on the JIO Net Work Services

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Abstract

The telecom industry has evolved very rapidly during last 10 – 15 years, from the basic telephony provided by BSNL, MTNL a government companies the other private players also came into the picture. The gradual progression from the basic telephony to mobile and other value added services to the users. Internet is the one of the important addition to the services. Recently Reliance Jio has made its presence in the market of Telecom Industry it is offering 4G Internet service and "FREE" Internet and Voice usage till Launch as pre – launch offer. It is a big game changer in the telecom industry as people has new choice and other telephonic and data service provider faces a new challenge to cope up with the situation. Today customer is the king in the telecom sector as it has many choice and preferences to opt a mobile handset and mobile connection for voice and data. In this paper the researcher is going to find the effect and awareness about the Jio Net work Services and what are the offerings made by the competitors like Vodafone, Airtel, BSNL etc. what is the marketing strategy opted by the Reliance Jio to capture the market and what could be the possible effect could be seen after the launch of Reliance Jio.

Key Words: Awareness of Jio Net work services, Customer perception, and Factors influence customer buying behavior

Introduction

"You want to see an angry person? Let me hear a cell phone go off." In this way, mobiles have disrupted the human life to the maximum extent. India is one of the largest smart phones markets in the world in terms of volume. So many numbers of network services are available in this world and each and every firm is expected to maximize their market share and profit. India is currently the second largest telecommunication market and has the second highest number of internet users in the world. "JIO" the product of Reliance Jio Infocomm Ltd (RJIL) disrupted the business in the year September, 2016. It is the only Voice over Long-term Evolution (VOLTE) service in India. It has no separate charges for voice calls and all the calls are made over the internet. Jio- Sim provides high speed internet connectivity [4G], rich communication services and various digital services on free of cost. The Indian Telecom sector has been disrupted by the entry of the conglomerate, Reliance, through its offering Reliance JIO. Reliance has changed the game very much by offering the free voice calls and discounted data packs with its provision of a "basket of services." It also offers handsets as part of "bundled services" where users can have the device as well as the service. Here are the ten ways the telecom industry disrupted after Jio'sim entry.

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IMPACT OF CONSUMER GRIVANCES REDRESSAL FORM IN INDIA

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ABSTRACT

Consumer is a person who buys any goods or hires any services for a consideration. But a person who obtains such goods for resale or for any commercial purposes will not be a consumer. Under the consumer protection ACT 1986, three-tier quasi-judicial consumer disputes redressal machinery was established at the district, state and national level. These agencies are popularly known as Consumer Forums or Consumer Courts. The study seeks to assess the perception of complainants towards consumer grievances redressal under Consumer Protection Act in India. Descriptive research design was adopted for the study. The unit of sample was individual complainants who filed complaints at District Consumer Disputes Redressal Forums. The sample consisted of 120 respondents. Convenience-cum-purposive sampling technique was adopted for selecting the respondents. Questionnaire was used for collecting the primary data. Various statistical tools percentage Analysis, standard deviation, the Pearson Chi-Square test, and the Karl Pearson Co-efficient of Correlation were used to analyze the data. The study revealed that even consumers had to hire the advocates to file cases at consumer forums, even though they did not desire to engage advocates. It was observed that consumers opposed the engagement of advocates because they demanded heavy fees and unnecessarily delayed the proceedings of consumer forums by taking adjournments. The logic seemed to be justified as a normal consumer is not that capable to argue against the seasoned lawyer. This tendency was found more prevalent among rural and poorly educated consumers. Majority of complainants favored the setting of establishing the consumer forums at sub division level. The study has implications for policymakers to enhance the effectiveness of amended Consumer Protection Act to improve the quality of justice to consumers.

Key words: Consumer protection Act, Consumer forum, Redressal of Grievances etc.

Emergency Medical Services Provided By Ambulance Patient Safety

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Abstract

As in India every minute's one person dies because he is not able to reach the hospital in time so The Ambulance service which will reduce the time. The main services of these Ambulances will reduce the time between ambulance driver and the Patients and it will save someone's life. The Ambulance vehicle provided excellent medical service to the patient safety and security and save the lot of people life on the current decade. Emergency medical services (EMS) personnel care for patients in challenging and dynamic environments that may contribute to an increased risk for adverse events. However, little is known about the risks to patient safety in the EMS setting. Ambulance Services is the most visible and crucial component in Pre-Hospital Care. It is the initial segment in the continuum of health care. The Ministry of Health has placed great importance on this frontline activity to benefit the community. The Medical Development Division and the Emergency Medicine and Trauma Services for their continuing effort in development and improvement in standards of care for pre hospital care service. Many challenges arise from implementation of the ambulance services, and as paramount for patient and staff safety, this policy was developed to safeguard and elevate the quality and safety of the service. This paper analysis only effective services provide by the Ambulance to the patient safety. It strengthens the Safety-First work culture within all MOH facilities and uses surveillance methodology to measure the success implementation.

Key Factors: Patient safety, Ambulance services MOH facilities.

INTRODUCTION



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360-Degree Feedback in Educational Institutions and its Applicability in Kerala

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Abstract: The Performance Appraisal of the employees' job performance is evaluated as per the standards already set for the category such as leadership, teamwork, output, supervision etc. This study is made to know about the Pros and Cons of the Performance Appraisal methods that are adopted in many organizations. The Management get to know the strengths and weaknesses of the organisations using the 360-degree feedback. Here an attempt is made to focus on the effectiveness of the performance appraisal system in various educational institutions in Kerala. Various arts colleges are considered for this study. It is very important to know the present scenario of education that is being imparted to the students who are the pillars for the next generations. The employees are expected to have a high degree of commitment and effort and the performance appraisal should be considered as an important function of every employer. The Performance Appraisal, if done rightly, can lead to better performance of the employees and ultimate effectiveness. It is also a systematic way for ensuring that the employer and the employee discuss regularly on the current/existing performance, the issues and arrive at consensus which will be beneficial for both. Here we have made an effort to study on the performance appraisal system which is done to improve the condition for a better performance of employees at various colleges and know the effectiveness of various appraisal systems. The usual way of Top Down Performance Appraisal, in which only the supervisor appraises the subordinate is changed and vice-versa is practised in 360-degree feedback, the This paper contributes primary study of 360-degree feedback, the needs to link leader assessment and development efforts to individual, team, and organisation results and its need in educational institutions.

Keywords: Performance Appraisal, 360 Degree Feedback, Employee Development.

I. INTRODUCTION

Employee Performance appraisal can be considered as a must in any organization to boost employee performance. This should be made to ensure that their existing employees are measured on a standard basis. When an effective system is adopted, it will motivate employees to perform to their level best. Performance appraisal is an annual process that involves evaluating employee's performance and

productivity against the pre-determined set of objectives for that year. The method helps to evaluate the skills, strength and the need for improvements in the organization. There are traditional and modern methods for Performance Appraisal. The Paired Comparison Method, Ranking Method, Forced Distribution Method, Forced Choice Method, check list method etc are some of the Traditional methods whereas the modern method focuses on individual's personality trait such as creativity, integrity, goal-oriented approach, leadership abilities and this type are more precise. The modern method includes 360-degree appraisal, assessment center method, Behaviorally Anchored Rating Scales(BARS), Psychological Appraisal, Human Resource (Cost) Accounting Method, Graphic Rating Scale etc. 360 Degree Feedback is an appraisal mechanism in which employees receive confidential, anonymous feedback from the people who work along with them. This includes the employee's superiors, peers, and direct reports. An online anonymous feedback form is filled by around 10 staffs which contain questions covering a broad range of workplace effectiveness. The feedback forms include questions that can be measured on a rating scale and also gives the raters chance to provide written comments. The person receiving feedback is also asked to fill self-rating survey which includes the same survey questions that others received in their forms.

II. REVIEW OF LITERATURE

Smither, London, Flautt, Vargas, and Kucine (2003)¹ studied on the association between 360-feedback and participation in executive coaching. The researcher studied on the impact on the further 360-feedback ratings. A considerable degree of variability in the subsequent feedback outcome was found, which could be attributed to certain individual differences and/or situational variables. This study helped in investigating over time the role of self-efficacy and perceptions about the importance of feedback system.

Savneet Kaur (2013)², highlighted that the 360 degrees performance appraisal and how it can be implemented in organizations. Various benefits and disadvantages of introducing this method into organizations have also been listed down. The available literature provides

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Economical Returns and Prospects of Sugar Industries in India: An Expectancy Rating by Cultivators of Karur District

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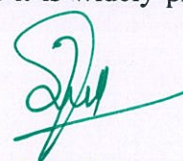
Abstract

In India over 45 million tonnes of sugar is being traded each year. Sugar production is not the only business of the Indian industry, but it also has a diversified business of power generation and ethanol production. The country has been producing about 1.7 billion liters of alcohol utilizing 75-80% molasses, which is a by-product of sugar production in the country. In 1993, Molasses and alcohol-based industries were decontrolled, but currently are being controlled by state governments. Sugar mills in Tamil Nadu have produced only 1.70 lakh tonnes of sugar till 31 December 2017 compared to the 1.86 lakh tonnes produced last year on the corresponding date, according to data from the Indian Sugar Mills Association (ISMA). The massive production in Tamil Nadu is through sugar industries. But the expectation of the cultivators is not fulfilled. Hence, the study focus on economical returns and prospects of sugar industries in India been rated by the cultivators.

Keywords: Granulated sugar, decontrolled, subsidy, confectioners, positive association

Introduction

Sugar cane is tall tropical Southeast Asian grass having stout fibrous jointed stalks; sap is a chief source of sugar, ethanol and jaggery. The sugarcane producing countries lying between the latitude 36.7° north and 31.0° south of the equator extending from tropical to subtropical zones. Sugar contains glucose, fructose and galactose and it is widely produced from sugar cane and sugar beet.



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AN INFLUENCE AND CAUSES OF OCCUPATIONAL STRESS MANAGEMENT ON WORKING HEALTH NURSES IN TEACHING HOSPITAL

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ABSTRACT

There is work-related stress in every occupation. Nursing is essentially standard as a stressful job and it has cause that stress to be one of the issues measured by the treatment profession. Thus, in progress study aim at investigating job stress surrounded by nurses working in training hospitals. This revision was conduct as eloquent – analytical examine on 180 nurses working in training hospitals associated to Symbiosis Institute of Health Sciences in 2016 Numbers were collected using HSE ordinary job stress survey. Data were analyzing by means of SPSS 19 software, and descriptive statistics, Pearson connection and self-determining t-test were recycled for data investigation.

Findings: Results indicate that common working understanding of nurses was 7.31 ± 5.95 and their common age was 30.97 ± 6.49 and 136 nurses were feminine. Denote job nervous tension keep count also was 115.79 ± 44 , which is a judicious score. 142 nurses knowledgeable moderate stress, 38 of them were experience high stress and none of nurses' qualified poor stress. The rapport between age, masculinity and know-how with job stress unpredictable was not momentous.

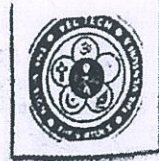


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A Study on Customer's Attitude and Satisfaction Towards Online Banking Services in Vellore City

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ABSTRACT

Online banking offerings is an internet primarily based carrier that allows bankers and bank clients' to get entry to their account. The researcher has taken effort to examine together the customers mind-set in the direction of on line banking offerings in Vellore City. It is a contribution to observe the effect of a web banking provider on purchaser mind-set and pleasure in bank. This look at additionally gives focus approximately online banking services and purchaser's facing issues within the banking institution via this online banking carrier. The researcher has selected 500 respondents purposively who were using on-line banking offerings in various banks for her comfort. The present examine is descriptive and empirical observe in nature. For the motive of evaluation, the records has been amassed from 500 respondents who were the use of online banking services in selected banks of Vellore City. The gear and techniques were applied for the analyses like Descriptive Analysis, Chi-rectangular Test, Regression Analysis and Step-sensible Analysis.

1. INTRODUCTION

Online banking offerings is a web based carrier that allows bankers and financial institution customers' to get right of entry to their account. It lets in the client to go online to the banks website with the help of a financial institution issued consumer identity and an encrypted password. The achievement of the banking institution depends on the purchaser attitude, pleasure and consumer notion on banking services. At gift, there were 27 scheduled public region banks, 14 personal zone banks and few foreign banks functioning in India. It is

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Performance of Micro Small and Medium Enterprises in Tamil Nadu (With special reference to Coimbatore District)

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Abstract

In recent years in both developed and developing countries for MSME is most significant contribution in gratifying various economic developments. The major aim of MSME higher growth of employment, increase the output and promotion of exports and fostering entrepreneurship. It is a major role in the industrial development of any country. In Indian economy MSME sector in very important pillar of Economic Development. MSME sector which can help realize the target of increased the National Manufacturing policy of raising the share of manufacturing sector as well as services sector in GDP from 10 % at present to 14% by the end of 2016. The present paper is attempted to focus the present status of performance of MSMSEs in Tamil Nadu and future prospects. It is concluded that this sector contributes significantly to manufacturing output, Employment opportunities and increase the export of the country.

Keywords; MSMEs Employment, Growth, Capital, opportunities.

Article History

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Introduction:

Micro Small and Medium Enterprises most important role in the industrialization of a developing nation. This is because: They provide lot of Employment opportunities and have comparatively higher labour capital ratio, they need only a shorter gestation period and relatively smaller markets, and to be economic they need lower investment. The MSME ensuring a more equitable distribution of the national income and facilitate an effective mobilization of the resources of capital and skill which might, otherwise, remain unutilized and they induce the growth of the industrial entrepreneurship and promote a more differed pattern of the ownership and location.

In Indian Economy Micro, Small and Medium Enterprises (MSMEs) are one of the most important sensitive sectors. The role of Micro small and Medium Enterprises (MSMEs) is attributable to its capacity of employment generation, low capital and technology requirement use of traditional or inherited skill, use of local available resources, mobilization of resources and exportability of products.

MSME IN INDIA

The Importance of Micro, Small and Medium Enterprises (MSMEs) is well understood by national economics. World over, half to two-thirds of all businesses are MSMEs and in many regions this proportion is much higher. MSMEs are capable of creating jobs with least amount of capital in dispersed locations which makes



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**Consumers Preference and Expectation towards Consumption of Jaggery with
Special Reference to Dharmapuri District**

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Abstract

Jaggery is a natural sweetener that is gaining popularity as a healthier alternative to refined white sugar. It is prepared from the sap or the juice of plants that contains a considerable amount of sucrose or sugar. This includes plants like sugar cane and certain palms like date palm and Palmyra. Traditional jaggery is unrefined and non-distilled, so no chemicals are used in making it and all the nutrients like magnesium, iron, calcium, and phosphorus are retained rich brown or golden in color, jaggery tastes like something between a rich molasses and caramel toffee. It is predominantly made in South and Southeast Asia, North Africa, Latin America, and the Caribbean Islands. Sometimes, it is also called country sugar, since it is prepared in rural households in some countries. Chemically, it is defined as $C_{12}H_{22}O_{12}$. The production and consumption of jaggery is increasing when compared to white sugar now-a-days. Hence, the need to study about the production, distribution and consumption of jaggery in Tamilnadu has aroused.

Introduction

Jaggery is a traditional non-centrifugal cane sugar consumed in some countries in Asia and the Americas. It is popularly known as *gur*. It is a concentrated product of cane juice and often date or palm sap without separation of the molasses and crystals, and can vary from golden brown to dark brown in colour. It contains up to 50% sucrose, up to 20% invert sugars, and up to 20% moisture, with the remainder made up of other insoluble matter, such as wood ash, proteins, and bagasse fibres. Ancient scriptures on Ayurveda mention various medicinal uses based on method of preparation and age.


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A Study On Managing Competency Of Human Capital Through Emotional Intelligence Amidst Covid -19 With Special Reference To Trivandrum District

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ABSTRACT

Productivity of the organisation and system success is influenced by the way employees behave at work place. Emotional Quotient (EQ) is the skill to recognize different set of emotions in yourself and others to interpret and use the emotions to enhance the quality of life. EQ is the basic factor that differentiates a normal worker from becoming human capital. Worker who manages the stress level and controls his outbreak of emotions are deemed to have high emotional intelligence. Emotional quotient or Emotional intelligence is the only factor that could enhance competency during the pandemic situation; Covid-19. The study is an attempt to understand the role of EQ in enhancing competency of employees in IT sector in times of Covid – 19.

Key words: competency, human capital, Emotional quotient, emotional intelligence.

INTRODUCTION

Emotional Intelligence is the capacity to recognize, analyse and manage our own emotions and others. Emotional intelligence expresses our capacity to work calmly in times of work place calamities and work pressure. The ability to express and control our own emotions to the emotions of others is called as emotional intelligence. It has four components like self-awareness, self-management, social awareness, relationship management. Self-awareness helps in understanding one's own strength and weakness, motivational factors and shows the reason for a particular behaviour. Social awareness is the ability to hear and understand others feeling. It is a process of empathy by analysing the expressed and unspoken words. Self-management on the other hand refers to the skill of managing our own emotions and how well we control our responses to challenging and dynamic situations. Relationship management or social skill is the ability to apply emotional understanding while dealing with others or expressing empathy

A Study on Human Capital Management With Special Reference To Potential Enhancement Among Teachers In Trivandrum District.

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ABSTRACT

Every organisation is trying to achieve a competitive edge than its competitors. In the ever-changing scenario conventional techniques are no longer able to hit the competition. To gain competitive edge in this scenario Human potential can be explored and enhanced. Now a days Human potential and talent are sculptured by information technology and communication technologies. Even Changes occurred in educational system as the challenger-Covid-19 hit the world. The whole world inculcated information technology as an aid to students especially Gen Y who are born in technological era. The study is conducted during the outbreak of Covid-19 where traditional methods of learning trashed. The study is an attempt to understand the extend of faculty engagement in skill acquisition trainings, online faculty development programs, online workshops and webinars to provide quality education to Gen Y. on the outbreak of Covid-19

Key words: human capital potential, Gen Y, competitive edge, Covid-19

INTRODUCTION

Managing human capital has been a quest for decades. Educational institutions always procure the best talents to sculpture future generation. Intellectual capital becomes a crucial resource for institutions which in turn are transformed to creative ideas to gain competitive. Marcel van Marrewijk and Joanna Timmers model identified HCM as a combination of human asset management, human culture management and human potential management. This age is marked by dynamic changes in knowledge and technology. In order to keep pace with the change, people are inclined to develop their potential. Human potential can be enhanced through personal growth and by having a positive work environment. Alfioni observed that a workforce with competitive advantage can be created by instilling knowledge, motivation, engagement which are difficult for competitors to imitate. The study is an attempt to throw light into the strategies adopted by educational institutions to bring out best from teaching community with the help of information technology.

REVIEW OF LITERATURE

S Pavlovna, L. Ivanovana, O. Viktorovna (2015), in the study Human potential as an element of innovative – investment attraction of the regions observed that investment potential is based on the regions level f development and expediency of innovative projects. The study highlights that the macro economic development as a reflection of human

AN APPROACH TO STUDY THE EFFECT OF E-CRM ON CUSTOMER
SATISFACTION OF DIGITAL MARKETING

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Abstract

One of the key developments in marketing has been the advent of electronic customer relationship management (e-CRM) systems, designed primarily to create and manage long lasting customer relationships. To remain competitive in this internet based environment it is imperative to attract new customers and increase customer's retention and to achieve these objectives it is crucial to implement e-CRM. The study was aimed to identify the effect of e-CRM strategies on customer satisfaction in context of online shopping. This study is based on 150 respondents and analysis confirms the conceptual model that convenience, trust and security have significant effect on customer satisfaction. This study enables managers and marketers to implement the e-CRM in the best shape and match it with current needs and requirements of consumers. The conclusions suggest that if organizations want to get the most from their e-CRM implementations they need to revisit the general principles of usability and resistance which should be applied thoroughly and consistently.

Keywords: Customer Relationship Management (CRM); Electronic Customer Relationship Management (e-CRM); e-Commerce; Customer satisfaction

Introduction

In the last decade, CRM has become a popular marketing Strategy, effectively managing customer relationships and boosting companies' profitability (Bolton et al., 2004). Identifying, satisfying and retaining company's best customers and maximizing the value from them is the underlying objective of CRM (Kennedy, 2006). Companies know the fact that



Review Article

A STUDY ON WOMEN EMPOWERMENT THROUGH SELF- HELP GROUPS WITH SPECIAL REFERENCE TO VILLUPURAM DISTRICT IN TAMIL NADU**¹C. B. Senthilkumar, ²Arumugam Dharmaraj, ³C. Indhumathi, ⁴V. Selvam, ⁵E. Kandeepan****¹Professor, Department of Commerce, Dr. M.G.R Educational and Research Institute, Chennai, India.
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Abstract

The empowerment of women has been apparent as a focal issue in deciding their status in recent years. The target of the examination are to replicate the social effect of women self help group, to look into the adjustments in the social clause SHGs, to gauge the effect of the SHGs on the social state of the individuals, and to dissect the demeanour of the individuals from the SHGs towards social effect. The investigation is distinct nature. Just essential information has been made utilized off with the end goal of examination. Essential information has been gathered through a field overview. The example size of the examination is 300 respondents. The specialist has utilized stratified random testing. The survey has used to gather the information from respondents. The study area is Villupuram District, Tamil Nadu. The collected data has been analysed using discriminant analysis. The study would be immensely useful to researchers, planners and policy makers in overcome the problems of women and in formulating strategies for the social progress and empowerment women through SHGs in Tamilnadu in general and predominantly in Villupuram District.

Keywords: Women Empowerment, Self Help Group, SHG, Garret Rank, ANOVA and Friedman Test.

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INTRODUCTION

Women in India are casualties of a numerous financial and social components. They are a vital piece of each economy. All around progression and agreeable development of a country would be conceivable just when Women are considered as equivalent accomplices in progress with men. Freedom of Women is a pre-essential for country's financial advancement and community upliftment. Destitution is the principle deterrent for the improvement of the Women. The job of women and the need to enable them are integral to human improvement programs including neediness easing. Regardless of different projects identifying with destitution lightening has been begun, it was seen that women in country territories, particularly from the poor families could be profited. A strengthening development among women the nation over has been currently turned by quick advancement in SHG arrangement. Monetary strengthening of country women brings about ladies' capacity to impact or settle on choice, expanded self-assurance, better status and role in family unit and so forth. The arrangement of SHGs isn't conclusively a miniaturized scale credit venture however a strengthening procedure. The strengthening of women through SHGs would give advantage not exclusively to the individual women yet in addition for the family and network all in all through aggregate activity for improvement.

Self- Help Group

A self- Help group gathering is a little intentional relationship of needy individuals ideally from the equivalent financial foundation. They meet up to spare their basic issues through self - Help. The quantity of individuals in one SHG doesn't surpass 20 (Surender and Manoj Kumar, 2010). The size is constrained to 20 in light of the fact that any gathering bigger than this should be enrolled under the India lawful framework. Intentionally meeting up to spare modest quantities normally. They commonly approval to add a typical store and to meet

their crisis needs on shared assistance premise. The gathering part utilize aggregate insight and friend strain to guaranteed legitimate end utilization of credit and opportune reimbursement thereof. Taint peer pressure had been perceived as a successful substitute for securities.

A financially poor individual additions quality as a major aspect of a gathering other than financing through SHGs decrease exchange costs for the two moneylenders and acquires while banks need to deal with just a solitary SHGs account expects of an enormous number of little measured individual records, borrowers as a piece of a SHG chop down costs on movement (to and from the branch and different spots) for finishing paper work and on the loss of workdays in peddling for advances.

WOMEN EMPOWERMENT

Empowerment actually signifies 'making somebody ground-breaking, encouraging the feeble to achieve quality' and with regards to ladies' strengthening, the term has come to signify ladies' expanded command over own lives, bodies and condition. Be that as it may, ladies as a gathering experience imbalance to men from the family level to the national level. These disparities originate from power relations, class-position chains of command and sociocultural conventions, customs and standards. The expense of sexual orientation disparity is especially noted in blocking advancement as far as more neediness, expanded hardship and constant disappointment in fulfillment of social needs like, sustenance, wellbeing, training, poise, social eminence and confidence. Caught in neediness and banned from circumstance poor ladies are kept from participating in the advantages of improvement and their huge potential remains underexploited.

**A STUDY ON INVESTORS PERCEPTION AND INVESTMENT
PATTERN IN STOCK MARKET INSTRUMENTS**

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ABSTRACT:

This study gives an outline about how the investor perception about stock market financial instruments and how they investing in that. Overall population divided into urban and rural categories and few basic rules of finance are advised to follow to raise the individual financial status. Especially middle class income category people investment procedure is shown an outlook on what basis they are invested. At last the article shows the impact of investing in stock market by all the investors which includes active investors and also non active investors in India.

KEYWORDS: Perception, dividend policy, mutual funds, direct equity, SIP(Systematic Investment Plan), smart investor, etc.

INTRODUCTION:

India is a first place where young population are come under earnings category. But the earnings have the equal amount of expenditure of the working class what are the drawbacks, how to overcome, and various successes. Find out to get vast investment returns with guaranteed. This study shows the various investment pattern and inventors perception with particular investment options in stock market. Stock market is the place where the buyers and sellers trade each other in any business day with business/trading hours. This trade shows the reflection of economy development and the real picture of the company growth in the society. Initially inventor save money in bank SB/FD account then in gold investment schemes offered by various private jewel shop owners. But after the technology boom in 2000's, recession in 2008, Modi Government formation in 2014 and again it continuation will gives a good impact to the investors to park their sufficient funds in various stock market instruments.

INVESTORS PERCEPTION:

Investors perception in all time is good or high returns when compare to Bank\Post office Deposit and also the capital must be Secured. Especially the retired peoples always park their fund only in Bank\Post office because of the protection of capital and assured returns. But when its compare to Stock market instruments its purely subject to market risk. Many peoples are still in lack of financial education.

The following ways shows how the investors are financially educated or aware:

1. Monthly at least 10-15% of his earnings must be save or invest in mutual funds
2. Many online sources or information about stock market instruments are easily access able by internet. So atleast daily 5-10 min must spend on news related to investments.
3. If possible investor many subscribe below Rs.100/- for any books for understanding basics in stock market in a month.
4. Suppose if investor is literate or illiterate at least once in a year must consult a Financial Advisor or stock market expert or Mutual fund distributors for better investment options.
5. Practice a monthly budget and track the huge expenses and try to reduce that. Not only in every month also consolidate with yearly budget

A STUDY ON IMPACT OF GREEN BANKING IN INDIAN BANKING SYSTEM

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Abstract

The most important themes of 21st century are the environmental protection and sustainable ecological balance, and it becomes an important issue that must be considered by all functional areas. However, green banking is still a major issue and can take an important role for the development of India. Even though the Indian banks have identified the need for greening their activities, they are running behind their counterparts that of developed economies. In addition to mitigating risks, green banking opens up new markets and avenues for product differentiation. Security and privacy issues, technical issues, lack of infrastructure, lack of coordination among stakeholders, lack of awareness and capacity building, higher operating expenses, reputation risk, diversification issues, infant nature of green concept and liquidity issue are the problems stated by the bank employees in regards green banking. The researchers suggest various measures to improve the scope of green banking.

Keywords: Green banking, ethical banking, sustainable development, online banking, environmental sustainability, electronic banking, etc.

1. Introduction

The quality of our environment affected at world level due to increased pollution creates global warming, green house gases, carbon emission, climate change, flood, drought, tsunami, earthquakes, etc. As a result, it will destroy our natural resources and life of the people. The United Nations Environmental Protection Finance Initiative and Equator Principles took more initiatives steps at international level for the protection of environment. It implemented the environment sustainability concept to encourage the financial institutions to go green. It was successfully followed by financial institutions like lead banks, insurance companies and investment companies are fully associated with

Impact of Digital Transformation in Aadhaar Card in India

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Abstract

Aadhaar helps to reduce duplication of cards, reduces administrative cost and work will be executed accurately and expeditiously, as the required information is available at the right time. It is expected that the Aadhaar will be very useful and a must for India, in education and health sector and also for the development of HR. It is also be conveniently used by other authorities, such as Income Tax, Department, Election commission office, municipal authorities, property tax collection offices, the passport office and other public offices, authorities department etc. The Aadhaar will be of immense use for individual to perform various activities with government and nongovernment organizations. Aadhaar helps in achieving the objective of ease of doing the business. In this Information age, Aadhaar helps everyone to have an access to the required information in a more transparent manner; it reduces time and cost and provides quality information for performing various activities, and helping in decision making. A need has arisen for issue of a comprehensive digital ID card to every citizen compulsorily, not only for the purpose of his identification but also to fulfill other requirements of storing digital records of people. The study mainly focus on usage of Aadhaar card for difference purpose in unique identify card for whole india This will be useful to Government, for implementing schemes, to regulate and control the economy and other people as a document to establish identity and as an evidence for various purposes.

Keywords: Aadhaar card, Aadhaar usage, Data protection, Digital ID Card

Introduction

Aadhaar project was introduced under the scheme 'UIDAI' (Unique Identification Authority of India) by Aadhaar card contains the demographic features such as name of the citizen, Father/Mother's name, Date of Birth, Sex, address of the citizen, and biometric features such as photograph, fingerprints and iris (eye) details. The demographic features as well as in the form of Quick Response (QR) code along with a 12-digit unique

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Impact Of Sos Application For Women Safety In Tamilnadu

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Abstract

SoS application is a Google – Map based online emergency application useful to find the specified emergency stations like, Police, Fire station, Cab service numbers and Hospitals, likely to be found in a given circular area. The user will only have to provide a radius of area to be searched. With the help of this application, User will also be able to view a geographical map of the area, make calls, and send messages to a selected emergency station. This paper focus on impact of sos application for women safety in Tamilnadu. Hence the application can be scaled up to the procedures which can be carried out in an emergency situation. Another aspect that can be put into reference for future scope is that the application can be mapped into any other operating system and can be used in iPhones, iPads or any other Windows phone. This application will also prescribe home remedies for common ailments.

Key Words: SOS Application, Women safety, Remedies

Introduction:

Tamil Nadu Police is glad to bring to people of the State, the Kavalan – SOS app as part of the Tamil Nadu State Police Master Control Room initiative, which the people of Tamil Nadu can use to seek police assistance instantly in emergency situations such as physical emergencies, eve-teasing, kidnapping or natural disasters such as floods, earthquake, etc. This app is developed by Amtex Systems.

People residing in Tamil Nadu, especially, Women & elderly people can use the Kavalan – SOS app whenever they feel vulnerable or threatened. Through this mobile app, help from Police can

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"EMERGENCY INFORMATION SYNTHESIS AND AWARENESS USING
SOS - APPLICATION FOR WOMEN SAFETY"

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Abstract

In today world people using smart phones have increased rapidly and hence a smart phone can be used efficiently for personal security in various other protection purposes. The heinous incident that outraged the entire nation have waken us to go for the safety issues and so a host of new apps have been developed to provide security systems to women via their phones An Android Application for the safety of women and this app can be activated this app by a single click whenever need arises. A Single click on this app identifies the location of place through GPs and sends a message comprising this location URL to the registered contact and also call on the first registered contact help the one in dangerous situations. This Paper focus on Women Empowerment and safety and also analysis of SOS services. The unique feature of this application is to send the message to the registered contact continuously for every five minutes until the stop button in the application is clicked. Continuous location tracking information via SMS helps to find the location of the victim quickly and can be rescued safety.

Key Words: Women Safety, Women Problem, Apps, Android, Mobile.

Introduction:

Many unfortunate incidents have been taking place in woman's case. Problems may come from any direction such as women walking on the road after the work, going to super market or many other reasons for which they go alone. People at home are not sure of their return safely. Another factor is



CONSUMERS' PERCEPTION TOWARDS PACKAGED DRINKING WATER (A STUDY WITH SPECIAL REFERENCE TO METTUR TOWN)

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ABSTRACT

Water is the most important need for life. Usually, pipe water spread by the municipalities has been the trusted water supply for drinking purpose. In the earlier days, bottled water industry just like other buyer items. Shortage of portable and wholesome water at railway stations, tourist's spots, and role tourism crop etc., has also added to the enlargement and different types of bottles are accessible to filling the water. Packaged drinking water is easy to handing and customer buy the water bottle before they think many about worth, cost, comfortable etc. since; water has the ability to reach the customer's home. For the present study, the data was collected with the help of a prepared questionnaire from 150 respondents the study brought to the fore that customers are un educated, students and business people, customer prefer various brands of packaged drinking water that the brands. Some of the customer buy occasionally like at the time of function, meeting and at the time of travelling. Generally customers spend very low amount to obtain of packaged drinking water. The complete findings and implications are discussed in the paper.

Key words: brands of package, packaged drinking water

INTRODUCTION

The earliest bottled water company was founded in the United States in the middle of the 19th century. In 1845, the Ricker family of Maine from anonymous basis bottled and sold water. Their small operation quickly grew; capitalizing on the spring's supposed medicinal properties,

ECONOMIC IMPACT OF CORONAVIRUS PANDEMIC IN INDIA

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Abstract

Globally corona virus has produced an unstable environment for people. This has spread all over the world and called as a pandemic by World Health organization. This is stopped many of economic activities due to contagious disease and has no cured till date to fight with corona. It has produced economic impact on globe and India. It may produce recession in many part of the world.. The World Health Organization (WHO) has declared that the new coronavirus outbreak is a public health emergency of international concern, officials announced on 30th January, 2020. This paper focus on coronavirus impact in Indian economy in various sectors. In every sector in India most of the products are imported from China, especially in medicine and manufacturing industry. The global economic impact could be broader than any that we have seen since the Great Depression.

Introduction:

India has been largely disruptive. The World Bank and rating agencies had initially downgraded India's growth for fiscal year 2021 with the lowest figures India has seen in three decades since India's economic liberalization in the 1990s. However after the announcement of the economic package in mid-May, India's GDP estimates were downgraded even more to negative figures, signalling a deep recession. Within a month, unemployment rose from 6.7% on 15 March to 26% on 19 April. During the lockdown, an estimated 14 crore people lost employment. More than 45% of households across the nation have reported an income drop as



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Impact Of E- Banking Services With Customer Attitude And Satisfaction With Special Reference To Chennai District

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Abstract

Today's world is one with increasing online access to services. One part of this which is growing rapidly is online banking. Customer satisfaction is imperative for the incessant survival of any organization around the world. Purpose – This study aims to provide an analysis of the customer attitude and customer satisfaction toward three banking services technologies namely, automated teller machines (ATMs), mobile banking and internet (online) banking. The study started by conducting an correlation and Regression analysis, on the valid responses received from a convenience sample of bank customers. This research work intends to investigate the impact of E-banking variables on Customer Attitude and customer satisfaction in Chennai District. Data has been gathered through questionnaire from 200 E-banking users as respondents, from different region in Chennai district. Results of the study have revealed that there is momentous relationship between service quality dimensions and customer satisfaction in E-banking in Chennai District. Through this study we can conclude that service quality in E-banking leads to satisfied customers needs and wants and thus banks can gain competitive advantage by offering better-quality services to their customers in today's emulous world. The result implicated that the internet banking service quality dimensions have a significant impact on the customer satisfaction of internet banking customers. Each of the dimension namely efficiency, system availability, fulfillment, privacy, contact, responsiveness and contact individually contribute 70% to the overall customer satisfaction in internet banking. The paper provides empirical evidence to show that the internet banking service quality dimensions area an important factor to satisfy the customers since each of them is positively related to customer satisfaction.

Keywords: *E-banking Services Quality, Customer Satisfaction, Customer Attitude.*

I. INTRODUCTION

Technology has played a vital role in today's world. Internet has made this world a Global village and the same has revolutionized the banking industry. Conversion from the manual based ledger system to systemized processes and the overture to internet based facilities has given a new facet to the banking sector. The competition in banking sector augmented over the last few years and to stay competitive, banks are espousing novel tools and techniques to attain customer retention and satisfaction and E-Banking is one tool towards it.

A. Definition



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STUDY ON THE WOMEN TEACHERS' PERCEPTION OF EMPOWERMENT
PROCESSES IN EDUCATIONAL INSTITUTIONS

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ABSTRACT

Human capital is considered the main factor in measuring the success of any organisation or educational institutions. Human empowerment the combined capability, determination and will power of people, to attend goals of an organisation is only sustainable competitive advantage an Organisation can create. The educational institution reminds aggressive and economic only if it obtains, improves and utilizes the knowledge faster than its competition. Hence the study focuses on exploring the process and practices of empowerment in educational sector .The findings reveals that prevalence of educational sector in Tamilnadu and bring forth the challenges faced through light upon practices and highlights the future.

Keywords: Empowerment, Women Teachers', Educational Institutions.

INTRODUCTION

For numerous institutions, the ability administration is generally undiscovered and unused concept within the field of human asset administration in spite of demonstrating numerous times its significance and competitive advantage for the institution. Institutions don't have information of related to the techniques utilized in ability administration which are sent in higher education framework to bolster them and the viability of those techniques. Institutions and corporate are concerned with the abilities to form the Institution stand within the competitive time.

There's a 25% contrast appeared in steady loss rate which comes about in million\$ costs of organization to supplant a few experts for each 50th person position within the organization.

**EMPOWERMENT OF WOMEN - THE SPECIAL REFERENCE TO TEACHERS IN
ERODE DISTRICT**

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ABSTRACT

Teachers, therefore, are important catalysts for empowerment. The paper attempts to study the essential part of women teachers in both a child's learning and her social, cultural and economic development. Women transmit and implant social values and nurture a child's talent, and interests. It is about modified that anyone instructing a youthful woman locks in her. Primary data for this study was collected using structured Questionnaire from Teachers of Erode District. Self-constructed questionnaire was used for the data collection. Questionnaire were distributed to around 250 respondents, from who 230 correctly completed questionnaire were obtained. . The survey covered the period of two months from December 2019 to January 2020. The survey was conducted in offline method. Be that because it may, concentrating only on instructing youthful women will not result in empowered women unless educates are themselves talented and energetic promoters of sexual introduction correspondence. Adjacent families and communities, teaches outline the front-line of a child's enhancement and in various cases, spend more time with children than anybody else, acting not because it were as Teachers but besides as conduits of information and alter.

Keywords: Empowerment of women, social, cultural, economic development

INTRODUCTION

Women basically give children with the capacities and information to address and light up issues that they involvement in childhood and all through their lives. Until we realize that



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WOMEN EMPOWERMENT- A PERSPECTIVE STUDY ON NAMAKKAL DISTRICT

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ABSTRACT

Empowerment of women has been designated as a *change* in the context of a woman's life that helps her to increase capacity for leading aattaining human life.Its exterior attributes are health,mobility,literacy and a wareness, statusinthe family, involvement in decision making, and material security. It also comprises internal qualities such as self-awareness and self-confidence.This present study attempts to find the demographic factors of the respondents in the study area and to analyze the factors affecting women empowerment in Namakkal District. Women's economic empowerment is the process of achieving women's equal access to and control over economic resources, and ensuring they can use them to exert increased control over other areas of their lives. It is concluded that there is a significant relationship between the age of the respondents and their level of satisfaction of work and family commitment of working women employees.

INTRODUCTION

Through centuries, we have developed various types of customs, traditions and practices. These customs and traditions, good as well as bad which has now become a part of our society's collective consciousness. Our society consists of people belonging to almost all kinds of religious beliefs. In every religion , women have been given a privileged place and every religion teaches us to treat women with respect and dignity. But somehow the society has so developed that various types of ill practices, both physical and mental, against women have become a norm since ages. For instance, practice of dowry, sexual harassment at work place, domestic violence,

Role of Aadhaar Card in Government welfare schemes

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Abstract: The data privacy debate in India has evolved with respect to the government's biometric identity programme, Aadhaar that enrolls welfare-dependent, poor populations to grant them access to government benefits. While legal challenges to Aadhaar by civil society groups argued that the biometric identity infrastructure creates conditions of mass surveillance and violation of individual privacy, the Indian Supreme Court in 2018 ruled that the government was justified in restricting individual privacy for the collective good of providing welfare in a transparent and corruption-free manner. Given the disproportionate burden on these populations to prove their identities to the state, this paper draws on a close reading of legal and policy texts, and activist documentation to argue that there is a need to move beyond the narrative of mass surveillance as privacy violation. Data privacy interests of the welfare-dependent emerge in the moment of biometric authentication, which creates anxieties of recognition when their authentication attempts fail or are deliberately falsified. Often, to have better social mobility, they are compelled to be physically mobile in order to enroll or update their records under conditions of physical disability and meager socioeconomic means. These anxieties illuminate their privacy interests through a compromise of dignity or dignified living, a formulation



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Our Heritage

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Financial Inclusion of Direct Benefit Schemes in Residence of Thiruppuvanam Block, Sivagangai District, Tamil Nadu

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Abstract

In an outset India made several policies which will be promoted to the life of common people that may uplift their standard of living, income, employability and earnings etc., the world has recognized employment guaranteed flog-ship program of MGNREGS, made an attempt of rural people, whether it brought out financial inclusions or not? The World Economic Forum clearly shows that MGNREG scheme has improved the access of financial services to the farmers. Further it indicates that the great scope for agricultural and economic growth of the country. This article shows the scheme of MGNREGS to estimate the extent of financial inclusion of sample respondents of Thiruppuvanam Taluk Sivagangai District, Tamil Nadu. After knowing the banking services the beneficiaries of MGNREGS, the study has carried out both primary and the secondary data which has to know their Financial Inclusion Index (FII). The FII is measured on the basis of lies between '0 to 1'. If '0' means financial exclusion of the beneficiaries of MGNREGS; where as in '1' indicates that the beneficiaries have achieved financial inclusions in the study regions.

Introduction

Financial inclusion the word has sound economic stabilization which has clearly brings out that attention of Rangarajan Committee envisages that the process of ensuring access to financial services which is timely and adequate credit to the vulnerable groups as an affordable cost.

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**An Emerging Issues on Rural-out Migration in Tiruppuvanam block,
Sivagangai District, Tamilnadu**

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Abstract

An emerging growth of population has its causes of urbanization. The urbanization of slum creation is through via of migration. The sample respondents were selected using the snow ball technique. It is historical as it attempts to tract the trend in rural-out migrants of residence of Tiruppuvanam block from 2000-2015. The primary data required for the study were collected through a survey of 100 migrants spread across the elsewhere place in Tamil Nadu. The study has found that the estimated multiple R is about 0.882 indicating 88 per cent migration in the project area is explained by the eight variables included in the analysis. The study has conclude that economic parameters of rural household like level of income, employment and expenditure on food and non-food items are greatly influenced by their proximity to urban areas. It is imperative to suggest that creation of rural – suburban centers in the nighbourhood of the urban area would facilitate the growth and development of the rural non-farm sectors. In the farm

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Role of Banks in Women Entrepreneur Empowered Small and Micro Enterprises: Empirical Evidence from Madurai City

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Abstract

In an outset the women empowerment has to reflect the economic growth in India. The globalised era, country's growth is depends on the participation of women people. The traditional habits of women people does not have a role to play on public as results the human development index in India is very low as compared to our neighboring countries like Sri Lanka and Bhutan. Now a days the scenario has changed women participation is increased day by day particularly MGNREG Scheme is reduce gender wage differences and SHGs gives a platform of accumulation of capital adequacy. The women entrepreneur has to face several problems and hurdles to promote their business especially in fund generation. The present scenario various Indian banks offer the financial assistance to the women entrepreneur let to pave the way of self sufficiency position of financial decision maker. In this article envisages that the financial assistance provided by various bank to the small and micro level business women entrepreneurs are settled in and around of the Madurai City. The study has concludes that the financial institutions support to the women entrepreneur and especially small scale and micro level industries which will help them to establish and run the industry without difficult and also competitive among these type industry without gender discrimination. Finally they have specific identity among them and reached their year on year target and also maximum

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AN INSIGHT ABOUT GST RATES IN INDIA- AN EMPIRICAL STUDY.

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Abstract:

Transformations are an uninterrupted process. Any new law levied or any new bill implemented or changes implemented will leave an impression on the people in general. It is generally the common public who are been affected directly or indirectly by these new laws or new changes or new bill. Goods and service tax is paradigm shift in the taxation system, it is an indirect tax system introduced basically to overcome cascading of taxes. It is applicable throughout the country. It is the biggest restructuring in the economy. GST is applicable for all goods and services and the rates are charged under various slabs for various category of goods and services. Generally the GST rate slabs are 0%, 5%, 12%, 18%, 28% for different goods and services. Almost all indirect taxes are swapped by GST. Implementing GST has left lot of impact on our life, this paper highlights on how the implementation of GST has changed the lifestyle of the people and how day-to-day goods and services will pocket the end user's wallet. GST as name implies it is the tax on goods and service and it is a simplified tax. The main intention is to reduce the burden on the end users. But instead of charging one single tax rates, the common man are charged with different rates for different goods and services. This paper studies the effect of the GST in India and its impression on general public's financial plan and affect the end users wallet.

Key words: uninterrupted, cascading, GST rates, restructuring economy, simplified

Introduction :

GST is considered as the biggest reform in the country, it is a simplified taxation system. All sectors from medium to large scale have been affected by GST. Consumers or end users are

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CUSTOMERS' PERCEPTION ON DIGITAL BANKING SERVICES WITH SPECIAL REFERENCE TO SALEM DISTRICT

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ABSTRACT

Digital banking is the move to online banking where banking services are delivered over the internet. The advantages for banks and customers are providing more convenient and faster banking services. The shift from traditional to digital banking has been gradual and should be rather described in degrees of service digitization than through a categorization into yes and no. It involves high levels of process automation and web-based services and may include APIs enabling cross-institutional service composition to deliver banking products and provide transactions. It provides the ability for users to access financial data through desktop, mobile and ATM services.

A digital bank represents a virtual process that includes online banking and beyond. As an end-to-end platform, digital banking must encompass the front end that consumers see, the

**AN EMPIRICAL STUDY ON OCCUPATIONAL STRESS AMONG
EMPLOYEES WORKING IN SELECT PRIVATE HOSPITALS OF SALEM
DISTRICT**

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ABSTRACT

The present study focuses on the causes and logical reasoning for Physical / Psychological impact of stress on the private hospital employees and focuses on the important stress management programs implemented by the selected private hospital organizations of Salem district. Efficiency or work performance of staff is the most significant factor in the growth and development of any firm. The work performance is concerned with physical and psychological well-being of the employees. Private hospitals have an important place in the Indian Economy and as stated above, this sector is amongst top stressed sectors like banking sector, industrial sector etc. Occupational stress among the private hospital employees, can affect their health, work performance, social life and family life and also on their psychological condition. So it is significant to understand the exact cause of stress and its effect on the employee's physical and psychological status. It is also important to provide an insight that will help the HR officials; management experts further improve their management competencies in the stress management in the private hospital organizations. Beyond the research, it is considered to be immense significance because organizational position on stress is hypothetical to operate in interface with the common ill-being and well-being. For the study purpose, 120 private hospital employees from 12 private hospitals (10 employees each from one organization that is $12 \times 10 = 120$ employees) have been selected randomly. The samples of private hospital employees have been selected from the private hospitals located in Salem district. Job stress is undoubtedly a common phenomenon among private hospital employees and it is influenced several factors. Identification of the factors involved in stress and its control can reduce this effect. Therefore, supportive and effective interventions must be done to reduce job stress. Because of high levels of job stress in demand scale and workload in surgical and internal wards, activities must be performed in order to



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Cyber Crime in Banks

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ABSTRACT

In 1990's People can easily identified the crimes due to physical presence but after the boom of internet even police can suffered a lot to find the victims. Basically the crimes are done by ethical hackers who are highly knowledgeable in computer and know the dark side of it. Here the article gives an attempt to study the various crimes which are all in banking sector especially cyber-attacks and the interesting part is till now there will be no hackers can officially caught by the departments in our country.

INTRODUCTION

Internet now a days pupil will be without food and water but they can't imagine without internet because it the place where we get complete communication and access information of gaming, online shopping, studying, social networking, online jobs, etc. pupil also same the soft copier of their identity documents like PAN, Aadhar, Driving License even education certificates in Google drive by scanning. Which gives complete and safe access from anywhere at any time. Here comes the real fact, what happens if the mail id and password missed or forgot or known by some other persons?

Mail id and password known by stranger, who as a hacker is the biggest and updated problems in India. Criminals are mostly exploiting the speed, convenience of the internet frauds due to credit and debit cards, illegal downloading, child pornography, distribution of virus, etc.

CYBER LAW IN INDIA

- IT Act (Information technology Act)
- IPC (Indian Penal Code)
- State level Legislation Act

By these 3 cyber law fraudulent may be caught and punished. Online frauds activities are difficult to find out. Even though the victims got arrested the fund lost is lost. The ministry of

CONSUMER PURCHASING BEHAVIOURS TOWARDS ORGANIC FOOD PRODUCTS-(Say 'yes' to organic, 'No' to chemical based products)

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Abstract

The life style of our consumer has changed in selection of food products. Instead, of chemical products the purchase towards organic products has slowly increased .Consumer knowledge towards importance of organic products has greatly influenced the preference of buying organic products. Many organic outlets have been opened in various parts of the country to meet the demands. The online marketing too contributes a lot in advertising the uses of consuming the organic products. Government of India has introduced various schemes for improving organic farming consumers were raised their hands to safeguard the environment and mankind.

Key words: Consumer Behavior, Food products, Environment.

1. INTRODUCTION:

Today we are living in the technology world, so mankind has to lead their life like a machine. Due to this living habit were changes and it created many problems to the environment .In this aspects the consumers were under the pressure of various health problems .consumer were turning back to the old methods of food habits by purchasing organic food products. In current marketing world the organic foods plays an important place. The consumers were interested in buying the organic food products. Organic products have no chemicals, pesticides grown naturally without affecting the environment. Consumer behavior is based on the various aspects such as attitude, values, beliefs, interest etc. Purchasing behavior of food products practice is changing globally among the consumers and now they want to opt food which is free from synthetic chemicals, fertilizers, and pesticides *i.e.*, they want to use the organic food which is not only good for health but also for eco-system . Organic

Digital Education in Current Scenario”

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ABSTRACT

The era of 21st century is often regarded as an era of technology. Technology today plays very important role in our life. It is seen as a basis of growth of an economy. An Economy which is poor in technology can never grow in today scenario. This is because technology makes our work much easier and less time consuming. The impact of technology can be felt in every possible field one such field is education. Online education in its various modes has been growing steadily worldwide due to the confluence of new technologies, global adoption of the Internet, and intensifying demand for a workforce trained periodically for the ever-evolving digital economy. Online education is on track to become mainstream by 2025. This paper focus on impact of digital education in current scenario. As the power of digital increase there are and there will be more applications that will assist students in development and learning. The online degree scenario around the world is more famous among students who work and look for flexible studying programs.

Key words: Digital Education, Distance Education, Learning Management System

Introduction

Technology is a gift of God. After the gift of life it is perhaps the greatest of God's gifts. It is the mother of civilizations, of arts and of sciences. Technology has certainly changed the way we live. It has impacted different facets of life and redefined living. Undoubtedly, technology plays an important role in every sphere of life. Several manual tasks can be automated, thanks to technology. Also, many complex and critical processes can be carried out with ease and greater efficiency with the help of modern technology. Thanks to the application of technology, living has changed and it has changed for better. Technology has revolutionized the

WORK FROM HOME " IS INDEED A "WORK FOR HOME"-WORK LIFE BALANCE
OF WORKING MOTHERS DURING LOCKDOWN N

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Abstract

With all of as living and working during uncertain, challenging times, the importance of preserving positive wellbeing has never been more import. The lockdown necessitated by the spread of COVID-19 has disrupted the normal life of people all around the world. While the situation is challenging for all, it specifically puts great demand on the women in the family, as they not only look after the work at home, but also their respective jobs. Working mothers are now doing two full time jobs without even a weekend break. Working mothers have always been multi-taskers and power-workers, balancing the need of their family and job. Along with kids and family around in the same space, the work-life balance during the COVID-19 and amidst the lockdown has taken on a whole new meaning. In this study focus on the work life balance of working mothers during lockdown.

Keywords: Work life balance, work from home, mothers, children

INTRODUCTION

As the corona virus continues to spread, most people who are used to working in an office environment suddenly face the reality of a new workspace - their own home. Many working mothers have experienced a profound shift in their lives owing to the COVID - 19 crisis. Working mothers in particular have had the toughest challenge as they manage added workload and domestic responsibilities. With shutting of schools and education institutes, it is on parents, especially mothers to take over tasks such as home-schooling, babysitting, home care, etc. During such times, it becomes paramount to give working mothers the time and support they need to care for their children, manage the work-place and help them balance life better in this new normal of work from home.

STATEMENT OF THE PROBLEM

Now in the new remote working scenario it brings in more challenges for them as they try to balance work-life in the physical space of home. Working mothers have suddenly found

'LIVE TO WORK' OR 'WORK TO LIVE' - Work Life Balance of Working Women's

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Abstract: Work life balance does not mean an equal balance. It means the capacity to schedule the hours of professional and personal life so as to lead a healthy and peaceful life. It is not a new concept. It emphasizes the values, attitude and beliefs of women regarding their age to work in organizing and balancing their work and personal life. When a woman achieves successful work life balance, she has job satisfaction and becomes highly committed. But in certain cases the women is not able to succeed due to incapability in balancing her work and personal life. As a result she withdraws from her work due to simple reasons. The present study focus on the work life balance of working women.

Keywords: Work life balance, Women, Family, Children

Introduction

The Indian culture with regard to career development of women is undergoing rapid changes due to the increased pace of urbanization and modernization. Indian women belonging to all classes have entered into paid occupations. At the present time, Indian women's exposure to educational opportunities is substantially higher than it was some decades ago, especially in the urban setting. This has opened new way, increased awareness and raised aspirations of personal growth. This, along with economic pressure, has been instrumental in influencing women's decision to enter the work force. Major changes visualized among women are that they began to be more involved in the societal matters. Many women started going for jobs. Thus, women have to play dual roles all throughout her matured livelihood. The dual roles include the role of a working woman and other general roles (The role of mother, wife, daughter etc. constitutes the general roles). Men are also performing these dual roles. But the responsibility with his general roles is far less than that of women. As working women get married, they have additional responsibilities and when they become mothers, they have to manage the primary care of children and extended family and are thus, under greater pressure

to continue on a career path. Working mothers of today fulfil family responsibilities and also try to remain fully involved in their careers coping up with the competing demands of their multiple roles. The caring responsibilities that working mothers have lays a heavy stress on them when it is combined with their professional duties. The attempt of working women to integrate, organize and balance the various problems and activities in their different roles simultaneously puts them under tremendous pressure. As a result, the family becomes an organizational stakeholder and this powerful social trend marked the beginning of the work life balance.

Statement of the Problem

Changes in the social, political and economic fabric of societies have influenced and continue to influence both the nature of employment and its relationship to life outside work. Work life balance has emerged as a hot topic in recent years. The economic need is considered to be the first criteria for women to go for work in India. Working women's employment outside the home generally has a positive rather than negative effect. Working mothers of today fulfil family responsibilities and also try to remain fully involved in their careers coping up with the competing demands of their multiple roles. The caring responsibilities that working mothers have lays a heavy stress on them when it is combined with their professional duties. The attempt of working women to integrate, organize and balance the various problems and activities in their different roles simultaneously puts them under tremendous pressure.

Scope of the Study

The concept work life balance has been abstracted from the job satisfaction level of an employee, which is an extrinsic factor of job satisfaction. It aimed to provide quality of life for an employee at the same time retaining the productivity levels of an employee at the work place.

Role Conflict And Role Of Overload Among Working Mothers

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Abstract

Life is like riding a bicycle. While riding a bicycle if there is an imbalance and if the rider is unable to control she may fall down. This is true in the case of all working mothers who are struggling with work-life balance issues in their livelihood. Work-life balance is the term used to describe those practices at workplace that acknowledge and aim to support the needs of employees in achieving a balance between the demands of their family and work lives. It is not a new concept. It emphasizes the values, attitude and beliefs of women regarding their age to work in organizing and balancing their work and personal life. When a woman achieves successful work life balance, she has job satisfaction and becomes highly committed. But in certain cases the women is not able to succeed due to incapability in balancing her work and personal life. As a result she withdraws from her work due to simple reasons. The present study focus on the work life balance of working mothers.

Keywords: Work - life balance, Women, Family, Children and Conflict.

INTRODUCTION

Work-life balance is an individual employees control over the responsibilities among the work place. Work-life balance is not merely work-family balance. More specifically, it refers to the management of one's professional responsibilities and family responsibilities. One can have work-family balance, but may not have anything left for oneself, for one's community, for one's own personal growth and development. So, it is possible to have work family balance and still need to achieve work-life balance.

STATEMENT OF THE PROBLEM

A person has lot of responsibilities connected with the work, family and self. An individual is likely to experience stress when there is contradictory between his work and the other role has to play in her life. Under stress, an individual fails to take clear-cut decisions, re-evaluate and reassess the priorities in life. Effective time management can be an answer to the resolution of work-life balance. Successful work-life balance can reduce the stress level of an individual, increase the job satisfaction and productivity.

SCOPE OF THE STUDY

Today's married women are dual career couples. These women have a dual commitment to fulfil. They have to be committed to their work and at the same time they have their commitment to their homes, spouses, children, relatives and friends. Their involvement in their work infringes on their personal life and if they also find their personal life affects their work.


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THE IMPACT OF PANDEMIC COVID-19 ON EDUCATION IN TAMILNADU

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Abstract

The impact of pandemic COVID-19 is observed in every sector around the world. In India education sectors is most affected as well as world are badly affected by this. It has enforced the world wide lock down creating very bad effect on the students' life during this period. Around 32 crore learners stopped to move schools/colleges. all educational activities halted in India and Tamilnadu. The outbreak of COVID-19 has advised us that change is inevitable. It has worked as a catalyst for the educational institutions to grow and opt for platforms and techniques, which have not been used before. The education sector has been fighting to survive the crises with a different approach and digitising the challenges to wash away the threat of the pandemic. The purpose of this paper is to provide commentary on the challenges and impacts of the pandemic crisis to higher education institutions (HEIs) in Tamilnadu. It also outlines mitigation plans, innovative strategies adopted and implications and recommendations to HEIs. This paper highlights some measures taken by Govt. of Tamilnadu to provide seamless education in the country. Both the positive and negative impacts of COVID-19 are discussed and some fruitful suggestions are pointed to carry out educational activities during the pandemic situation.

Key Words: Positive impact, Negative impact, Suggestion of Covind – 19

Introduction

The COVID-19 pandemic has affected educational systems worldwide, leading to the near-total closures of schools, universities and colleges. COVID-19 and its Impact on Education System in India. Coronaviruses (COVID19) are a large family of viruses that may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) (www.who.int) A novel coronavirus outbreak was first documented in Wuhan, Hubei Province, China in December 2019. The World Health Organization declared the outbreak a Public Health Emergency of International Concern on 30 January 2020.

The petrifying and the extreme impact of COVID-19 has shaken the world to its core. Additionally, the higher a part of the Governments across the globe have quickly closed academic establishments making an attempt to comprise the unfold of the COVID-19 pandemic. In India as effectively, the federal government as a facet of the nationwide lockdown has closed each academic institution, as a consequence of which, learners going from school-going kids to postgraduate college students, are affected high level. The pandemic Covid-19 has spread over whole world and compelled the human society to maintain social distancing. It has significantly disrupted the education sector which is a critical determinant of a country's economic future. February 11, 2020, the World Health Organisation proposed an official name of the virus as COVID acronym for Coronavirus disease 2019.

HISTORY WUHAN- COVID-19

It was first identified in Wuhan, China on December 31, 2019. First death by COVID 19 was the 61-year old man in Wuhan, China 2020. WHO declared COVID-19 as a pandemic on 2020. The first case of the COVID-19 pandemic reported on 30 January 2020 in the state of Kerala and the affected had a travel history from Wuhan, China (Wikipedia). The first death due to COVID-19 was reported in India on March 12, 2020. It has affected more than 4.5 million peoples worldwide (WHO). According to the UNESCO report, it had affected more than 90% of total world's student population during mid April 2020 which is now reduced to nearly 67% during June 2020. Outbreak of COVI-19 has impacted more than 120 crores of students and youths across the planet. In India, more than 32 crores of students have

A STUDY ON IMPACT OF MOBILE PHONE ON COLLEGE STUDENTS' STUDY BEHAVIOUR

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ABSTRACT

In olden days, there was no mobile phone, e-mail etc... Telegram & letter are the only source to communicate. People would like to thank graham bell for inventing telephone to this primitive world. Because of telephone, people can communicate with other easily and our feelings emotions can be conveyed through them within a fraction of second. After some days, in modern society, wireless phone has come to us in usage and then mobile phone was introduced by Martin cooper. People can take it in our hand in any time and in any situation. E-mail is an electronic mail in this they can pass message easily & fastly. They can use it for office, profession and social network has formed (i.e.) face book, twitter, WhatsApp on this social network they can share information and capture picture and send immediately. All kind of people are using mobile phone and there apps in their day to day life. Without it they can't lead their life. Some of them are addicted to it. Especially younger generation is suffered by it a lot. They use it as a habitual practice. In this study background, this study is focusing on Impact of mobile phone using by college students study behaviours and problems faced by students for using mobile phone.

KEY WORDS : Mobile usage, health problem, mobile apps, impact of mobile phone.

INTRODUCTION

Many people are confused about higher education, because there have been a lot of changes recently, including institutions changing their names and titles. The international definition of tertiary education divides into two parts. Type A (Higher Education) and Type B (Further Education). A higher education qualification at degree levels takes a minimum of three years to complete. Higher education means university level education. It offers a number of qualifications ranging from higher national diplomas and foundation degrees to honours degrees and as further step, postgraduate programmes such as masters degrees and doctorates. These are recognized throughout the world as representing specialist expertise supported by a wide range of skills that employers find very useful. Further education is generally includes those post graduate studies in where you can gain your master and doctorate degrees. They come in various categories, such as a Master of Arts, Master of Science and master of theology. The amount of time it takes one to earn a master's degree depends upon the program one is enrolled. But one should usually expect to study at least for 2 years. The second type of graduate degree and one considered higher than a master's degree is a doctoral degree. These are awarded for a particular course of study beyond the master's degree. Doctoral degrees can be professional degrees, such as the doctor of ministry or academic degrees such as the doctor of philosophy.

Bachelor's Degree

It is usually an undergraduate academic degree awarded for a course or major that generally has three or four years.

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A Review of Smart Home Community in IoT Environment: Architectural survey and Challenges

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Abstract— Smart cities aim to improve the citizens quality of life by exploiting information about city scale procedures extracted from heterogeneous data sources gathered on city wide distribution. The IoT is the empowering influence of smart city technologies at urban scale. IoT includes various elements like communication networks, communication protocols, sensing technologies, computations, analysis and services. The primary commitment of this survey paper is that it abridges the present condition of specialty of IoT architecture in smart city. Architecture specific study does always pave the structure of related field. In addition, most of the possible IoT technologies for smart city are introduced. Emerging IoT technologies were discussed by this survey and its challenges.

Keywords— Smart City, Internet of things (IoT), Smart building, Security, IoT Architecture, smart city architecture, IoT technologies, challenges

I. INTRODUCTION

The web transformation has prompted the interconnection among individuals and PCs at an unremarkable scale and pace. The next revolution will be the interconnection between objects and appliances to create a shrewd environment. Currently it is estimated that there are 9 billion interconnected devices and in future it is highly expected to reach 24 billion devices by 2020 [9].

According to the recent market analysis report by Knud Lasse Lueth, IoT Analytics clearly indicates that Smart Cities and Smart Home stand out as the most prominent IoT applications in near future [1].

The smart city is becoming smarter than in the past as a result of the current expansion of digital technologies there has been a remarkable growth of digital devices, such as sensors, actuators, smartphones and smart appliances, because it is possible to interconnect all devices and speak with between through the Internet. This led to the huge marketable objectives of the Internet of Things (IoT) [8].

With the rapid rise of the population density inside urban areas, gathering information for day-to-day management of activities and long-term development planning in the city is essential in order to supply the requirements of the citizens. For example, take the case of a public transport system, some information such as real-time location and utilization, occupancy of parking spaces, traffic jams, and other data like weather conditions, air and noise pollution status, energy consumption, etc. should be gathered continuously [8]. These data will be analysed by using analytical tools and gives information to that particular city authorities that helps them to take precaution or necessary steps to solve it.

Smart citizens, smart energy, smart buildings, smart mobility, smart technology, smart healthcare, smart infrastructure, smart governance and education and finally smart security are the key parts of shrewd urban communities [8].

II. ARCHITECTURAL DESIGN OF IOT

An IOT architecture is a system of integration of numerous elements, several technologies and communication solutions. Sensors, protocols, actuators, cloud service, storage and computing tools for data analytics and presentation are considered to be the essential elements of IOT. There are identification and tracking technologies, wired and wireless sensor and actuator networks, enhanced communication protocols, and distributed intelligence for smart objects are just some of the most relevant [3]

The IOT general architecture provide the media to be everywhere incorporating a large number of different and heterogeneous end systems and sensors to provide services that seamlessly employ very complex tasks [1]. Many IOT architectures depends on various applications. Different technologies have been applied to address the specific features of each applications of IOT [2].

Many and different architectures have been proposed by researchers. Basically, there are three IoT architecture layers [4]:

1. Perception Layer/ IoT Device Layer- The client side.
2. Network Layer/ IoT Getaway Layer -Operators on the server side.



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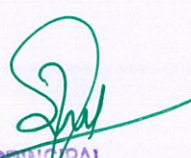
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Automatic Extraction of Images from Medical Videos Repository

DR.T. RAMA PRABHA AND S. ANITHA

The main aim of this paper proposes a frame based approach for segmenting the storing of medical videos onto the repository. Instead of viewing through the entire video this tool will help you to extract the specific frames from the extended videos automatically. This will play a vital role for many researchers in the field of medical imaging, medical research and education, medical diagnostics and training of medical professionals. The key components of this system include video segmentation, image extraction, image retrieval and image quality assessment process. We show examples on number of video clips to illustrate the utility and flexibility of the system.

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COMPARISON ON DISCOVER THE EXEMPLIFICATION OF SUBSTANCE FROM THE IMPRESSION BY APPLYING DATA MINING

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Abstract: The goal of this assignment is to explain the association of human through a substance talk. For instance, social occasion, get-togethers, etc. Human works together with others in various ways of interaction respectively. The most notable ways are talk and substance. Data mining is a learning Discovery. The substance data can be progressed with the different frameworks of data mining. Covered Markov model, T-structure systems are used in the present system. An important snare of these present structures is memory improvement. To vanquish this issue with the proposed system of an Ant Colony Optimization (ACO) has been using the ideal arrangement and increment the exhibition. Inherited coordinated effort orchestrates (GIN) accept a huge activity in perceiving the helpful relationship of characteristics. Improvement is essential to ensure the idea of the data. Since the rummaging has direct underground bug state has been used to streamline the memory also. Here we apply the crossbreed of the system moved creepy-crawly state streamlining (AACO) with stemming. Filtering for a perfect route in the graph subject to practices of ants is a critical endeavour of creepy-crawly settlement streamlining. The future enhancement of this research has to concern towards the face emotion detection system. This work mainly focused on three emotions happiness, angry, and sadness. The emotions can be analyzed from the images in the form of jpeg. These images are pre-processed for feature extraction, which is based on Principal component analysis (PCA) for the embedding tool.

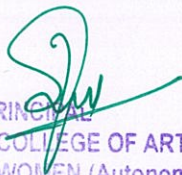
KEYWORDS: TM – Text mining, ACO – Ant colony optimization, AACO – Advanced ant colony optimization techniques, T-Structures.

1. INTRODUCTION:

Content Analytics, generally called substance mining, is the route toward breaking down colossal collections of made resources for making new information and to change the unstructured substance into sorted out data for use in the further examination. Content mining distinguishes actualities, connections, and statements that would somehow or another stay covered in the mass of printed huge information. These actualities are separated and transformed into organized information, for investigation, perception (for example through HTML tables, mind maps, outlines), mix with organized information in databases or stockrooms, and further refinement utilizing AI (ML) frameworks.

Standard catchphrase search recovers the majority of the records that contain the watchwords you've chosen. That is unbelievable to the degree it goes, yet in spite of all that you have to scrutinize every last one of those files to check whether they truly contain any information that is material to your chase.

It can see certified ramifications in light of complex Natural Language Processing (NLP) estimations, which empower it to see practically identical thoughts – paying little mind to whether they've been imparted in by and large various ways, or with different spellings. A request using substance mining will perceive substances, associations, and proclamations that would somehow remain shrouded in a mass of a free substance or unstructured data.


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COMPARISON ON DETECTING THE AILMENT USING PALMISTRY ALGORITHM IN IMAGE PROCESSING

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Abstract: The undertaking is planned for building up the use of palmistry to locate the human malady from their palm. Palm seeking is a phenomenal issue in the medicinal services framework. In the proposed strategy, Palm scrutinizing is examined from the points of view of model affirmation, heuristics, and learning. Two sorts are evacuated in this methodology. Profound learning is one of the methodologies in AI that has an abnormal state of acknowledgment.

In customary palmistry has utilized in the past procedure of space science. It is the deformities the future from the palm print of a person. In this venture the palm print utilities for an imperfection the illness with the assistance of Artificial Immune System (AIS) to get to the human conduct. CLONALG is a calculation, which is executed to identify the imperfection region. While filtering of palm print we can without much of a stretch discover the deformity territory. The character distinguishing proof has been the palm print altogether dependent on Convolutional Neural Networks (CNN).

KEYWORDS: CLONALG, CS – Clonal Selection, AIS – Artificial Immune System, CNN – Convolutional Neural Networks.

INTRODUCTION:

In the event that you are correct given, your left hand is "uninvolved" and shows your obtained potential - those characteristics, breaking points, and tendencies with which you were considered. Your right hand is "dynamic" and reveals how you have either made or changed those ordinary natural traits. If you are left-given, the turnaround applies, so your right hand is the inert one while your left hand being dynamic reveals what you have deliberately and intentionally completed with the potential you have gained. All things considered, the shape, concealing, and surface of the hands and fingers notwithstanding the advancement of the critical lines will be similar in two hands. These are the people who for reasons unknown have sought after the physical, enthusiastic and mental lanes in their one of a kind life map.

Hence, the palmistry has to be implemented in the astrological field. This is the innovation technology of this palmistry techniques used to implement the ailment in the human hand via palm-print for the health care system. It is applicable to doing the process which helps of the AI (Artificial Intelligence) and it's applied to get the palm-print for the given people then proceed to examine the ailment through the line waves and pressure.

RELATED WORKS:

Hardik Bhalchandra Pandit, Dipti Shah et al. Proposed an Computerized picture handling for assess the diseases. Author has taken the palmistry method to discover the disease from the palm structure, which is taken as an image and evaluate through the advanced picture preparing and investigation procedure [1].

Maduguri Sudhir, E.V.Narayana et al. determines a picture handling framework. This divides the palm into few areas. By this Technique the particular portion will be taken to the medical research. Like the finger print used to find and restorative science etc [3]. Prateek Agrawal et al. represent a fluffy based master framework for specifying the data of individual palm. The palm highlights the headline, heart line and life saver [4].

Adams Wai-KinKong, GuangmingLu et al. said to a method for palm print comparable with DNA, Which is calculated by the three chief lines and few bits of powerless lines. Because we examine the data has been very clear manner [5].



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Morality Prediction Model in Cardiovascular Disease with Significant Feature Selection and Hybrid KNN Classification Technique

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Abstract: Nowadays morality rate is increasing globally due to heart disease. It is one of the leading health risk facing men today. So early detection of heart disease assist the patients to maintain a healthy life style. Several techniques are used in the medical field to detect or diagnose disease in view of patient family health history and some other aspects. However, developing a system to predict the heart diseases without any medical tests is still challenging. Machine learning (ML) approaches is suitable and effective in providing decision and prediction from enormous health care data. Several previous researches provide an overall view in ML methods for disease prediction but the accuracy of prediction is still needed to be improved. In this study, a novel framework is presented that intent at removing the unwanted features with Bacterial Colony Optimization algorithm and applies the Hybrid KNN algorithm with great accuracy in identifying the heart disease. This prediction model is developed with UCI Cleveland dataset with several known classification approaches. An enhanced model is presented with 99.83% accuracy in heart disease prediction. The presented study is compared with other classification approaches.

Keywords:Data mining, Machine learning, Feature selection, Heart disease, Hybrid KNN.

I. INTRODUCTION

Based on the data provided by world health organization (WHO), yearly 17.9 million humans are died because of cardiovascular diseases (CVDs) [1-2]. In India mortality occurs between the 30–59 years age-group people which are twice than that in the US [3]. Therefore the early prediction of this health issue may save human life and helps to reduce the death rate. Data mining (DM) provides a new way to cardiovascular disease prediction. Several DM approaches are utilized to found and extract required data from the medical dataset with least user inputs [4]. Researchers seek several ways to utilize the data mining in medical data to obtain an accurate prediction of cardiovascular diseases [5-8].

In order to use the machine learning algorithm in health care data it is important to remove the unwanted features which degrades the prediction accuracy [9, 10].

Therefore, a suitable attribute selection approach is required to obtain a great result in prediction. Selecting the appropriate feature selection approach is still a challenging issue among the researchers [11].

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However, it is not easy to identify the proper technique and select the significant features. Hence the proposed system introduces the Bacterial Colony Optimization algorithm in finding the finest combination of essential features among the 13 attributes that work well with the classification algorithms.

The Knn classification algorithm is enhanced in the present study to improve the prediction accuracy. Along with the Euclidean distance parameters such as class center, distance, Item Weight to Class and Item's strength are added to evaluate the disease risk level. The experiment is performed on the UCI Cleveland dataset generally used by the ML researchers. Six important features were selected and applied five classification algorithms to develop the prediction system. The capability of the proposed approach is evaluated by comparing the maximum accuracy attained by the HKNN technique against the maximum accuracy attained in the former research.

The remaining section of this research is arranged as: section II describes the heart related research implemented by ML approaches. Section III and IV discuss the problem statement and dataset description respectively. Section V presents the classification techniques applied in the proposed system. Section VI describes the experimental setup and result obtained in the study. Eventually section VII provides the conclusion.

Related works

The existing work which is closely related to the proposed study is reviewed in this section. The following research work is implemented on the Cleveland dataset.

Saxena et al [12] present a heart disease prediction framework by the classification rule based on decision tree structure. This approach predicts the risk level of patients based on their health parameters and assists non-expert doctors to make correct decision about the patient heart disease risk level with the accuracy of 86.3 % in testing phase and 87.3 % in training phase. P.K. Anooj [13] introduced a weighted fuzzy rule-based prediction system. The researchers create two important factors such as automatic fuzzy rules creation and the weighted procedure which provides a powerful fuzzy system for heart disease prediction. The author implemented this system on Cleveland, Hungarian and Switzerland dataset with the accuracy of 0.6, 0.4 and 0.5 percentage respectively.

T. Santhanam and E.P. Ephzibah [14] developed a prediction model based on Principal Components Analysis (PCA) as a feature selection method and feed forward neural network as a classifier with an accuracy of 95.2%. Authors compared this system with regression model that obtain 92.0% accuracy.V. Krishnaiah et al [15] present a model for heart disease prediction by removing the redundancy of the

HIGH POTENTIAL MARKET BASKET ANALYSIS BY COLLABORATIVE FILTERING OF HETEROGENEOUS ITEMSET WITH UP-TREE

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ABSTRACT

One of promoting information examination applications is that the development of counsel framework. Increment the standard of the guidance framework is doable once breaking down a greater amount of data, which may be gotten from outer heterogeneous sources. also, anticipated framework mining high utility thing sets from value-based databases alludes to finding the thing sets with high benefits. Here, the which methods for thing sets utility is intrigue, significance, or productivity of partner degree thing to clients. a larger than usual scope of up-and-comer thing sets for top utility thing sets corrupts the mining execution regarding execution time and house request. The paper objective is utilized to inquire about the benefit things inside the client everyday life dealings set. during this postulation, partner degree algorithmic program, especially utility example development (UP-Growth) is utilized for mining high utility thing sets with a gathering of successful techniques for pruning up-and-comer thing sets. the learning of high utility thing sets is kept up in an exceedingly tree-based association that is called as utility example tree (UP-Tree) such applicant thing sets might be created with proficiency with checking the data. Toward manufacture clear the removing demonstration and be from sweep particular list normally, a thick progressive system association, name UP-Tree is worn, to save the in succession of dealings and raised adequacy thing set. EEGU and EEGNU strategies zone unit connected to weaken the overestimated utilities keep inside the hubs of worldwide UP-Tree. In this paper examination a web markets and market innovations cause the need for retailers to look into clients' conduct. the present framework viable examination could improve every provider's gainfulness, nature of administration and customer fulfillment that pulls expanded enthusiasm for investigation

Keywords: Association Rule, Lift, TWU, TU, DGN Itemset Minin, UP-Tree

1. INTRODUCTION

Information mining is identifying with finding new information terribly} very store of information. preparing, the extraction of concealed whole-world destroying information from tremendous databases, it is a hearty new innovation with decent potential to help firms consider the principal significant information in their data distribution centers. preparing apparatuses anticipate future patterns and practices, enabling organizations to make proactive, information driven choices. the mechanized, planned examinations offered by handling pass in transit aspect the investigations of past occasions give by show apparatuses great of end look after frameworks. Information mining tackle self control counter industry inquiry that in former times be what's more serious determination. information {processing} is that the way toward applying these techniques to learning with the goal of revealing shrouded designs. it's been utilized for quite a long while by

organizations, researchers and governments to filter through volumes of learning like aircraft

explorer excursion records, evaluation information and staple scanner learning to give research reports. An essential explanation behind exploitation information preparing is to help inside the investigation of accumulations of perceptions of conduct. Such learning ar inclined to co dimensionality owing to obscure interrelations. partner degree unavoidable truth of learning mining is that the sub sets of information being dissected probably won't be illustrative of the absolute area, and in this way probably won't contain tests of bound significant connections and practices that exist crosswise over elective components of the space.

Market Basket Analysis or MBA could be a field of displaying strategies dependent on upon the possibility that on the off chance that you buy a precise group of things, you're extra (or less) apparently to look for another bunch of tems MBA incorporates assurance and expectation client's conduct bolstered use example of past

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SCALABLE LEARNING FOR IDENTIFY AND RANKING PREVALENT NEWS TOPIC USING SOCIAL MEDIA

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ABSTRACT

This paper studies however networks in social media will facilitate predict some human behaviors and individual preferences. Especially, given the behavior of some people in a very network, however will infer the behavior of different people within the same social network is analyzed. This might facilitate higher perceive behavioural patterns of users in social media for applications like social advertising and recommendation. To deal with the quantify ability issue, the paper Newman Clustering (NMC) model with an edge-centric bunch theme to extract distributed social dimensions. With distributed social dimensions, the NMC approach will expeditiously handle networks of ample actors whereas demonstrating a comparable prediction performance to different non-scalable ways. Additionally, the paper includes a replacement construct referred to as lot detection analysis. Since several machine-driven prediction ways exist for extracting patterns from sample cases, these patterns will be won't to classify new cases. Clique Detection Models (CLC) contains the tactic to remodel these cases into a regular model of options and categories. As a result, the behavior of people is collected through their posts in a very forum and so they're classified as positive/negative posts. The cases are encoded in terms of options in some numerical kind, requiring a change from text to numbers and assign the positive and negative values to every review word to classify the word within the review document.

KEYWORDS:

Social Media, Edge Centric Model, Graph Clustering, Clique Detection, Topic Modeling.

I. INTRODUCTION

Data mining is that the method of mechanically discover the dear data in immense repositories. the information mining techniques are deployed so as to search out novel and helpful patterns which may otherwise stay unknown. They conjointly offer capabilities to predict the results of a future police investigation. Figure 1.1 shows the data discovery in info (KDD), that is that the overall method of changing data, into helpful data. data processing has the simplest assortment of techniques to induce the specified output for the dataset. There are variety of elements concerned within the data methodology process, it represent the design of an information mining system

- Preprocessing
- Data cleansing and preparation
- Association rule mining
- Clustering
- Summarization

Graph mining techniques are categorized into following groups.

- Graph cluster; is that the task of grouping the vertices of the graph into clusters taking into thought the edge structure of the graph in such how that there ought to be several edges at intervals every cluster and comparatively few between the clusters? Graph cluster within the sense of grouping the vertices of a given input graph into clusters graph cluster relies on unsupervised learning technique within which the categories aren't noted in before clustering. The graph clusters are fashioned supported some similarities within the underlying graph structured knowledge graph.
- Graph Classification; in graph classification the most task is to classify separate, individual graphs in graph information into two or additional categories/classes. Classification relies on supervised/semi supervised learning technique within which the categories of the info area unit outlined in previous

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SIGNIFICANT FEATURES AND IDENTIFICATION OF HEART DISEASE PREDICTION BY USING GENETIC ALGORITHM IN DATA MINING TECHNIQUES

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ABSTRACT

The cardiovascular disease prediction becomes one amongst the most important issues of clinical information analysis. There is great deal of knowledge out there inside the health care industries. The informed decision or prediction is made up of vast quantity of raw health care information as data from the information mining. There square measure solely restricted studies that play a significant role on attention towards the numerous options of disorder prediction. To extend the accuracy of disorder prediction the numerous options square measure known by victimization data processing techniques. There square measure several prediction models square measure developed by victimization totally different mixtures of feature and conjointly several classification techniques square measure out there such as: K- NN, call Tree, Naive Bayes, etc, Genetic algorithmic rule is with efficiency wont to predict the accuracy of the disorder. The victimization constant algorithmic rule, the simplest feature choice is done at the side of the right mutation result.

Keywords— Data mining, Classification algorithms, Feature selection, Heart disease prediction

I.INTRODUCTION

The non trivial extractions of an implicit antecedently unknown and probably helpful info concerning knowledge is termed as knowledge mining[8]. A user - oriented approach to novel and hidden patterns within the knowledge are provided by the info mining technology .To improve the standard of service by the attention directors will use tha discovered data. The discovered data can even be employed by the medical practitioners can to cut back the amount of adverse drug result, to counsel more cost-

effective therapeutically equivalent alternatives. Following are a number of the necessary areas of interests wherever data processing techniques are often of tremendous use in health care management.

Traditionally, higher cognitive process in health care is predicated on the bottom data, lessons learnt within the past resources and funds constraints. However, data processing techniques and information management technology are often applied to form information wealthy health care atmosphere.

Knowledge discovery in medical databases: data processing is a vital step of information discovery. In recent years it's attracted quite a little of interest in information trade [2,10]. Knowledge discovery method consists of associate unvarying sequence of knowledge cleansing, information integration, information choice, data processing pattern recognition and data presentation. In particulars, data processing could accomplish category description, association, classification, clustering, prediction and statistic analysis. Data processing in distinction to ancient information analysis is discovery driven. data processing could be a young knowledge domain field closely connected to information reposition, statistics, machine learning, neural networks and inductive logic programming.

Data mining provides automatic pattern recognition and tries to uncover patterns in information that are troublesome to sight with ancient applied mathematics ways. Without data processing it's troublesome underneath stand to comprehend to appreciate} the total potential {of information of knowledge of information} collected at intervals care organization as data under analysis is very large, extremely dimensional, distributed and unsure. Massive

EXPERTISING COLLABORATION ONLINE LEARNING ENVIRONMENT WITH REFLECTIVE THINKING BY CLASSIFICATION MODEL

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ABSTRACT

This paper analyze teachers' reflective thinking by coordinating the inductive substance investigation and content grouping techniques. The current examinations procure intelligent deduction classifications by playing out an inductive substance investigation and structure our content characterization calculation in classifications, so this investigation enlarges the manual coding technique. This investigation applies prepared grouping model to an enormous scale and unexplored discourse informational index, to extensively comprehend the educators' appearance. This paper additionally yields six sorts of perceptions of characterization results: instructors' appearance level representation and educators' appearance advancement representation. By utilizing the classifications picked up from inductive substance examination, we outwardly present instructors' appearance level in the wake of finding the eventual outcomes of substance plan future request model.

KEYWORDS:

Data Mining, Teacher's Reflection Level, TF-IDF Classification, Visualization Learning

I. INTRODUCTION

Data mining is a process which finds useful patterns from large amount of data. The paper discusses few of the data mining techniques, algorithms and some of the organizations which have adapted data mining technology to improve their businesses and found excellent results.

The improvement of Information Technology has produced massive measure of databases and gigantic information in different regions. The examination in databases and data innovation has offered ascend to a way to deal with store and control this valuable information for further basic leadership. Information mining is a procedure of extraction of valuable data and examples from tremendous information. It is furthermore called as data disclosure process, taking in mining from data, data extraction or data/plan examination.

Data mining is an intelligible method that is used to glance through huge proportion of data to find accommodating data. The goal of this framework is to find plans that were already dark. At the point when these models are found they can further be used to choose explicit decisions for headway of their organizations. Three steps included are

- Exploration
- Pattern Identificatin
- Deployment

Arrangement is the most generally connected information mining procedure, which utilizes a lot of pre-ordered guides to build up a model that can characterize the number of inhabitants in records on the loose. Extortion identification and creditrisk applications are especially appropriate to this kind of investigation.

This methodology much of the

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THE MAJOR ROLE OF PREPROCESSING THE CLINICAL DATA FOR FEATURE EXTRACTION

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Abstract:

In modern trend world, the every field have produced massive data and it may help to feature extraction. Based on the data the technical area of data mining will mining the data and produce a most successful prediction result for the upcoming problems and growth all other field. In the area of medical science produces a lot of massive data either organized or unorganized. As a technical data worker need to segregate the data and making an organized one. The pre-processing of medical data for feature reduction and extracting the influential parameter for prediction is the hectic task. In this paper, the preprocessing techniques applied in the In Vitro Fertilization (IVF) data to clean and find the influential data for classification and prediction. IVF data is nothing but the infertility treatment data which who move on Artificial Insemination. Based on the patients test results and survey of personal details that are combine into a formatted and it have 19 attributes. The preprocessing techniques like Genetic Algorithm (GA), Ant Colony Optimization (ACO) and Relative Reduct Algorithm (RR) are applied in the data for feature selection as well as removing the noisy data and redundant data from the data set. So from this study we can find which algorithm act effectively for reduces unwanted data and produce the highly influential data for classification.

Keywords: IVF, Data Mining, Genetic Algorithm, Ant colony optimization, Relative Reduct Algorithm.

I. Introduction

The healthcare domain is recognized for its ontological complication and diversity of medical data standards and variable data quality. Making an effective and practically usable discovery in medical data is of ongoing importance in current decades due to the addition of privacy issues in patient data. Computer-aided knowledge discovery methods plays an important role in transformation and understanding of concepts related to health and illness. From the twentieth century, many countries have chosen e-health as a prioritized national program [1]. It provides standardized aggregation of patients' clinical information and health care services by providing instant access to this information for healthcare professionals and patients too. Unequivocal methods, tools and methodology are needed for the application of Data Mining in health care. Both structured and unstructured data is available for research as a result of progress in the computerization of data in the health care industry [2]. Even though, there are number of algorithms are available to classification related to specific domains in health care is still to be resolved. The health care industry is one of the most information intensive industries. Health care is an intensive research field and largest consumes of public health. Human medical data are the most rewarding and difficult of all biological data to mine and analyse [3] [4]. When the database is large, it is very difficult for the medical researchers, physicians and health care providers to use the stored data more effectively. The medical database usually contains data such as patient records, physician diagnosis and monitoring information to save lives. The medical decision support system was designed to reduce medical errors and costs, earlier

Prediction Model for Occupational Incidents in Chemical and Gas Industries

Ganapathy Subramaniam Balasubramanian, Ramaprabha Thangamani

Abstract: Understanding occupational incidents is one of the important measures in workplace safety strategy. Analyzing the trends of the occupational incident data helps to identify the potential pain points and helps to reduce the loss. Optimizing the Machine Learning algorithms is a relatively new trend to fit the prediction model and algorithms in the right place to support human beneficial factors. The aim of this research is to build a prediction model to identify the occupational incidents in chemical and gas industries. This paper describes the architecture and approach of building and implementing the prediction model to predict the cause of the incident which can be used as a key index for achieving industrial safety in specific to chemical and gas industries. The implementation of the scoring algorithm coupled with prediction model should bring unbiased data to obtain logical conclusion. The prediction model has been trained against FACTS (Failure and Accidents Technical information system) is an incidents database which have 25,700 chemical industrial incidents with accident descriptions for the years span from 2004 to 2014. Inspection data and sensor logs should be fed on top of the trained dataset to verify and validate the implementation. The outcome of the implementation provides insight towards the understanding of the patterns, classifications, and also contributes to an enhanced understanding of quantitative and qualitative analytics. Cutting edge cloud-based technology opens up the gate to process the continuous in-streaming data, process it and output the desired result in real-time. The primary technology stack used in this architecture is Apache Kafka, Apache Spark Streaming, KSQL, Data frames, and AWS Lambda functions. Lambda functions are used to implement the scoring algorithm and prediction algorithm to write out the results back to AWS S3 buckets. Proof of concept implementation of the prediction model helps the industries to see through the incidents and will layout the base platform for the various safety-related implementations which always benefits the workplace's reputation, growth, and have less attrition in human resources.

Keywords: Occupational incidents, Prediction Model, Machine Learning, Real-time processing.

I. INTRODUCTION

Research and Development department of organizations and industries might have challenges when they try to implement a solution. There might be a lot of unknowns when providing the input to relate to the concept along with computational constraints. Implementation of new algorithms and new models have a similar step-up process to verify and validate the real-time scenarios. The Scoring

algorithm [15] and SafeOne, Prediction Model for Support Vector Machines (SVM) that is developed for prediction of occupational incidents, definitely need an architecture to get through the acceptable implementation. In-flow data should constantly monitor to compute the exact score and provide the expected output. Developing the proof of concept (POC) will help the organization to see-through the potential outcome of the solution and also helps to identify the gaps in it [23]. It will also provide the stakeholders to internally evaluate the promising solution which helps to reduce the unnecessary risk. Design expectations and potential timeline can also be determined before the full-scale implementation. Applying a defined algorithm is not an easy task. The workflow should be determined and a state of maintenance should be established. As a part of POC, it is necessary to build an interface to visualize the best possible results [7][12].

II. PROCESS MODEL

An evolutionary prototyping process model, as shown in Fig. 1, is being used to build this proof of concept (POC) which constantly helps to refine the solution [10]. Since the implementation of the Scoring model and SafeOne prediction model is complex and preliminary outcome is unclear and sporadic. The prototyping model helps to evaluate the accuracy of the results, factors to be modified, missing factors and remove the outliers. This helps to improve the overall solution while they are being built. Algorithms are never done, but it always maturing as the application of the factors and in-flow data changes [2][12].

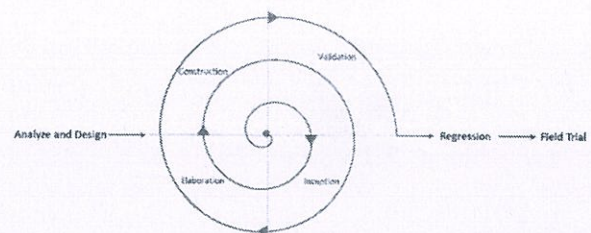


Fig. 1. Evolutionary prototyping process model (Spiral model)

A. Inception

Requirements and Use cases have been well defined to achieve the outcome of the algorithms. The primary goal is to predict the particular zone where it may have the potential to expose to the occupational incident by classifying the zone between Danger, Caution and Good. Continuous streaming of inspection data and sensor data flows through the pipeline.

¹ SVM Model is being developed as a part of Research & Development
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Longitude Recognition of Satellite Broadcasting Depiction to Discerning the Filed for Agronomy by using Data Mining Algorithms

V.P. Muthukumar, S. Subbaiah,

Abstract: It focused on the degree and longitude of a geographic picture taken from the satellite in horticulture. This is gotten by applying data mining strategies that get off the embedding to perceive the quality behind the field of Agri. Data mining is a method of isolating the required data from plenty of datasets. It applies in different areas like research and science applications. The image gathering from the satellite-reliant on the point of longitude which contains compared incorporate decision, subjective subset gets together with pre-preparing, plan, Zero R, batching, 10 cross-endorsements, and portrayal. The pre-dealing with procedure expels plenitude information from the given approaches of information with the supports of K-means. The pre-dealing with method expels excess information from the given approaches of information. The insignificant data from the given volume is cleaned; it moves to change the data into a fathomable game plan. Next, it bundles the data according to their similarity between them reliant on it's a mean deviation. Hence, the objective has manipulated by Zero R, to perceive the inadequate framework on the photos regarding the land area taken from the satellite. The information dealing with the approach is done by the CFS system sought after by the 10 cross-endorsements. The result focused on the accuracy of an image and the degree and longitude. The perfect result is given by this technique with the strangest measure of precision extent.

Keywords: Pre-processing, K-means, Aggregation, RIPPER Classifier (Linear Regression), Forward Selection, Zero-R, 10 Cross-Endorsement, Clustering (Density-based Cluster), and Visualization.

I. INTRODUCTION

Meaning the satellite symbolism to utilize the information for basic leadership during this time are typically done physically by a human for diminishing the labor and produce the best answer for Agri. In this examination, has going to interpret the satellite symbolism by utilizing a man-made consciousness strategy explicitly utilizing crossover classifier, Clustering and pre-handling to end up helpful information for basic leadership, particularly for exactness agribusiness and agroindustry.

Movements in both picture taking care of timetables and correspondence systems now (genuinely) change the picture

for farmers. The proportion of picture getting ready applications in careful agribusiness is growing persistently with the availability of higher-quality estimations joined with current counts and extended credibility to merge various wellsprings of information from satellite imagery and sensors arranged in fields. This article bases on the employments of the picture getting ready in exactness cultivating.

Certifiable worries in horticulture are water weight, nature of yields, and the utilization of pesticides. Giving data and watching water framework, paying little heed to whether fake or typical, is possible by following satellite imaging of fields after some time. Applications in exactness cultivating license mapping of immersed landscapes at lower costs. Water furthermore impacts the warm properties of plants. Subsequently, dealing with infrared imaging offers extra plans to reprieve down and screen water framework. The assessment from infrared imaging would then have the option to be used in pre-gathering errands, to pick whether or even where to harvest.

II. RELATED WORKS

H. Wang et al. portrayed a brought together profound CNN that recognizes the situation of an antique in remote detecting pictures. The component maps on the article with the case relapse at a shot. The origin module deals with the inadequate preparing dataset [3].

Z. Deng et al. clarified the exact vehicle-proposition arrange (AVPN), which joins the various leveled highlight map on the little include discovery. The area of a vehicle characterized by the R-CNN, which joins the AVPN with vehicle organizing [4]. X. Han et al. depicted a quicker area based convolutional neural system (Faster R-CNN) for comprehending the powerful free geospatial object discovery structure. The precision of a pre-preparing component to improve by the productivity towards multi-class geospatial object recognition [5].

Yang Long et al. proposed an unaided score-based bouncing box relapse (USB-BBR) strategy joined with the jumping boxes of districts improved by the non-most extreme concealment calculation. elliptic Fourier change based histogram of situated inclinations and nearby parallel example histogram Fourier are utilized to remove the preparation sets [6].

Kun Tan et al. proposed different classifier frameworks (MCS) that give outrageous learning machine (ELM), multinomial calculated relapse (MLR), and K-closest neighbor (KNN) classifiers.

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Design and Implementation of MPVLC Li-Fi Model for End-To-End Wireless Data Transmission

A. Gayathri, S. Mohanapriya

Abstract: Li-Fi system is a recent and brilliant technology which is utilized visible light as a medium for multimedia data transmission. In Li-Fi communication system, transfers data in the form of light signals as an alternative of Wi-Fi. The Li-Fi technology supports transmission of multimedia data in the way of light particles by sending the multimedia data via LED bulbs that make changes in faster transmission. The Li-Fi with hardware and software model creation with many parameters that must be considered while implementing a Li-Fi based transmission system prototype which is high data rate, distance and the LOS. These parameters are taken for major component when modelling a Light Fidelity system. The main problems in the implementation of an improved data rate at low network coverage and powerless location multi point VLC system and solar component are the range and cost effective model. The VLC source component and destination component must be compatible for high data rate. The conventional lighting technique in communication feels from intrusion and maximum delay possibilities. Solution for the above light based transmission problems in implementation; VLC is a preferred communication model because of its maximum throughput and secure transmission from light particles. The proposed Multi Point Visible Light Communication Li-Fi model provides high-speed communication to achieve better capacity, efficiency, and availability at low network coverage than existing lighting technology.

Keywords: Li-Fi, LED, Solar Panel, Wireless, Multimedia Data, PC, Mobile.

I. INTRODUCTION

The Visible Light Communications is always progress the communication by light source. It sends the data via the LED bulbs is obtained by having the light as a communication medium from the Li-Fi model to represent a logic signal rate respectively [1]. A receiver device either connected with solar panel, photodiodes, camera will detect the data fetching from the transmitter device and will connect the frequency [2]. When the destination identifies the light particles, it is activated as value as "1" and when it knows not activated the light at all from the source part, it is activated as a value "0" [3]. By using the light state as activate and deactivate, the source can pass 0's and 1's.

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This is the easiest model that linearly used for wireless transmission. The different levels of light colors between activate and deactivate state open for passing high data rate information. Visible light communication motivated by much advancement including immunity to challenge with earlier communication systems, for huge unregulated bandwidth (THz) [4]. Visible Light model due to its short range communication can be utilized to eliminate data traffic and signal malicious in next generation networks. VLC is a part of wireless communication that can be allowed to solve huge communication problems [5].

Visible Light Communication is pointed as an effective target option for next generation wireless communications network and it is attain the improving focus in the last years [6]. VLC is a modern technology which takes entire advancement of Light Emitting Diodes for the multipurpose of illumination and data communications at very faster. VLC is a good light energy source and green technology with the effective sense to recreate models to solve the problem near future benefits. It is capable to provide solutions for several applications including wireless local area, personal area, and heterogeneous networks, indoor localization and navigation, vehicular networks, providing an amount of data size from a 5×10^2 Mbps to 10×10^2 Gbps [7]. Li-Fi is a part of VLC that exhibits high-speed, bidirectional, fully networked communications for fast transmission.

When comparing VLC with RF communication, VLC has number of advantages over RF technologies in term of bandwidth, VLC has 400 THz unlicensed band for communication where RF has limited and regulated bandwidth ≈ 300 GHz [8]. Another advantage of VLC is the low implementation cost and low power consumption due to the advancement of LED light bulbs that is used for both data communication and illumination where RF requires its own base station which consumes more power. As a result, LEDs incoming light can be detected using different types of receivers such as image sensors which make it possible to detect light-wave carrying data from the transmitter [9].

II. LITERATURE REVIEW

A. Submission of the paper

The light emitting diode which provides high modulation bandwidth for communication purposes as well as illumination.

Graphing Model of Prediction Data for Occupational Incidents in Chemical And Gas Industries

Ganapathy Subramaniam Balasubramanian, Ramaprabha Thangamani

Abstract: Constant streaming of data for any instances at such high volumes provides insight in various organizations. Analyzing and identifying the pattern from the huge volumes of data has become difficult with its raw form of data. Visualization of information and visual data mining helps to deal with the flood of information. Constant streaming of data for any instances at such high volumes provides insight in various organizations. Analyzing and identifying the pattern from the huge volumes of data has become difficult with its raw form of data. Visualization of information and visual data mining helps to deal with the flood of information. Visual data representation takes the data and its results to all the stakeholders in a meaningful manner which comes out of the data mining process. Recent developments have brought a large number of information visualization techniques to explore the large data sets which can be converted into useful information and knowledge. Observations and inspection data gathered from chemical and gas industries are being piled up on a daily basis as raw data. Continuous analysis is a new term evolving in the industry which continuously performs on the streaming data to have real-time analysis and prediction on-live. In this paper, usage of the various graphing model as per the respective information obtained from the organization have been discussed and justified. It also describes the value addition in making the decisions by representations through graphs and charts for better understanding. Heatmap, Scattergram and customized Radar plots the analyzed data as in the required format to visualize the prediction done for the occupational incidents in chemical and gas industries. As a result of the graphing model, representation provides a higher level of confidence in the findings of the analysis. This fact takes a better visual representation technique and transforms them to provide better results with faster processing and understanding.

Keywords: Occupational incidents, Graphing Model, Charts and Graphs, Continuous Analysis, Real-time processing.

I. INTRODUCTION

Presentation of the analyzed data is an important step to visualize the information and findings for a better understanding. Meaningful visualization delivers the needed result to the organization to make the decision in a clear way.

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Tabulation and graphical methodologies convey the result and its message in a better way. Visual representation of the data cannot be done without understanding the underlying properties of the data types in the domain. Data often deals with values and calculations which would be measurements, observations, calculated numbers, percentages or descriptions of the information. Basically, data are two types: constant and variable. Constant is a value that does not change, while a characteristic, number, or quantity that increases or decreases over time or takes different values in different situations is called variable. Due to unchangeable property, the constant is not used and only variable is used for summary measures and analysis [2].

Visual representation like charts and graphs provides insight into the data and helps to summarize through depiction and figure out the pattern out of it. The purpose of the data analysis is to perform calculations on the raw data using an appropriate algorithm to achieve the results to conclude the solution. A spreadsheet application like Excel paves a good starting point to perform such calculations and to display the analyzed results. The design principles for generating the graphical methodology will depend on the purpose to be used for. Graphical representation keeps the data extremely simple and avoids raw tabular data and/or text. Tabular data presentation should start with simple graphs to see for any outliers or spikes. Definition the verification points helps the analysts to determine the pattern or value of it [21].

II. PROCESS MODEL

The graphing model follows the three-step process: Initiation, Filtration, and Drill-down Data. In the Initiation process, getting an overview of the data is an important functionality. This helps to identify the patterns and focuses on the travel path of the data being plotted. This may end up by finding one or more patterns around the data. To understand the data behind the pattern, analysis has to be performed by drilling down the details. The graphing model may use all three steps for the visual representation of the data. Graphing model processes are useful for analyzing the high-level view of the data and to identify the interesting subsets inside the same. Focusing on the subset of the data through the graphing model provides the interlinks between the items and also to pick the right path within it. Drill down of data to get the details of the data is important to explore further interesting subsets.

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DEEP SEGMENTATION BASED ALEXNET WITH MULTILAYER PERCEPTRON MODEL FOR AUTOMATED DETECTION AND CLASSIFICATION OF MAMMOGRAM BREAST CANCER IMAGES

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Abstract

Breast cancer is a crucial health issue among women in all over the globe. The early identification of breast cancer using mammogram leads to high survival rate. This paper develops a new deep segmentation based AlexNet with Multilayer Perceptron (MLP) model called DS-ANMLP for automated detection and classification of breast cancer. The proposed DS-ANMLP model involves a series of processes, namely preprocessing, segmentation, feature extraction and classification. At the earlier stage, preprocessing takes place to remove the unwanted noise exist in the image and also enhance its quality. Then, the preprocessed image undergoes segmentation by the use of Faster Region based Convolution Neural Network (R-CNN) (Faster R-CNN) with Inception v2 model. Afterwards, AlexNet model is applied as a feature extractor to extract the feature vectors from the segmented image. Finally, MLP is used to classify the images into different kinds of breast cancer and normal images. A series of simulations are carried out to ensure the betterment of the proposed DS-ANMLP model. The experimental results demonstrated the effective performance of the proposed DS-ANMLP model over the compared methods in a considerable way.


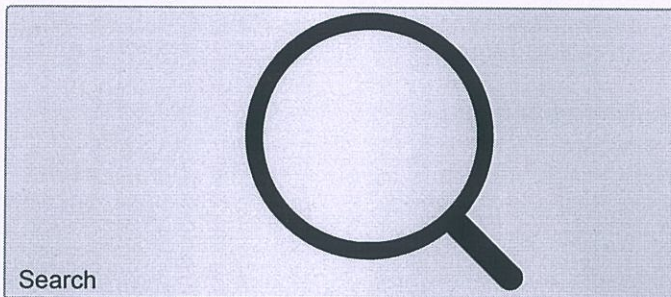
Keywords: Breast cancer, Classification, Segmentation, Feature extraction, Mammogram

1. Introduction

Breast cancer is common form of cancer among women, which is the second leading cause of death. Based on a survey, world social insurance association in 1960's has stated that the development of breast cancer has been increased exponentially all over the world [1]. Primary diagnosis of tumor tends to extend the recovery value or survival rate of the patient. Mammography is used for early prediction, localization and remedy for treating the breast

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A hybrid approach for mortality prediction for heart patients using ACO-HKNN

- C. Sowmiya¹✉ &
- P. Sumitra¹

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Abstract

Heart disease is the major cause of mortality in the world. The heart disease prediction from the clinical data is deliberate as the most important subject in clinical data analysis. Especially the size of data in health care is vast. Data mining (DM) assists decision and prediction from the raw health care data. DM converts the large collection into useful information. Several existing studies utilize the data mining approaches in heart disease prediction. There is only little research focused on selecting the important features which play a significant role in predicting heart disease is less. The aim of this study is to provide an enhanced approach with novel feature selection and classification technique to predict mortality in congestive heart failure patients. Through this approach the death rate due to heart disease will be decreased gradually. The ant colony optimization (ACO) algorithm is utilized for selecting the best feature for hybrid K-nearest neighbor (KNN) classifier. The proposed approach is compared with the prior classification techniques such as the Support vector machine, Naïve Bayes,

A STUDY ON PERFORMANCE APPRAISAL OF THE EMPLOYEES OF CHRISTY FRIEDGRAM INDUSTRIES IN TIRUCHENGODE

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ABSTRACT

Performance appraisal is a vital tool to measure the frameworks set by any organization to its employees. This study examined the status of the performance appraisal system of Christy friedgram Industry on Performance Appraisal. The respondents of this study were tenured employees. The convenient sampling method was used in the selection of respondents. Interviews, focus group discussion and survey questionnaires were the main instrument used in this study. The objective of the study is to get an insight into the relative importance of performance appraisal in organization. The impact of the performance appraisal system towards the performance of the respondent's in term of communication, skills and responsibility. The result of the study showed that the performance appraisal system of the company are in place, aligned with the vision and mission of the institution , and is accurate in terms of content and purpose. On the other hand, the results reflected that the performance appraisal system of the company has brought about both positive and negative impact on the employees performance.

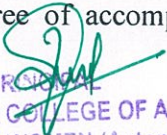
INTRODUCTION

1.1INTRODUCTON ABOUT THE STUDY

Performance Appraisal is the important aspect in the organization to evaluate the employees performance. It helps in understanding the employees work culture, involvement, and satisfaction. It helps the organization in deciding employees promotion, transfer, incentives, pay increase.

Meaning

Performance Appraisal is a method of evaluating the behaviour of Employees in the work spot, normally including both the quantitative and qualitative aspects of hob performance. Performance here refers to the degree of accomplishment of the tasks that make up an


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சீ. அகல்யா

உதவிப்பேராசிரியர், தமிழ்த்துறை

விவேகானந்த கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி)
எலையாம்பாளையம், திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா

முன்னுரை

ஒப்பீட்டு நோக்கில் தொல்காப்பியம் - நன்னூல் முழுவதையும் எடுத்துக் கொள்ளாமல் அவற்றில் உள்ள பொருள்கோள்கள் மட்டும் எடுத்துக் கொள்ளப்பட்டிருக்கிறது நூல் முழுவதும் எடுத்தால் பல்கிப்பெருகி அதையே ஒரு நூலாக்கம் செய்ய வேண்டிவரும் என்ற எண்ணத்தின் வெளிப்பாடே காரணம்.

தொல்காப்பியத்தில் தொல்காப்பிய உரையின் வழி தோன்றிய நன்னூல் இயல்பாகவே அதன் சூத்திரங்களை உள்வாங்கி வெளிப்படுத்தி இருக்கிறது எழுத்து, சொல் இரண்டிலும் இதன் இயல்பை காணலாம். சில சூத்திரங்கள் தொல்காப்பியத்தின் உள்ளடக்கங்களை அப்படியே கூறவும் செய்கின்றன. இதை அடிப்படையாக வைத்தே இரண்டு நூல்களுக்கான ஒற்றுமையினை இ. சாமுவேல்பிள்ளை தொல்காப்பிய - நன்னூல் என்று நூலாக்கம் செய்தார். இது 1858 இல் அச்சாகி வெளிவந்துள்ளது. நூலைப்பற்றி பவானந்தம் பிள்ளை நன்னூல் பதிப்பு முகவுரையில்

தொல்காப்பிய நன்னூல் என்பது தொல்காப்பியம் மூலத்திற்கும் நன்னூல் சூத்திரங்களுக்கும் உள்ள இயைபு காட்டப்பட்டுள்ளது. இது கி.பி. 1858 ஆம் வருடம் அச்சாகி வெளிவந்தது ஆயினும் அதனில் நன்னூல் பொதுப்பாயிரம் அச்சிடப்படவில்லை. எழுத்ததிகாரம் ஒரு சில சூத்திரங்கள் தவிர மற்றவற்றுக்கு இயைபுடைய தொல்காப்பியச் சூத்திரங்கள் இவை எனக் காட்டப்படவில்லை. ஆதலால் இந்நன்னூல் பதிப்பாள் அத்தொல்காப்பிய நன்னூல் குறை நீக்கிப் புதிதாகப் பதிப்பிக்கப்பட்டது என்றால் மிகையாகாது.'

என்று குறிப்பிடுகிறார் பவானந்தம் பிள்ளையின் இக்குறிப்பைத் தவிர வேறெந்தக் குறிப்பும் இந்நூலைப் பற்றி அறியப்படவில்லை. இந்நூல் முழுவதும் இரு நூல்களின் ஒத்த நூற்பாக்களை மட்டும் எடுத்து இயம்புகிறது இக்கட்டுரை தொல்காப்பியத்திற்கும் நன்னூலுக்குமான ஒத்த நூற்பாக்களை இயம்பாமல் ஒத்த கருத்துடைய பொருள்கோளைப் பற்றியும் அதன் வகைகளையும் அப்பொருள்கோளைக் கையாண்ட மற்றும் பொருந்திய விதத்தினையும் அப்பொருள்கோளிற்கு உரையாசிரியர்கள் வெளிப்படுத்தும் கருத்துகளையும் தொகுத்து வெளிப்படுத்துவதாக இக்கட்டுரையின் நோக்கம் அமைகிறது.

பொருள்கோள் இடமும் முறையும்

தொல்காப்பியர் பொருள்கோளைச் சொல்லும் இடமும் சொல்லும் முறையும் நன்னூலார் சொல்லும் இடமும் முறையும் வெவ்வேறானவை. தொல்காப்பியர் பொருள்கோளைப் பொருள்திகாரம் எச்சவியலில் குறிப்பிடுகிறார். நன்னூலார் பொருள்கோளைப் பொதுவியலில் குறிப்பிடுகிறார். நன்னூல் தான் பொருள்கோள் என்று விளம்புகின்றது. தொல்காப்பியம் மொழிபுணர் நிலை என்று இயம்புகிறது. பொருள் விளக்கும் முறையால் தொல்காப்பியர் மொழி புணர் நிலை என்று கூறுகிறார் என்பதை

இயற்கையாகத் தம்முட் கூடிப் பொருளுணர்த்துஞ் சொற்கள் என மியற்கையாகக் கூடிப் பொருளுணர்த்தாது விகாரப்பட்டுப் பொருளுணர்த்துங்கால்'

என்ற நச்சர் விளக்கத்தின் மூலம் அறியலாம் ஆனால் நன்னூலார் பொருளைக்கொள்ளும்



புறநானூறு சுட்டும் அறவியல்

முனைவர் கோ. இரவிச்சந்திரன்

தமிழ் உதவிப் பேராசிரியர், தமிழ்த்துறை
விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி)
எளையாம்பாளையம், திருச்செங்கோடு, நாமக்கல் மாவட்டம்

மலர்: 4

சிறப்பிதழ்: 3

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சங்க கால நூல்களில் தலையானதும், வரலாற்றுச் சிறப்புடையது மாக விளங்குவது புறநானூறு. அறம், பொருள், இன்பம், வீடுபேறு என்னும் வாழ்வின் உறுதிப் பொருள்களைக்கொண்டு புறப்பொருள் பற்றிய நானூறு பாடல்களைக் கொண்டுள்ளது. இதற்கு புறப்பாட்டு, புறம்பு நானூறு என்ற வேறு பெயர்களும் உண்டு.

புறநானூற்றுப் பாடல்கள் சராசரியாக பதினெட்டு அடிகள் கொண்டவை. இந்நூலைத் தொகுத்தவர் பெயரும், தொகுப்பித்தோன் பெயரும் அறியப்படவில்லை. புறநானூற்றுப் பாடல்கள் சாதி, சமய, இன வேறுபாடு அற்றவை. மனித வாழ்வியல் முன்னேற்றத்திற்கும் வளமான வாழ்விற்கும், உயர்விற்கும் வழிவகுக்கின்றன. இவை பொருட்சிறப்பும், கருத்துச் செறிவும், சொல் இனிமையும் கொண்டதாகத் திகழ்கின்றன. புறநானூற்றின் தனித்தன்மையானது, பல மன்னரையும் மக்களுள் சிறந்தாரையும் பாடியுள்ளமை தெரிய வருகின்றது.

அறம் - பொருள் - வரையறை

அறம் என்ற சொல்லுக்குப் பொருத்தமான “எதிக்ஸ்” (ETHICS) என்ற ஆங்கிலச் சொல் - இச்சொல்லிற்கு ஆங்கில அகராதி ‘தனி மனிதன் பிறருடன் தொடர்புக்கொள்ளத் துணை செய்யும் இயல்பான ஒழுக்கம் என விளக்கம் தருகின்றது’. எதிக்ஸ் என்னும் சொல் கிரேக்க மொழிச் சொல்லாகும். ‘எதேசு என்னும் வேர்ச் சொல்லடியாகத் தோன்றியது. முதன்முதலில் இவ்வடிச் சொல், பழகிப்போன நடத்தை, வழக்கம். மரபு என்னும் பொருளையே உணர்த்தியது. பின்னர் அவற்றுள் “நடத்தை” என்னும் பொருளே “எதோசு” (ETHOS) என்னும் சொல்லிற்குரிய சிறப்பு மிக்க பொருளாகப் போற்றப்படலாயிற்று. நாளடைவில் சொல்லடியாகத் தோன்றிய “எதிக்ஸ் ஒழுக்கத்தைப் பற்றிய ‘அறவியல் கலை’ என்று போற்றப்படும் நிலையை அடைந்துள்ளது.’

PRINCIPAL

திருமுருகாற்றுப்படை மற்றும் கந்தரலங்காரத்தில் உறவுமுறை ஒப்பீடு

முனைவர் ப. கற்பகராமன்

தமிழ்த்துறைத்தலைவர், விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி),
எளையாம்பாளையம், திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா.

1. முன்னுரை

ஒப்பீடு என்பது மனித இனத்திடம் மட்டுமே இருக்கக்கூடிய இயல்பான ஓர் உணர்வு, பசி, தூக்கம், அழகை ஆகியவை போல ஒப்பீட்டுணர்வும் மனிதனிடம் குடிகொண்டுள்ள ஓர் அடிப்படை உணர்வு. மனிதன் எப்போது விலங்கிலிருந்து தன்னை வேறுபடுத்திக் காட்ட நினைத்தானோ அப்போதே அவனிடம் இந்த ஒப்பீட்டுணர்வு தோன்றிவிட்டது. ஆரம்பத்தில் மனிதனிடம் தோன்றிய இந்த ஒப்பீட்டுணர்வினை கிராஜா அவர்கள்,

“மற்ற விலங்குகளைப்போல இதுவரை இருந்து அவற்றிலிருந்து வேறுபடத் தொடங்கியதை அறிந்த அந்த நாள்முதல் மனிதனிடம் ஒப்பீட்டுணர்வு குடிகொண்டது.”

என்று குறிப்பிடுகின்றார். அறிவு வளர்ச்சியின் ஆரம்ப நிலையான விலங்கிலிருந்து தன்னை வேறுபடுத்திக்காட்ட பயன்பட்ட இந்த ஒப்பீட்டுணர்வு அறிவின் உச்ச நிலையான ஒப்பிலக்கிய உணர்வாக 19-ஆம் நூற்றாண்டின் தொடக்கத்தில்தான் நடைமாற்றம் பெற்றது. இதன் அடிப்படையில் நக்கீரரால் இயற்றப்பட்ட திருமுருகாற்றுப்படை மற்றும் அருணகிரிநாதரால் இயற்றப்பட்ட கந்தரலங்காரம் ஆகிய இரண்டு நூல்களிலும் உள்ள உறவுமுறையை ஒப்பீடு செய்வதாக இந்த ஆய்வு அமைகின்றது.

2. உறவுமுறை

எங்கும் நீக்கமற நிறைந்திருக்கும் முருகப்பெருமானின் சிறப்பினைப் படிப்பவர்கள் மகிழும் வண்ணம் எடுத்துரைக்கும் இலக்கியங்களான திருமுருகாற்றுப்படையிலும் கந்தரலங்காரத்திலும் முருகக் கடவுளை மகன், தம்பி, கணவன், மருமகன் என்னும்

உறவுமுறைகளோடு பொருத்தி அழகுக் கடவுளான முருகக் கடவுளின் பெருமையை வெளிப்படுத்தி உள்ளனர் இதன் ஆசிரியர்கள்.

3. மகன்

மகன் என்ற உறவுமுறை திருமுருகாற்றுப் படையில் இரண்டு இடங்களில் குறிப்பிடப்பட்டுள்ளது.

ஆல்கெழு கடவுட் புதல்வ மால்வரை
மலைமகள் மகனே”²

என்ற பாடல் வரிகளில், ஆலமரத்தினில் தட்சிணாமூர்த்தியாக இருந்து அறமுரைத்த சிவபெருமானின் புதல்வனே என்றும் பார்வதியின் மகனே என்றும் முருகக் கடவுளை மகன் என்ற உறவுமுறையில் புகழ்கின்றார் ஆசிரியர். மேலும்,

“மருகனே ஈசன் மகனே ஒருகைமுகன்”³

என்ற வெண்பாப்பாடல் சிவபெருமானின் மகனே என்று முருகக் கடவுளைப் புகழ்கின்றது.

அருணகிரிநாதரோ, கந்தரலங்காரத்தில் ஒன்பது இடங்களில் மகன் என்ற உறவுமுறையைப் பயன்படுத்துகின்றார்.

“சேற்றைக் கழிய வழிவிட்ட வாசெஞ்
சடாடவிமேல்

ஆற்றைப் பணியை யிதழியைத் தும்பையை
யம்புலியின்

கீற்றைப் புனைந்த பெருமான் குமாரன்க்ரு
பாகரனே”⁴

என்ற பாடலில் சிவந்த சடைக்கற்றின்மேல் கங்கையாற்றையும் படத்தையுமுடைய பாம்பினையும் கொன்றை மலரையும் தும்பை மலரையும் பிறைச் சந்திரனையும் சூடியுள்ள சிவபெருமானுக்குக் குமாரனே என்று முருகக் கடவுளை வணங்குகின்றார்.

திருமுலரும் மகப்பேறு மருத்துவமும்

முனைவர் ஆ. சந்திரசேகரன்

உதவிப்பேராசிரியர், தமிழ் உயராய்வுத்துறை,

விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி),

எளையாம்பாளையம், திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா.

உலகின் தற்சால அறிவியல் வளர்ச்சி மனிதனே வியக்கும் வண்ணம் உள்ளது. இத்தகு வளர்ச்சியை சித்தர்கள் தங்களது மெய்ஞ்ஞான அறிவாலேயே கண்டு உரைத்துள்ளனர். ஆண், பெண் என்ற சேர்க்கை இல்லாமல் குளோனின் முறையில் குழந்தை பிறக்கின்றன. இவை எல்லாம் அறிவியலின் அசாத்திய வளர்ச்சி எனலாம். இதை, அறிவியல் வளர்ச்சி பெறாத அக்காலத்திலேயே இச்சிந்தனையை கொங்கணச் சித்தர் கூறியிருப்பது வியக்கத்தக்கதாக உள்ளது. மனித உயிர், கருவில் தோன்றுகிறது. இதற்குக் குரோமோசோம்கள் காரணம் என்று இன்றைய அறிவியல் ஆய்வு கண்டுபிடித்துள்ளது. இந்தக் குரோமோசோம்கள் ஆணின் விந்திலும் உள்ளது. பெண்ணிடமும் உள்ளது. இவற்றில் ஒன்று இணையும்போது கரு தோன்றுகிறது என்ற உண்மையை,

“மாதா பிதாசுட இல்லாமலே வெளி மண்ணும் விண்ணும் பண்ணவென்று ஆணும் பெண்ணும் கூடி யானதனால் பிள்ளை ஆச்சுதென்றே நீரும் பேசுகின்றீர்”¹

என்ற பாடலில் ஆண், பெண் இல்லாமல் குழந்தை பெற முடியும் என்பதைக் கூறியுள்ளனர். இந்த அறிவியல் நுட்பத்தைத் திருமுலர் உணர்ந்திருந்தார். அவர் குரோமோசோம் என்ற சொல்லைக் கூறவில்லை. ஆனால், அவற்றின் செயற்பாட்டை

“திருவின் கருக்குழி தேடிப்புகுந்த துருவம் இரண்டாக ஓடிவிழுந்ததே”²

என்று குறிப்பாக திருமுலர் தெளிவுறுத்துகின்றார்.

மனித உள்ளமும் உடலும் நெருங்கிய தொடர்பு உடையவை. உள்ளம் வாடினால் உடலும் வாடும். மனநலமே உடல் நலத்திற்கு அடிப்படை.

மனநலம் இன்று மருத்துவத்தின் ஒரு கூறாக உள்ளது. “உள்ளம் உடைமை” என்று திருவள்ளுவரும் கூறியுள்ளார். இந்த நுட்பத்தைத் திருமுலர் மறைமுகமாக உருவக நிலையில் உரைத்தார். “உள்ளம் பொருங்கோயில் ஊன் உடம்பு ஆலயம்” என்று இரண்டுக்கும் உள்ள தொடர்பைக் குறிப்பாகக் கூறியுள்ளார். உடல் நலமாக இருக்கவேண்டும். இதற்குச் சத்துணவும் உடற்பயிற்சியும் அடிப்படையாக இருக்கின்றன. உடல் நலமாக இருப்பதற்கு உயிர்ச்சத்து எனப்படும் விட்டமின்கள் தேவை. பால், கீரைகள் முதலிய ஊட்டம் தரும் உணவுப் பொருள்கள் தேவை. சிலர் இந்த உண்மையை உணர்வதில்லை. முறைப்படி தம் உடம்பைக் கவனித்துக் கொள்வதில்லை. அதன் விளைவாக அவர்களின் உடல்நலம் கெடுகிறது. பிணிகள் ஏற்படுகின்றன. அவர்களின் வாழ்நாளும் குறுகிவிடுகிறது. இந்த உண்மையைத் திருமுலர் கூறியுள்ளார். “உடம்பார் அழியின் உயிரார் அழிவார்” என்ற பாடலில் சுட்டியுள்ளார்.

விஞ்ஞானத்தை விஞ்சும் மெய்ஞ்ஞானம்

சித்தர்களின் சிந்தனைகள் பல ஆண்டுகளுக்கு முன்பே மக்களிடம் பரவ ஆரம்பித்து விட்டது. மனித இயக்க முதல் பொருள் அறிவே ஆகும். அந்த அறிவின் இயல்பை திருவள்ளுவர்,

“எப்பொருள் எத்தன்மைத் தாயினும் அப்பொருள் மெய்ப்பொருள் காண்பது அறிவு”³

என்ற குறள் மூலம் அறிவியலையும் அதன் ஆய்வுத் திறத்தையும் விளக்கி உண்மையை ஆய்வின் வழியே வெளிக்கொணர வேண்டும் என்றும் கூறுகிறார். பிறக்கப் போகும் குழந்தை ஆணா? பெண்ணா? அல்லது மாற்றுத்திறனாளியா?

பண்டைய தமிழரின் நம்பிக்கைகளும் சகுனங்களும்

முனைவர் அ. அசோகன்

விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி), எளையாம்பாளையம்
திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா

முன்னுரை

நாட்டுப்புறவியல் என்பது நம்பிக்கைகள், பழக்க வழக்கங்கள் ஆகியவற்றால் பாதுகாக்கப்படும் ஒரு குறிப்பிட்ட மக்களின் பண்பாடாகும். நாட்டுப்புறவியல் என்பது மக்களது நம்பிக்கைகள் பழக்க வழக்கங்கள் ஆகியவற்றை உள்ளடக்கியதாகும். நம்பிக்கைகள் மக்களால் உருவாக்கப்பட்டு அம்மக்கள் சமுதாயத்தால் பாதுகாக்கப்படுகின்றன. மனிதனின் தன்னல உணர்வும் சமுதாய உணர்வுமே நம்பிக்கைகளை வளர்த்து வருகின்றன. பண்டைய கால முதல் மனிதன் இயற்கையோடு இணைந்து வாழ்ந்து வருகிறான். இயற்கை மாறுதல்களேற்ப மனித மனமும் மாறுபடுகின்றது. இயற்கையோடு இணைந்த மனித வாழ்க்கையில் நம்பிக்கைகள் தோன்றலாயின. உலகெங்கிலும் வாழும் பழங்குடி சமுதாய வரலாற்றை நோக்கினால் இவ்வுண்மை புலனாகும் என்று பண்டைய தமிழரின் நம்பிக்கைகளும் சகுனங்களும் பற்றி இக்கட்டுரையில் காண்போம்.

இலக்கியமும் நாட்டுப்புற நம்பிக்கையும்

பண்டைய தமிழரின் நம்பிக்கைகளும் சகுனங்களும் பற்றி இலக்கியங்களில் தொடர்ந்து பதிவு செய்திருந்தனர். கி.பி. 5-ம் நூற்றாண்டைச் சார்ந்த ஆசாரக்கோவை மூலம் பண்டை தமிழரின் நம்பிக்கைகளைப் பற்றி அறிகிறோம். தொல்காப்பியத்திலே “நாளும் புள்ளும் பின்வற்றி நிமித்தமும்” எனக் குறிக்கப்பட்டுள்ளது. புள் என்பது முன்னர் பறவை என்றும் பின் சகுனம் என வழங்கினர்.

“கூகை அலறினால் சாவு வரும்”

என்ற நம்பிக்கை பண்டைய தமிழரிடையேயும் இன்றும் தமிழகத்தில் நிலவி வருவதை அறியலாம் என்பதை புறநானூறு காட்டுகின்றது.

“அஞ்சவரு குராவல் குரலுந் தூற்றும்”

காகம் கத்தினால் விருந்தினர் வருவர் என்பது அக்கால முதல் இக்காலம் வரை தமிழரிடையே நிலவி வரும் நம்பிக்கையாகும்.

“மறுவில் தூவிச் சிறுகருங் காக்கை அன்புடை மரபினன் கிளையோ டார்”

ஏதேனும் நல்ல காரியத்திற்கு புறப்படும் போது காகம் இடப்பக்கத்திலிருந்து வலப்பக்கம் செல்லுதல் நல்லது என நம்புகின்றனர். ஆறலை கள்வர் நடமாட்டத்தைக் “கணந்துள்” என்ற பறவை சத்தம் எழுப்பி மற்றவர்களுக்கு எச்சரிக்கை விடுத்த செய்தியையும் சங்க இலக்கியத்தில் காணலாம்.

“ஆற்றிய விருந்து இருந்தோட் டஞ்சிறை நெடுங்காற் கணந்துள் ஆளறி வறிஇ ஆறுசெல் வம்பலர் படைதலை பெயர்க்கும்”
(குறுந்:350)

ஏதேனும் காரியத்திற்கு புறப்படும்போது நல்லவார்த்தை நல்ல சகுனமாகக் கருதப்பட்டது. கனவு காணல், வாய்ப்புள், பறவைப்புள், நற்சொல், வாய்ச்சொல், பல்லி சொல்லுதல், கண் துடித்தல் பற்றிய நம்பிக்கையும் காணலாம். “இடது கண் துடித்தால் பெண்களுக்கு நல்லது” என்று கூறுகிறார் எட்கர் தாஸ்டன். தலைவனை எதிர்போக்கி காத்துக்கொண்டிருக்கும் தலைவியின் இடது கண் துடித்தால் தலைவன் விரைவில் வருவான் என நம்புகிறாள்.

“நல்லெழி லுண்கணு மாடுமா லிடனே”
(கலித்தொகை)

“நுண்ணேர் புருவத்த கண்ணு மாடும்”
(ஐங்குறுநூறு)

குழந்தை தும்மினால் தாய் “நூறு” எனக் கூறுவது “நூற்றாண்டு வாழ்க” என்ற பொருளில் வரும். சபகாரியங்களைப் பற்றி பேசிக்

நாட்டுப்புற இலக்கியத்தில் சமுதாயப் பண்பாடுகள்

முனைவர் ஆ. இன்பவள்ளி

உதவிப்பேராசிரியர், தமிழ் உயராய்வுத்துறை, விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி), திருச்செங்கோடு, நாமக்கல், தமிழ்நாடு, இந்தியா.

தனியாக வாழ்ந்த மனிதன் கூட்டமாக வாழ தொடங்கிய காலம் சமுதாயம் எனப்பட்டது. கூட்டமாக வாழத் தொடங்கிய மக்கள் தமக்குள் பல்வேறு வகையான நம்பிக்கைகளையும், பண்பாடுகளையும் கொண்டிருந்தனர்.

மக்கள் நாளடைவில் ஒருவரோடு ஒருவர் குழுவாக சேர்ந்து வாழத் தொடங்கிய போது முதல் சமுதாய அமைப்பு தோன்றியிருக்க வேண்டும் குழுவாக இணைந்த மனிதன் தங்களின் பண்பாடுகளையும் குடும்ப அமைப்பினையும் மற்றவரோடு பகிர்ந்து கொள்ள வேண்டிய குழல் ஏற்பட்டிருக்கும். அவ்வாறு தோன்றிய குழு அமைப்பே சமுதாயம் என்றும் எண்ணலாம்.

நாட்டுப்புறவியலில் சமுதாயம்

ஒரு சமுதாயத்தின் பண்பாட்டினை அந்தந்த மொழிகளில் தோன்றிய இலக்கியங்கள் உணர்த்தவல்லன. இலக்கியப் படைப்பாளர்கள் தாம் வாழ்ந்த சமுதாயத்தில் உள்ளத்து உணர்வுகளையும் நாகரிகப் போக்கினையும் தாங்கள் படைத்த இலக்கியங்களின் வாயிலாகப் புலப்படுத்தி உள்ளனர். அவைகளை இனங்கண்டு தொகுத்தும் பகுத்தும் நோக்கி அந்த அந்த மொழிபட்ட மக்களின் பண்பாட்டு நாகரிக மரபுகளை அறிவதும் மிகவும் அவசியமானதாகும்.

நாட்டுப்புறவியலில் சமுதாயத்தில் திருமணமும் குடும்பமும் முக்கிய பங்கு வகிக்கின்றன. குடும்பம் என்பது ஒரு சிறு குழுவாகவும் இருக்கலாம். பலர் அடங்கிய பெருங்குழுவாகவும் இருக்கலாம். அதில் குறைந்த அளவு ஓர் ஆணும் பெண்ணும் இடம் பெற்றிருப்பர். இவ்விருவரும் முறைப்படி மணம் செய்து கொண்டு கணவன் மனைவி என்ற உறவை ஏற்படுத்திக் கொள்ளும் போது தான்

அவர்கள் ஒரு குடும்பமாக அமைகிறார்கள். கணவன் குடும்பத்தின தலைவன். தலைவன் வழிகாட்டுதலிலேயே குடும்ப அமைப்பு இயங்குகின்றது. கணவனைப் பேணுதல் மனைவிகளின் தலையாயக் கடமையாக போற்றப்பட்ட செய்தியை

“வினையே ஆடவர்க்குயிரே வான்நுதல் மனையுறை மகளிர்க்கு ஆடவருயிர்”

(குறுந்.பா.எ.135)

என்னும் பாடலால் அறிய முடிகின்றது.

குடும்பமில்லையெனில் சமுதாயம் இல்லை. மனிதன் தோன்றியது முதல் இன்று வரை சமுதாயத்தின் அங்கமாக விளங்குவது இக்குடும்பங்களே ஆகும்.

“குடும்பம் தனி மனிதருக்காகவும் சமுதாயத்திற்காகவும் பெரும் பங்காற்றுகிறது. இது பாலியல், இனப்பெருக்கம், பொருளாதார கல்வி ஆகிய நான்கு முதன்மையான பணிகளைச் செய்கிறது” என்பர் லெவியும் பாலர்சும்.

சமுதாயத்தின் ஆணிவேராகத் திகழ்வது குடும்பம் என்ற அமைப்பாகும். குடும்பத்தில் மனிதர்கள் ஒவ்வொருவரும் ஒரு கடமை இருக்கிறது. அவரவர் கடமையை அவரவர் ஆற்றும்போது வீடும் நாடும் நலம் பெறுகிறது.

பண்பாடு

பண்பாடு என்பது மக்களால் பின்பற்றப்படும் சமுதாயக் கூறாகும். பண்புதல் பண்பாடாகும். ஒவ்வொரு மனிதனும் தனக்குரிய ஒழுக்கத்திலும் தன்னைச் சூழ்ந்த சமுதாயத்தின் நலன்களைப் பேணுவதில் அக்கறைக் கொள்ள வேண்டும். விலங்கினின்றும் மக்களைப் பிரித்துக் காட்டும்

புறநானூற்றில் தமிழர் பண்பாட்டு நிகழ்வுகள்

முனைவர் ரா ரவிச்சந்திரன்

உதவிப் பேராசிரியர், தமிழ் உயர்ப்பாடல் துறை,

விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி) எளையாப்பாளையம், திருச்செங்கோடு, நாமக்கல், தமிழ்நாடு, இந்தியா.

சங்க இலக்கியம் தமிழர் நம் அம் பண்புகளும் வரலாற்றுச் சான்றுதரங்களும் மக்களும் மற்றும் பண்பாட்டு கருவியாகவும் விளங்கிற்று இவற்றுள் புறநானூறு நூலில் புறப் பாடல் நானூறு பாடல்கள் 150 க்கும் மேற்பட்ட புலவர்களால் பாடப்பட்ட தமிழர்களின் வீரக்களஞ்சியமாக நிகழ்கிறது இந்நூலின் மூலம் சங்க கால மக்களின் அரசியல், சமூகம், பொருளாதாரம், கலை, வீரம், கொடை, ஆடை அணிகலன், பழக்க வழக்கங்கள் மற்றும் வாணிபம் போன்ற செய்திகளை அறியமுடிகிறது.

அகவற்பா வகையைச் சார்ந்த இந்நூல் பல்வேறு புலவர்களால் பல்வேறு காலங்களில் பாடப்பட்டவையாகக் கருதப்படுகிறது. இவர்களனைவரும் ஒரே சமூகத்தையோ நான்கு போ சார்ந்தவர்கள் அல்ல அரசன் முதல் எளிய குயவன் மகன் வரை பல்வேறு நிலைகளில் இருந்த ஆடவரும் பெண்டிருமான புலவர்கள் பாடியுள்ளனர். இந்நூலின் பாடல்கள் தொகுக்கப்படுமபோது ஒரு வகை இயைபு கருதி, முதலில் முடிமன்னர் மூவர், அடுத்து குறுநில மன்னர், வேளிர் ஆகியோரைப் பற்றிய பாடல்களும் அடுத்து போர்ப் பற்றிய பாடல்களும் கையாற்றிவைப்பாடல், நடுகல், மகளிர் தீப்பாய்தல் என்று தொகுத்துள்ளனர். புறப் பொருள் கருத்துக்களைத் தழுவி பாடப்பட்ட இந்நூலில் ஒவ்வொரு பாடலின் இறுதியிலும் திணை, துறை, பாடினோர், பாடப்பட்டோர், பாடப்பட்ட குழல் போன்ற குறிப்புகள் காணப்படுகின்றன.

இக்கட்டுரை புறநானூற்றில் அறியலாகும் பண்பாட்டு நிகழ்வுகளான, அறம் சார்ந்த நிகழ்வுகள், விருந்தோம்பல், கொடை மற்றும் வீரம்

ஆகியவற்றை தக்க சான்றாதாரங்களுடன் ஆராய்ந்து எடுத்துரைக்கின்றது.

அறச்செயல்கள்

சங்க காலம் பொற்காலமாக விளங்கியது. அக்காலத்தில் இலக்கியம் வழங்கிய புலவர்கள் அறம் கூறும் சான்றோர்களாக விளங்கினர். அரசர்கள் புலவர்களின் மீது மதிப்பும் நட்பும் வைத்திருந்தனர். அரசர்கள் நெறி மாறிப் போகும்போது புலவர்கள் இடித்துரைத்து அறிவுறுத்தும் திறனைப் பெற்றிருந்தனர். இதனால் நாட்டின் மக்கள் சான்றோர்களால் சூழப்பட்டிருந்தனர். இதனால் நாளடைவில் தமிழர் வாழ்வில் அறநெறியுடன் வாழ்வதே சிறந்த வாழ்க்கை எனக் கருதப்பட்டிருந்தது.

அறத்தால் வாழ்வதே இன்ப வாழ்க்கை என்பதை வள்ளுவர்,

“அறத்தான் வருவதே இன்பம் மற்றெல்லாம் புறத்த புகழும் இல்”

எனக் குறிப்பிடுகின்றார்.

சான்றோர்களும் நல்ல குடும்பமும் தீமை செய்யாத அரசனும் வாழும் ஊரில் நான் இருப்பதால் எனக்கு இன்னும் முடி நரைக்காமல் உள்ளது என ஒரு சான்றோன் சொல்வதாகக் கீழ்க்கண்ட புறநானூற்றுப் பாடல் குறிப்பிடுகின்றது.

“யாண்டு கல ஆக நரையில் ஆகுதல் யாங்க ஆகியர்? என வினவுதிர் ஆயின் மாண்ட என மனைவியொடு மக்களும் நிரம்பினர் யான் கண்டனையர் என் இளையரும் வேந்தனும் அல்லவை செய்யான் காக்கும் அதன தலை

குறுந்தொகையில் பண்பாட்டுச் சிந்தனைகள்

க. நிதியா

தமிழ் உதவிப்பேராசிரியர். விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி), எணையப்பாளையம், திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா

சங்க இலக்கியங்களில் ஒன்றான குறுந்தொகை புலவர்களின் மொழித்திறனையும் கற்பனை வளத்தையும் உரைப்பதோடு அக்காலத்தில் வாழ்ந்த மக்களின் வாழ்க்கைத் தரத்தையும் அவர்கள் வாழ்ந்த முறையையும் வெளிப்படுத்துகிறது. குறுந்தொகைப் பாடல்களில் ஆங்காங்கே இடம்பெற்றுள்ள குறிப்புகளைக் கொண்டு அம்மக்களின் சமுதாய வாழ்க்கையை அறிய முடிகிறது. மனித வாழ்வுக்கு அடிப்படையான பண்பாட்டுக் கூறுகள் எவ்வாறு காணப்படுகின்றன என்பதை எடுத்தியம்புவதே இக்கட்டுரையின் நோக்கமாகும்.

பண்பாடு:

பண் என்னும் சொல்லிற்குத் 'தகுதி' என்ற பொருளும் பாடு என்பதற்கு உலக ஒழுக்கம் என்ற பொருளும் கொண்டால் பண்பாடு என்பதற்கு தகுதி மிக்க உலக ஒழுக்கம் எனப் பொருள் கொள்ளலாம்.

"கற்றுக் கொள்வதற்கான ஆற்றலும், தான் கற்றதை அடுத்த சந்ததியினருக்கு எடுத்துச் செல்லும் ஆற்றலும் மனிதருக்கு இயல்பாக கைவரப் பெற்றவை. இந்த ஆற்றல்களின் விளைவாக அவனுக்கு ஏற்படக்கூடிய அறிவு, நம்பிக்கை, நடவடிக்கை ஆகியவற்றின் கலவையே பண்பாடு எனப்படுகிறது."

இல்லற மாண்பு

இல்லற மாண்பு என்பது "இல்லாளொடு கூடி வாழ்தலின் சிறப்பு" என்று பரிமேலழகரும் இல்லின் கண் இருந்து வாழும் திறன் கூறுதல் இல்லாழ்க்கை என்று மணக் குடவராலும் விளக்கம் தரப்படுகிறது. "சமூக அமைய்பில் குடுய்பம் என்பது அடிப்படை அலகு. இவ்வமைப்பு இல்லையேல் சமுதாயம் என்ற கட்டுக்கோப்பே நொறுங்கிப்

போகும். மாலு வாழ்வில் அடித்தளம் குடும்பமே" என முனைவரகப அறவாணாளரின் சிந்தனைக்கு ஏற்ப இனிய இல்லற வாழ்வு முறைகளில் பண்பட்ட நிலைகளை குறுந்தொகை கூறுகிறது.

அன்பு, அறிவு, ஆற்றல் ஆகிய பண்பு நலன்களால் ஒன்றுபட்ட தலைவனும், தலைவியும் இணைந்து வாழும் இல்லறத்தின் மாட்சியைக் குறுந்தொகையில் பல பாடல்கள் போற்றிப் புகழ்கின்றன. ஒரு பசுவினை மட்டுமே வளர்த்து அதனால் வரும் வரும் வருமானத்தைக் கொண்டு எளிய வாழ்வு நடத்தி வந்தான் தலைவன் தலைவன், தலைவியை மணந்த நாள் முதலாகப் பெருவாழ்வு பெற்று ஒவ்வொரு நாளும் விழாக்கோலம் பூண்ட வீட்டினனாகத் திகழ்ந்தான் என்று பெண்ணின் பெருமையினைப் பற்றி ஒரு பாடல் பேசுகின்றது.

"ஓரான் வல்சிச் சீரில் வாழ்க்கை பெருநலக் குறுமகள் வந்தென இனிவிழ வாயிற் றென்னுமிவ் வுரே"

-குறுந்தொகை 295

தலைவனோடு கூடிநிகழ்த்தும் இல்லற வாழ்க்கை வீடுபெற்றுலக வாழ்க்கை விடச் சிறந்தது என்பதைக்

"கறிவளர் அடுக்கத்து ஆங்கண் முறி அருந்து குரங்கு ஒருங்கிருக்கும் பெருங்கல் நாடன் இனியன் ஆகலின் இனத்தின் இயன்ற இன்னா மையினும் இனிதோ இனிதுஎனப் படுஉம் புத்தேள் நாடே? "

-குறுந்தொகை 288

என்ற பாடலின் வழி அறியமுடிகின்றது.

தேவர் உலகம், துன்பமில்லாது இன்பமே உடையதாக விளங்கும். ஆனால் தலைவனோடு

நவீனத் தமிழாய்வு (பன்னாட்டுப் பன்முகத் தமிழ் கானாண்டு ஆய்விதழ்) தொகுதி 8, எண்.2, ஏப்ரல் - ஜூன் 2020 ISSN 2321-984X

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திருமந்திரமும் திருக்குறளும் ஓர் ஒப்பீடு

ஆ. கவிதா

பகுதிநேர முனைவர் பட்ட ஆய்வாளர், தமிழ் உயராய்வுத்துறை, விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி), எளையாம்பாளையம், திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா

முன்னுரை

“நிறைமொழி மாந்தர் ஆணையிற் குளந்த
மறைமொழி தானே மந்திரம் என்ப”
தொல் செய் 176 தொல்காப்பியர்

எனும் தொல்காப்பியரின் வாக்கிற்கிணங்க காமம் வெகுளி மயக்கம் எனும் மூலகைக் குற்றமற்ற ஒழுகலாற்றினை இறப்பு நிகழ்வு எதிர்வு என்னும் மூலகைக் காலத்திலும் வழங்கும் நெறியான் அமைந்த முழுதுணர்ந்த சான்றோர்கள் என்று “நிறைமொழிமாந்தர்” என்னும் சொல்லுக்கு விளக்கமளித்துள்ளார். மேலும் மனிதன் அவனது உடம்பைக் கொண்டு செய்யவேண்டிய ஞானச் செயல்பாடுகளைக் கற்பிக்கும் அனுபவப் பேரறிவுப் பெருநூலாக திருமுலர் - திருமந்திரம் போற்றப்படுகின்றன. திருமந்திரக் கருத்துக்கள் போன்றே திருக்குறளும் மனிதர்களை நல்வழிப்படுத்தும் அறக்கருத்துகளை எடுத்துக் கூறுவதாக அமைந்துள்ளன.

நிறைமொழிமாந்தர் பெருமை நிலத்து
மறைமொழி காட்டி விடும்.

குறள் -28 மணக்குடவர் உரை.

என்ற குறட்பாவிருந்தும் நிறைமொழி மாந்தர் என்பது சித்தர்களுள் ஒருவரான திருமுலர் மற்றும் திருவள்ளுவர் உரைத்த அறக்கருத்துகளையும் மறைமொழி என்பது அவர்கள் எடுத்தியம்பிய வேதக் கருத்துகளையும் உணர்த்துவதாக அமைகின்றன. மேலும் திருமந்திரம் மற்றும் திருக்குறள் சார்ந்த கருத்துக்களை ஒப்பிட்டு ஆய்வதாக இக்கட்டுரை அமையவுள்ளது என்பது குறிப்பிடத்தக்கது.

திருமந்திரமும் திருக்குறளும்

திருமந்திரத்தில் நீதி நூல்கள் கட்டிக்காட்டும் பல்வேறு தலைப்புகள் திருக்குறளில் அமைந்துள்ளன. திருமந்திர முதல் தந்திரத்தில் மகளிர் இழிவு, கல்வி, கல்லாமை, பிறன்மனை நயவாமை, நல்குரவு, கள்ளுண்ணாமை, நிலையாமை, அன்புடைமை, அன்பு போன்ற தலைப்புக்கள் இவ்விரண்டு நூல்களிலும் இடம்பெற்றுள்ளன. திருக்குறள் உலகநீதியையும் திருமந்திரம் இத்தலைப்புகளின் கீழ் தெய்வ உணர்வை நீதிக்கருத்தாக மையப்படுத்திப் பாடுகின்றன.

கல்வி

இறை அனுபவம் ஞானக்கல்வி என்னும் இவ்விரண்டையும் திருமந்திரம் கல்வி என்னும் தந்திரத்தில் திருமந்திரம் வாயிலாக குறிப்பிடுகின்றது. இறைவன் தனக்கு மெய்யறிவுக் கல்வியை அருளியவர் என்று திருமுலர் உரைக்கின்றார் இறைவனை உணரும் திருவருட்கல்வியைக் கற்பவர்க்கு அகக்கண் உண்டாகும். இறைவனின் புகழ்பாடும் திருமுறையாகிய நூல்களைக் கற்றுத்தேர்ந்தால் அகத்தாய்மையும் புல ஏற்படும் என்பதை

நூலொன்று பற்றி நுனிநே மாட்டாதார்
பாலொன்று பற்றினாற் பண்பன் பயன்கெடுங்
கோலொன்று பற்றினாற் கடா பறவைகள்
மாலொன்று பற்றி மயங்குகின் றாரிகளே
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என்ற பாடல் வரிகள் எடுத்தியம்புகின்றது.

பெருங்கதைபுரம் தொல்காப்பியமும் உணர்த்தும் எண் வகை மெய்ப்பாடுகள்

வா கவிதா

உதவிப் பேராசிரியர், தமிழ் உயராய்வுத்துறை,
விசேஷவணந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி),
வண்ணாம்பலாசையம், திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா.

பெருங்கதைபுரம், தொல்காப்பியமும்

பெருங்கதை ஒரு தழுவல் காப்பியம் அண்ப்புயர் என்பவர் பைசா மொழியில் 'புத்தகத்தா' என்ற பெயரில் உதாணன் என்னும் லீனில் கதையைப் படைத்தார். இதனைக் கல்வையாசன் தூர்விதிநன் என்பவன் வட மொழியில் காப்பியமாகக் கிளைன். இவ்வட மொழிக் காப்பியத்தைத் தழுவி கொங்குவேளிர் என்பவர் பெருங்கதை என்ற பெயரில் தமிழ்க்காப்பியமாகப் படைத்தார். இக்காப்பியம் தமிழில் எழுந்த காலம் சிபி.ஏழாம் நூற்றாண்டு என்பர். பெயரைப் போலவே இது ஒரு பெருங்கதை ஆயினும் பெருங்காப்பிய வரிசையில் இக்காப்பியத்தை உட்படுத்தாதது மிகுந்த வியப்பைத் தருகின்றது.

இப்பெருங்காப்பியத்திற்கு தொல்காப்பியரின் இலக்கண வரையறைகளை ஒப்பீடு செய்யும் பொழுது அவை சரியான முறையில் பொருந்தி வருகின்றன என்ற முடிவுக்கு வரலாம்.

பெருங்கதையில் தொல்காப்பியச் சுவைகள் மனித வாழ்க்கையில் ஏற்படும் இன்ப துன்ப உணர்ச்சிகளை எட்டு வகையாகப் பகுத்துக் கூறியுள்ளனர்.

நகை, அழகை, இளிவரல், மருட்கை, அச்சம், பெருமிதம், உவகை, வெகுளி என்பவையே அவ்வெட்டு வகையான சுவைகளாகும். வடநூலார் சத்துவக் குணத்தையும், ஒரு சுவையாகக் கருதி நவரசங்கள் என்று கூறுவது அவர்களுடைய மரபாகும்.

'நகையே அழகை இளிவரல் மருட்கை அச்சம் பெருமிதம் வெகுளி உவகை என்று அப்பால் எட்டே மெய்ப்பாடுடென்ப'

எனும் தொல்காப்பிய நூற்பா எட்டுவகை மெய்ப்பாடுகளைப் பற்றிக் கூறுகின்றது. கவையெனினும் மெய்ப்பாடெனினும் ஒக்கும் எண்வகைச் சுவைகளும் பின்வரும் காரணங்களின் அடிப்படையில் தோன்றுகின்றன.

நகை - எள்ளல், இளமை, பேதைமை, மடன்
அழகை - இளிவு, இழவு, இசைவு, வறுமை
இளிவரல் - மூப்பு, பிணி, வருத்தம், மென்மை
மருட்கை - புதுமை, பெருமை, சிறுமை, ஆக்கம்
அச்சம் - அணங்கு, விலங்கு, கள்வர், இறை
பெருமிதம் - கல்வி, தறுகண், இசைமை, கொடை
வெகுளி - உறுப்பறை, குடிசோள், அலை, கொலை
உவகை - செல்வம், புலன், புணர்வு, விளையாட்டு

நகை

தொல்காப்பியர் முதற் சுவையாக நகைச்சுவையைக் குறிப்பிடுகின்றார். வடமொழியில் இதனை 'ஹாஸ்யரஸம்' என்று கூறுவர்.

உதயணன் மானீகையின் பந்தாடும் சிறப்பு கண்டு அவளிடம் காதல் கொண்டான். வாசவத்தைக்குத் தெரியாமல் அவளுடைய நெற்றியில் யவன மொழியில் காதல் கடிதம் எழுதி மானீகைக்கு அனுப்பினான். இதன் மூலம் உதயணனும், மானீகையும் அடிக்கடி சந்தித்து வந்தனர். இதனை அறிந்த வாசவத்தை சினம் கொண்டு மானீகையினைக் கைது செய்தான். வழக்கமாக மானீகையினைச் சந்திக்கும் இடத்து மறைந்து நின்றாள். அங்குச் சென்ற உதயணன் வாசவத்தையை மானீகை என்று தவறாக எண்ணி மானே, தேனே, மானீகா எனும் பொழுது யான் மானீகை அன்று வாசவத்தை என்று கூறியது கேட்டு உதயணன் தடுமாறி விழுந்த

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கம்பனில் தொல்காப்பியச் சுவடுகள்

ரா.ம. ரேவதி

முனைவர் பட்ட ஆய்வாளர் (பகுதி நேரம்), தமிழ் உயராய்வுத்துறை
விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி)
திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா

முன்னுரை

தமிழ்க் காப்பியங்களில் தனிச்சிறப்புப் பெற்றுக் கற்றோரும் மற்றோரும் விரும்பிப் படிக்கும் ஒப்பற்ற காப்பியம் கம்பராமாயணம். இந்திய இராமாயணங்களில் வால்மீகியின் வடமொழி இராமாயணம், துளசிதாசரின் இந்தி இராமாயணம், கம்பரின் தமிழ் இராமாயணம் ஆகியன குறிப்பிடத்தக்கன. கம்பர் தமிழ் பண்பாட்டிற்கேற்பக் காப்பியத்தில் பல மாற்றங்களைச் செய்து இலக்கியத்துக்கு உயிர் ஊட்டுகிறார். கம்பனின் கவித்துவச் சிறப்பு தனித்தன்மையுடையது. இதனால் 'கவிச்சக்ரவர்த்தி' என்ற சிறப்பைப் பெறுகிறார். உள்ளதை உள்ளபடியே காட்டுவது மரபு இதனைக் கம்பர் தன் காவியத்தில் 'சிறந்தது பியற்றில் இறந்ததன் பயனே' என்னும் தொல்காப்பிய இலக்கண இலக்கிய வாழ்வியல் கொள்கையை மேற்கொண்டு திறம்படக் கையாண்டுள்ளார். காவியம் முழுமையும் தொல்காப்பியச் சாயல் வேருன்றியுள்ளது. அவற்றுள் சிலவற்றை இங்குக் காண்போம்.

தொல்காப்பிய நெறி நின்றவர் கம்பர்

கம்பனால் இயற்றப்பட்ட இராமாயணம் ஒரு வழி நூலாகும். இது வடமொழியில் வால்மீகி இயற்றிய இராமாயணத்தைத் தழுவி எழுதப்பட்டது. இந்நூல் ஒரு வழி நூலாகவே இருந்தாலும் கம்பர் தனக்கே உரித்தான பாணியில் கருப்பொருள் சிதையாமல் தமிழ் மொழியில் இயற்றியுள்ளார். வடமொழி கலவாத தூய தமிழ்ச்சொற்களைத் தனது நூலில் கையாண்டதால், 'தொல்காப்பிய நெறி நின்றவர் கம்பர்' என்று புகழப்படுகிறார்.

“வடசொற் கிளவி வடவெழுத்து ஓர்இ
எழுத்தொடு புணர்ந்த சொல்லா கும்மே”
தொல் சொல். 401

தொல்காப்பியம் கொடுத்த இவ்வுரையை ஏற்றுப் போற்றியவன் கம்பன் இது உயல்பாக மொழியறிஞர்கள் கடைபிடிப்பது தான். இதற்கு மேலும் தொல்காப்பியக் கருத்துக்களைக் கம்பன் தன் இராமாயணத்தில் குறிப்பிட்டுள்ளார். வடமொழி கலந்து எழுதுவதுதான் பெருமைக்குரியது என்று எண்ணிய காலத்தில் வடமொழிக் கதையை தமிழாக்கம் செய்த கம்பன் தனது காவிய நாயகனை 'இராமன்' என்று தான் எங்கும் சுட்டுவான். இகர உயிர் இல்லாமல் ராமன் என எழுதுவதைப் பார்ப்பது மிகமிகக் கடினம். இங்ஙனம் வடமொழிப் பெயர்களைத் தமிழ்ப்படுத்தி ஆள்வதற்குக் கம்பனின் தமிழ்ப்பற்றும் தமிழ் மரபைப் போற்ற வேண்டும் என்னும் அவாவுமே காரணமாகும்.

மூத்தோரைப் போற்றும் பண்பு

இன்று ஐயா என்பதை அய்யா என்று எழுதுவதை மிகுதியும் மேற்கொண்டு வருகின்றனர். பலர் இதைப் புதுமை என்றும் இதனால் மொழியழகு அழியும் என்றும் வாதாடுகின்றனர். 'ஐ, ஓள்' ஒலி இரண்டும் கூட்டொலிகள் என்பது யாவரும் அறிந்ததே. இங்ஙனம் தனித்து எழுதுவதோடு கூட்டொலியாகவும் எழுதலாம் என்று தொல்காப்பியர் கூறியதை ஏற்று அதற்குக் காவியத்தில் இடமளித்தவன் கம்பன். இக்கூட்டொலிப் பற்றித் தொல்காப்பியத்தில்.

“அகரம் இகரம் ஐகாரம் ஆகும். - தொல்.
எழு. 54

என்று எழுதிய தொல்காப்பியர் அடுத்து

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தோடர் இன மக்களின் இசையும் ஆட்டக் கலையும்

ச. இந்திரா

பகுதிநேர முனைவர்பட்ட ஆய்வாளர்,
விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி),
எளையாம்பாளையம், திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா

நீலகிரி மாவட்டத்தின் வாழும் பழங்குடி இன மக்களில் ஒரு இனத்தவரான தோடர் இன மக்கள் போர்வை போர்வையுடன் கைத்தடிகள் கொண்டு மேய்ச்சல் தொழில் செய்கின்றனர். ஆடவர்கள் கைத்துடன் கூடிய ஆட்டம் ஆடுகின்றனர். எனினும் கைத்தடி, மேய்ச்சல் தொழிலுக்கும் தொட்படையதாக அமைவதை இங்கு கருதலாம். "ஒவ் ஒவ் ஒவ்" என்று மேய்ச்சல் தொழிலின்போது மாடுகளை ஓட்டும் தோடர்களது ஓசையானது. தோடர்கள் ஆட்டம் ஆட்டத்திலும் இடம் பெறுகிறது. தோடர்களது தொழிலுடனும் ஆட்டத்துடனும் தொடர்புபடுத்திக்காண இவை வாய்ப்பளிக்கின்றன.

எருமைக் கொய்யினை வைத்துத் தலைதாழ்த்தி வணங்குவதும், முதியோரைத் தலை தாழ்த்தி வணங்குவதுமான 'தலை தாழ்த்தல்' என்பது ஆடவர், பெண்டிர் ஆடும் தோடர் ஆட்டத்தில் இடம் பெறுவதைத் தொடர்புபடுத்திக் காணலாம். மேலும், ஆடும்போது ஆடவரும் பெண்டிரும், போர்வை போர்த்தியதோடு ஆட்டம் ஆடுவதும் இங்கு எண்ணுதற்குரியது. புறச்சூழல்களுக்குத் தக்கவாறே வாழ்க்கை நிலை அமைகின்றது. வாழ்க்கையில் பல்வேறு கூறுகள் வாழ்வின் ஏனைய நிகழ்வுகளில் படிதல் இயல்பு.

தோடர் வாழ்வோடு ஒருங்கிணைத்த ஆட்டக்கலைகள்

கலையியல் ரீதியில் மலையின் மக்கள் ஆட்டங்கள் விரிந்த நிலையில் ஆய்வுக்குட்படுத்தப் படவில்லை. எனினும் சாமி தளத்திற்கு முன் ஆடப்படும் ஆட்டமுறை பற்றி, எட்கர் தர்ஸ்டன் குறிப்பிட்டுள்ளார். "தோடர்களின் ஆட்ட வடிவம் பற்றி எச்.ஆர்.ரிவர்ஸ் கூறியுள்ளார்.

தோடர்களின் பாட்டுக்கேற்ப ஆட்டம் அமைந்த விதம் பற்றி, நீலகிரி மலையின் மக்கள் இசைக்கருவிகளுடன் இணைந்தாடும் சடங்கு ஆட்டம் பற்றி, ஜேம்ஸ் வில்கின்சன், பி.கே. டபுள்யூ, பிரானசில் எமனோவ் ஆகியோர் குறிப்பிட்டு எழுதியுள்ளனர்.

ஆட்ட வடிவம்

ஆட்ட வடிவங்களும் ஆட்டக் கலைநாற்றத்தை தீர்மானிக்க உதவுகின்றன.

1. வட்ட வடிவ முறை ஆட்டம்
2. நேர் கோட்டு முறை ஆட்டம்

இவை இரண்டும் இணைந்த நிலையில் விளங்குபவ் கூத்து வடிவம் என்று ஆட்ட வடிவங்களை பகுத்து உணரமுடியும்.

வட்ட வடிவ ஆட்ட முறைகளே தொடக்க காலத்ததாகும். நேர்கோட்டு முறை, கூத்து வடிவ முறை ஆகிய வடிவங்கள், காலத்தால் வளர்ச்சி நிலை எய்தியவை என்பது ஏற்புடைய கருத்தாகும்.

தோடர் மக்கள் ஆட்டம் ஆட்டங்கள் அனைத்து வட்ட வடிவ நிலை கொண்டவையே விளங்குகின்றன. தோடர் இன மக்கள் ஆட்டங்களுக்கும் வட்ட வடிவ முறைகளிலேயே தொடங்கப் பெற்ற வட்ட வடிவ நிலைகளிலேயே முடிவடையக் கூடியவையாக விளங்குகின்றன. ஆடவர் ஆட்டம் இருப்பினும் இவ்வடிவத்தைக் காண முடிவற்ற வட்ட வடிவ முறை ஆட்டங்கள் குடி நிலையிலேயே விளங்குவதை இவ்வட்ட ஆட்டங்களால் உணரமுடிகிறது.

ஆடுகளம்

மலையின் மக்கள் ஆட்டம் ஆட்டங்கள் ஆட்ட ஆடுவதற்கெனத் தனித்த அரங்கங்கள் ஏது

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நவீனத் தமிழாய்வு (பன்னாட்டுப் பன்முகத் தமிழ் காலாண்டு ஆய்விதழ்) தொகுதி 8, எண்.2, ஏப்ரல் - ஜூன் 2020 ISSN 2321-4443
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கலைக்கு உடல் ஊனம் ஒரு தடை இல்லை

செ. யமுனா

அறிவியல் நிறைஞர், விவேகனந்தா மகளிர் கலை மற்றும் அறிவியல் கல்லூரி (தன்னாட்சி) என்னையா மனையாம், திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா.

முன்னுரை

ஒவ்வொரு கலையையும் கற்றுத் தேர்ந்தவர்களையே கலைஞர்கள் என்கிறோம். உறுரணமாக கிர்பம், ஓவியம், கட்டிடம், நாட்டியம், நாடகம் போன்ற கலைகளில் தேர்ந்தவர்களையும், இந்த கலையையே நம்பி வாழ்பவர்களையும் கலைஞர்கள் என்றே கூறுகிறோம்.

சஞ்சாரம் நாவலில் ஆசிரியர் நாதஸ்வர கலைஞர்களைப் பற்றி கூறியுள்ளார். நாதஸ்வர கலையை சஞ்சாரம் நாவலில் இடம்பெறும் கண் தெரியாத தன்னாசியும், கால் ஊனமுற்ற அபிப்ராஹிம் சாகிப்பும் எவ்வாறு கற்றுத் தேர்ந்தனர் என்பதை இக்கட்டுரையில் காண்போம்.

தன்னாசியின் சிறுவயது :

தன்னாசி ஒரு வணிக குடும்பத்தில் பிறந்தவர். அவர் பிறந்த நேரத்தில் வணிகரான அவரது தந்தைக்கு பெருந்த நஷ்டம் ஏற்பட்டது. அது தன் பையனால்தான் எனக் கருதி தன்னாசியை வீட்டு வேலைக்காரியிடம் வளர்க்கச் சொல்லிவிட்டு சென்றார். கண் தெரியாத பையன் என்பதால் அவள் பெரிதாக அக்கறைக் காட்டவில்லை. சிறு குழந்தையாக இருந்தபோதே கோழிக் குஞ்சுகளை அடைந்து வைக்கும் பஞ்சாரத்தில் போட்டு முடி வைத்துவிட்டு சென்று விடுவாளாம் அந்த வேலைக்கார கிழவி.

மனம் அறியாக் காதல்:

பாட்டி வீட்டின் அருகில் இருந்த தச்சவேலை செய்பவரின் மகள் சரஸ்வதி இவரீமீது அக்கரைக் கொண்டு பழகி வந்தாள். சரஸ்வதி தன்னாசியைவிட மூன்று வயது பெரியவள். பாட்டியின் எரிச்சல் பேச்சினை மட்டும் கேட்டு வந்த தன்னாசிக்கு சரஸ்வதியின் பேச்சு ஆறுதல்

மொழியாக இருந்தது.

தன்னாசி மனதில் சரஸ்வதி மீது காதல் மலர்ந்தது. இருவரின் உரையாடலைக் கண்ட சரஸ்வதியின் தந்தை தன்னாசியை அடித்து விரட்டினார். சரஸ்வதி தன் மீது எந்த தவறும் இல்லை எனக்கூறி அழுதாள். பிறகு பெற்றோரின் பேச்சினை தாங்க முடியாமல் தன் உயிரை மாய்த்துக் கொண்டாள். அவள் இறந்ததை அறிந்து மனம் உடைந்த தன்னாசி மயானத்திலேயே தன் வாழ்நாளை கழித்துவந்தார். அவருடைய நடவடிக்கையிலும் மாறுதல்கள் ஏற்பட்டன.

நாதஸ்வரம் கற்றல்:

மயானத்தில் சுற்றித் திரிந்த தன்னாசி திடீரென்று காற்றில் மிதந்து வந்த இசையைக் கேட்டு அந்த இசை வரும் திசையை நோக்கி சென்றான். அருகில் இருந்த கோவிலில் இருந்து அந்த இசை வந்தது. கோவிலின் உள்ளே தென்பாண்டியார் நாதஸ்வரம் இசைத்துக் கொண்டிருந்தார்.

"நாதஸ்வரம் வாசித்த தென்பாண்டியார் காலில் விழுந்து வணங்கி 'இந்த வாத்தியத்தை எனக்கும் வாசிக்கக் கற்றுக் கொடுங்கள்' நான் கண் தெரியாத கபோதி என்றான்"

அவரும் கற்றுத்தர சம்மதம் தெரிவித்தார். அவரிடம் இருந்து இசையைக் கற்றுக் கொண்டார். அதன்பிறகு பல்வேறு இடங்களில் தனது கச்சேரியை நிகழ்த்தினார்.

"கருப்பொருட்களைக் குறிப்பிடும்போது யாழினையும், பறையினையும் தொல்காப்பியர் சுட்டுகின்றார்"

இதிலிருந்து தொல்காப்பியர் காலம் முதலே இசைக்கலை இருந்துள்ளதை அறிய முடிகிறது.

திருக்கோவையார் காட்டும் களவொழுக்கப் பண்பாடு

ச. லதா

முனைவர் பட்ட ஆய்வாளர்(பகுதி நேரம்), தமிழ் உயராய்வுத்துறை,
விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி),
எளையாம்பாளையம்-637205, திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா.

முன்னுரை

மாணிக்கவாசகரால் அருளிச் செய்யப்பட்ட திருவாசகமும், திருக்கோவையாரும் சைவர்களின் தமிழ்மறையான பன்னிரு திருமுறைகளுள் எட்டாம் திருமுறையாக விளங்குகின்றன. மாணிக்கவாசகர் பாடல்களில் தத்துவம், உளவியல், அறிவியல், சைவ சித்தாந்தம், மெய்யியல் போன்றவை காணப்படுகின்றன. அந்த வகையில் மாணிக்கவாசகர் தம் பாடல்களில் அகத்திணை மரபுகளுக்கு ஏற்ப தலைவன், தலைவி கோட்பாட்டின் வழி வீடுபேறு அடைவதற்கான வழிமுறைகளைச் சொல்லியிருக்கிறார். மாணிக்கவாசகரின் ஆன்மக் காதல் ஆகிய தலைவன் தலைவி தனித்தன்மைகளை சுருக்கமாக விளக்குவது ஆய்வுக் கட்டுரையின் நோக்கமாகும்.

திருக்கோவையார்

இது மாணிக்கவாசகரால் இயற்றப்பட்டது. பன்னிரண்டு திருமுறைகளில் எட்டாம் திருமுறையாக அமைந்துள்ளது. இதை திருச்சிற்றம்பலக் கோவையார் என்னென்றும் அழைப்பர். இந்நூல் 400 துறைகளையும் 25 அதிகாரங்களையும் உடையது. அன்பே சிவமாகவும் அருளே காரணமாகவும் நாயகி பரம்பொருளாகவும் நாயகன் ஆன்மாகவும் தோழி திருவருளாகவும் தோழன் ஆன்ம போதமாகவும் நற்றாய் அம்மையாகவும் சித்தரிக்கப்பட்டுள்ளனர். இந்நூல் மேலோட்டமாகக் காணும்பொழுது அகத்திணை நூல் போல் தெரிந்தாலும் பேரின்ப நூலாகவும் விளங்குகிறது. சைவ சமயத்தைப் பின்பற்றும் மக்களால் ஒரு தெய்வ நூலாகக் கருதப்படுகிறது. ஒரு முறை சிவபெருமான் மாணிக்கவாசகரிடம், “பாவை பாடிய வாயால்

ஒரு கோவை பாடுக” என்று சொன்னார். மாணிக்கவாசகரும் திருக்கோவையாரைப் பாட, அதை இறைவன் தன் கரங்களால் ஏட்டில் எழுதினார்.

மனித வாழ்க்கையை அகம் என்றும் புறம் என்றும் பண்டைய புலவர்கள் பகுத்துரைப்பர், ‘அகம்’யாதெனின் ஒரு ஆணும் பெண்ணும் இணைந்து வாழும் வாழ்க்கையை விவரிப்பதாகும் ஆக வாழ்வானது மனித வாழ்வின் முழுமை எனலாம். தொல்காப்பியர் முதலான இலக்கண ஆசிரியர்களின் மனித வாழ்க்கையில் நிகழும் ஒழுக்கக் கூறுகளை அகத்திணைகளாக வகைப்படுத்திக் கூறுகின்றனர்.

அகத்திணை விளக்கம்

அக வாழ்க்கையை சித்திரிப்பதனை அகத்திணை என்ற சொல்லால் குறிப்பிடுவர். அகம் திணை என்று பிரித்துப் பார்த்தால் அகம் என்பது உள்ளத்தினையும், இல்லத்தினையும் ஓரங்குணர்த்தும் இடவாகு பெயரான எனலாத்திணை என்பது நிலத்தையும் அந்நிலத்தில் வாழும் மக்களின் ஒழுக்க முறைகளையும் குறிக்கும் செயலாகும். இல்லத்திலிருந்து தலைவனையும் தலைவியுமாக வாழும் ஒழுக்கப் பாடே அகத்திணையாகும். இதில் தலைவன் தலைவியின் இயற்பெயர் சுட்டிக்கூறப்படாது என்பர். இதனை,

“மக்கள் நுதலிய அகன் ஐந்திணையும்
சுட்டி ஒருவர் பெயர்கொளப் பெறார்”

என்று தொல்காப்பியம் கூறுகிறது.

“காதலர் வாழ்வு காலம் இடம் எனும் பின்னணியில் இயற்கைச் சூழலில் பல்வித ஒழுக்கங்களைக் கொண்டு நிகழ்ந்தது” எனக் கூறுகிறார்.

நவீனத் தமிழாய்வு (பன்னாட்டுப் பன்முகத் தமிழ் காணாண்டு ஆய்விதழ்) தொகுதி 8, எண்.2, ஏப்ரல் - ஜூன் 2020 ISSN 2321-984X
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பகுதி VI, பதிப்பு 18 - ஜூலை-டிசம்பர்

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சங்க இலக்கியங்களில் அறிவியல் செய்திகள்

ஆய்வாளர் மோ. கோமதி,

முழுநேர முனைவர் பட்ட ஆய்வாளர்,

விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி),
எளையாம்பாளையம், திருச்செங்கோடு 637205

இலக்கியம் ஒரு அறிமுகம் :-

இலக்கியம் என்னும் சொல் எத்தகைய நூலைச் சுட்டுகிறது என்பது வரையறுத்துக் கூறுவது ஒரு சிக்கலான செயல். ஆனால் அதனை நடைமுறை வாழ்க்கையில் எளிதில் இனம் கொள்ள இயலும். உதாரணமாக ஒருவருடைய மேசையின் மீது இந்திய வரலாறு மாநிலத் தன்னாட்சி ஆய்வு அறிக்கை புகைவண்டிகளின் கால அட்டவணை, பாரதியார் கவிதைகள் என்னும் பல நூல்கள் இருப்பதாகக் கொள்வோம். ஒரு உயர்நிலை பள்ளி மாணவன் ஒருவனிடம் அ மேசையின் மீதுள்ள இலக்கியத்தைக் கொண்டு வா என்று சொன்னால் அ மேசையின் மேலுள்ள புத்தகங்களைப் பரப்பிப் பார்த்து "பாரதியார் கவிதைகள்" என்னும் நூலையே பொதுவாக எடுத்து வருவான்.

இலக்கியம் என்னும் சொல்லின் பொருளைப் புரிந்து கொள்வதற்கு அச்சொல்லை ஆராய்ந்து அதன் நுட்பமான பொருளைக் காணுதல் நலம் பயக்கும். தமிழில் இன்று பெருவழக்காக உள்ள இலக்கியம் எனும் சொல்லை தொல்காப்பியனார் பயன்படுத்தவில்லை திருவள்ளுவருக்குத் தெரியாத சொல். இ கார்ப்பியக் கலைஞர்களான இளங்கோவடிகளும், கம்பனும் கேட்டறியாத சொல்லே இருந்து வருவது இச்சொல் ஆகும். முதன்முதல் மாணிக்கவாசகரால் இலக்கியம் எனும் வடிவில் இச்சொல் வழங்கப்பட்டுள்ளன.

மஞ்சளின் மகிமை :-மஞ்சள், ஒரு முலிகைக் கிழங்காகும். மஞ்சள் மருத்துவ குணம் கொண்டது ஆகும். நமது நாட்டில் பல நூற்றாண்டுகளாக மஞ்சளைத் தூளாகவும் தண்ணீரில் கலந்து மருந்தாகவும் பயன்படுத்தி வருவது நம் பழக்கமாகும். (சமீபகாலமாக அமெரிக்கா மஞ்சளுக்கு சொந்தம் கொண்டாட முயன்ற போது அ அரசாங்கம் அதனைத் தடுத்து விட்டன) இவை நறுமணம் வீசும் தன்மையை கொண்டது. பண்டைய காலத்திலிருந்தே கிருமிநாசினியாகவும் முகப்புச்சாக்கை பயன்பட்டு வருகின்றன. பண்டைய தமிழர்கள் மஞ்சளின் மகிமையை அறிந்ததை போல் நேரத்தையறிய பூக்கள் மலருவதை வைத்துக் கணக்கிட்டனர்.

தமிழர்களின் திருநாளாம் பொங்கல் அன்று மஞ்சள் செடியை வைத்துத் தீர்வு வழிபாடு நடத்துவது காலங்காலமாக நடந்துவரும் நமது கலாச்சாரம் ஆகும்.

தமிழாய்வுச் சங்கமம்

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பகுதி VI, பதிப்பு 18

கந்தபுராணம் திருமுருகாற்றுப்படை ஓர் ஒப்பீடு

ஆ. முருகன்

பகுதி நேர முனைவர் பட்ட ஆய்வாளர், தமிழ் உயராய்வுத்துறை,
விவேகானந்தா மகளிர் கலை மற்றும் அறிவியல் கல்லூரி(தன்வாட்சி),
எளையாம்பாளையம், திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா.

1. முன்னுரை

மனித அறிவு வளர்ச்சியின் ஆரம்ப நிலை விலங்குகளோடு தன்னை ஒப்பிட்டுப் பார்ப்பது என்றால் மனித அறிவு வளர்ச்சியின் உச்ச நிலை இரு இலக்கியங்களை ஒப்பிட்டு ஆராய்வது மனிதனிடம் தொன்றுதொட்டு இருந்துவந்த இந்த ஒப்பீடு உணர்வு கலை, இலக்கியம், அறிவியல் ஆகிய மூன்று துறைகளுள் முதன் முதலில் இலக்கியத்துறையில்தான் காண்கொண்டது.

2. ஒப்பீடு

ஒப்பீடு என்ற சொல்லை இலக்கியத்தோடு சேர்த்து ஒப்பீடு இலக்கியம் என்ற சொற்றொடராக மேத்யூ அர்னால்டு என்ற ஆங்கில இலக்கிய மேதை முதன்முதலாக அறிமுகப்படுத்தியவர். இதனை கிராஜா அவர்கள்,

"ஒப்பீடு என்ற சொல்லை முதன்முதலாகக் கையாண்டவர் ஆங்கில இலக்கிய மேதை மேத்யூ அர்னால்டு என்பவராவார்."

என்ற வரிசையில் உணர்த்துகின்றார். ஒப்பீடு முறை திறனாய்வு என்பது ஒரே மொழியில் எழுந்த இலக்கியங்களையோ வெவ்வேறு மொழியில் எழுந்த இலக்கியங்களையோ ஒப்பிட்டு ஆராய்வதாகும் என்பதை இந்திய ஒப்பீட்டறிஞரான க பாலசுந்தரன் அவர்கள்,

"ஆங்கில மொழியில் இது கம்பாரேட்டிவ் கிரிட்டிசிசம் எனப்படுகிறது. ஒரே மொழியில் எழுந்த இலக்கியங்களையோ, வெவ்வேறு மொழியில் எழுந்த இலக்கியங்களையோ ஒப்பிட்டுக் காண்பதே ஒப்பீட்டுமுறைத் திறனாய்வு"

என்று குறிப்பிடுகின்றார்.

இதன் அடிப்படையில் கச்சியப்ப சிவாச்சாரியாரால் இயற்றப்பட்ட கந்தபுராணம் மற்றும் நக்கீரரால் இயற்றப்பட்ட திருமுருகாற்றுப்படை ஆகிய இரண்டு இலக்கியங்களையும் ஒப்பிட்டு அதன் குறிப்பிடப்பட்டுள்ள முருகக் கடவுள் குடிக்கொண்டுள்ள ஊர்கள் குறித்து ஆராய்வது இவ்வாய்வு அமைவின்றது.

இரண்டு இலக்கியங்களுமே முருகக் கடவுள் சிறுக்கியாள் தனளை எடுத்துணர்த்தும் தூல் என்பதும் இந்த இலக்கியங்கள் ஆய்வுக்கு எடுத்துக் கொள்ளப்பட்டுள்ளன.

3. முருகக் கடவுளின் இருப்பிடம்

முருகக் கடவுள் குறிஞ்சிக் கடவுள் துன்றுகள் அணைத்தும் அலறுங்கு உரிவயபானவை கனிஞ்சும் அன்பை யட்டுமே வேண்டிபவன் முருகன் என்பது அமைனையே நினைத்து அவன்பால் அன்பினாநி வழிபடுபவர்களுடைய உள்ளத்தில் உணர்வன் முருகன் அன்பின் முதிர்ச்சியில் உள்ள பத்தினி எவ்விடத்தில் நின்று தன்னை வழிபடுகின்றாள்? அன்பி னத்தில் தொன்றி அநன் செய்வன் முதன்

4. கந்தபுராணம் குறிப்பிடும் முருகக் கடவுள் குடிக்கொண்டுள்ள ஊர்கள்

இரும்பினால் செய்யப்பட்ட காயையாள் வேலையுடைய குறிஞ்சி நில மக்கள் அறியப்படாத அலர்தம் மகனாகிய வள்ளியின் மீத தன் கொண்ட காதலைப் போரிடவே வயலையுடைய தெரிந் துகொள்ளும் படி உணர்விய திருப்பரங்குன்றத்தில் குடிக்கொண்டுள்ள முருகக் கடவுளை என்று முருகக் கடவுள் குடிக்கொண்டிருக்கிறார்.

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நீர் நிலைகளின் பயன்களும், பாதிப்புகளும்

முனைவர் கு. கருமுருகானந்தராஜன்

உதவிப்பேராசிரியர், தமிழ் உயராய்வுத்துறை, விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி (தன்னாட்சி), எளையாம்பாளையம்-637 207, திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா.

மோ. கோமதி

முழுநேர முனைவர் பட்ட ஆய்வாளர், தமிழ் உயராய்வுத்துறை, விவேகானந்தா கலை மற்றும் அறிவியல் மகளிர் கல்லூரி(தன்னாட்சி), எளையாம்பாளையம்-637207, திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா.

"நீரின் அமைப்பை உலகுளில் யார்யார்க்கும் வான்இன்று அமைப்பை ஒழுக்கு"- திருக்குறள்

"மாமழைபோற்றும்! மாமழை போற்றும்!" என்று மழையைப் போற்றிப் புகழ்ந்தார். சிலம்பு தந்த செம்மல் இளங்கோவடிகள், என் சிறப்பை உணர்ந்தே, அவர் இவ்வாறு சொன்னார். என் வரலாற்றை நீங்கள் தெரிந்து கொள்ளுவது தேவைதானே? என்று மழையும், "ஆறில்லா ஊருக்கு அழகு பாழ்" என்றார் ஓளவைப் பாட்டி. ஊருக்கும், நாட்டுக்கும் பெருமை சேர்க்கும் என் அழகுக் கதையை நீங்கள் அறிய வேண்டாமா? என்றும், பண்புகளுள் சிறந்த பண்பு "உற்றுழி உதவும் பண்பு" இந்தப் பண்பில் கொள்கலனாக விளங்குகின்றன. நீர் நிலைகளின் சிறப்பு பற்றியும், நீரினால் ஏற்படும் அழிவைப் பற்றியும் இக்கட்டுரையில் மூலம் அறிகிறோம். முதல்வன் அணைக்கட்டாகிய நானே ஆவேன். என் பெருகை அறிவது உங்கள் கடமை. சொல்லுவது என் பொறுப்பு என்று அணைக்கட்டும் தங்களின் வரலாற்றைக் சுறுமாறு இக்கட்டுரை அமைகிறது. மழையின் பிறப்பு

கதிரவன் வெப்பத்தால் கடல் உள்ளிட்ட நீர்நிலைகளில் உள்ள தண்ணீர் ஆவியாகின்றன. அவை நீராவி என்று அழைக்கப்படுகின்றது. கருமையாக இருப்பதால் கார்மேகம் என்றும் நாம்

அழைக்கின்றோம். இது பசுமைக் காடுகளால் இழுக்கப்பட்டு மழை என்ற பெயரில் வானத்திலிருந்து பூமியில் பொழிகிறது. தென்மேற்குப் பருவக்காற்றுக் காலத்திலும், வடகிழக்குப் பருவம் காற்றுக் காலத்திலும் தான் பெய்து தமிழகத்தை வளப்படுத்துகிறது. மழையின் வாழ்க்கையும், பயனும்

நிறமும், மணமும் இல்லாத மழை நிலத்தின் இயல்புக்கு ஏற்றப்படி நிறம் பெறுகிறது. இது குறிஞ்சி, முல்லை, மருதம், நெய்தல் போன்ற நிலங்களையும் வளப்படுத்துகின்றது. மழையால் நன் செய்யும், புன் செய்யும் செழிக்கின்றன. காயும், கனிபும் இனிக்கின்றன. பூக்களும் சிரிக்கின்றன.

மழை மக்களுக்கு உணவை மட்டுமா படைக்கிறது! மழை இல்லையேல் பஞ்சம் என்னும் பேய் தலைவிரித்து ஆடும். மழை பொழியாவிட்டால் மக்களுக்கு நன்மை ஏதும் கிடையாது.

மழையால் கேடு

"கெடுப்பதா உம் கெட்டார்க்குச் சார்வாய் மற்றாங்கே

எடுப்பதா உம் எல்லாம் மழை"

சில சமயங்களில் அளவுக்கு அதிகமாக மழை பொழிவதால் நாடு கெட்டுப் போவதும் உண்டு. அடிக்கடி ஏற்படும் புயலாலும், ஆழிப்பேரலைகளாலும் இவ்வாறு நடந்துவிடுகிறது.



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TIRUCHENGODE TK, NAMAKKAL DT

TAMILNADU

குமாரபாளையம் மாரியம்மன் திருவிழாவும்,
சமூகப் பண்பாட்டு விழுமியங்களும்

கு. ரேவதி

தமிழ் இலக்கியம், விவேகானந்தா கலை மற்றும் அறிவியல் கல்லூரி (தன்னாட்சி),
பாளையம்பாளையம், திருச்செங்கோடு, நாமக்கல் மாவட்டம், தமிழ்நாடு, இந்தியா.

முன்னுரை

திருவிழாக்கள் என்பது பலதரப்பட்ட மக்கள் அனைவரும் ஓர் இடத்தில் கூட்டமாக இணைந்து மகிழ்ச்சியாக இருக்கவேண்டும் என்பதற்காகத் திறந்துவிடப்பட்டதாகவும் மணநூலாளர் கொடுத்து ஊரைச் செழிக்கவைத்த மாரியம்மனுக்கு நன்றியைத் தெரிவிக்கும் பொருட்டு திருவிழா எடுத்துக் கொண்டாடி மகிழ்கிறோம். இந்நிலையில் ஒவ்வொரு ஊரிலும் ஒவ்வொரு முறையான சங்குகளை மேற்கொண்டு வருகிறோம். நாமக்கல் மாவட்டம் குமாரபாளையம் மாரியம்மன் கோவிலில் நடைபெறுகின்ற திருவிழாக்களும், பூசை முறைகளையும் பற்றி இக்கட்டுரை ஆராய்கிறது. கோயில்

சாதாரண மனிதர்களைக் காட்டிலும் சக்தி வாய்ந்த கடவுளுக்கு கடவுளுக்கு அமைக்கப்படும் இடத்தைக் கோயில் என்று பிரிப்பர். "கோ" என்பதற்கு அரசன் என்று பொருளையும், "இல்" என்பதற்கு இல்லம் என்ற பொருளையும் குறிக்கும். "கோயில் இல்லாத ஊரில் குடியிருக்க வேண்டாம்" என்பது பழமொழியாகும்.

திருமூலர் கோயிலைப் பற்றித் தனது திருமந்திரம் என்ற நூலில்

"உள்ளம் பெருங்கோயில், ஊனுடம்பு ஆலயம்"

என குறிப்பிட்டுள்ளார்.

கோயிலின் வேறுபெயர்கள்:-

கோயில் "ஆலயம், கோட்டம், அம்பலம்" பெயர்களால் அழைக்கப்படுகிறது. ஆலயம் ஆ என்பது "ஆன்மாவை குறிக்கும், லயம் என்பது ஒன்றுபடுத்தல் அல்லது வயப்படுத்தல்" என்பது பொருள்.

"ஆலயம் தொழுதல் சாலவும் நன்று"

"ஆலயப் பணியே ஆண்டவன் பணி"

என்று ஆலயத்தின் சிறப்புகளைப் பற்றி ஓளவையார் குறிப்பிட்டுள்ளார்.

திருவிழா

அம்மனை மகிழ்ச்சியூட்டும் விதமாக மாரியம்மனுக்கு திருவிழாவானது நிகழ்த்தப்படுகிறது. இத்திருவிழா பதினைந்து நாட்களுக்கு நடைபெறுகிறது. மாசிமாதத்தின் இறுதியில் சாமி பூச்சாட்டப்பட்டுப் பங்குனி மாதத்தின் முதலில் திருவிழா நடைபெறும்.

காப்புக்கட்டுதல்

சாமி சாட்டப்படுகின்ற நாள் என்று இரவு பன்னிரண்டு மணியளவில் வெற்றிலைப் பாக்கு, தாம்பூலம் மாற்றி சாமிக்கு செய்யப்படுகிறது.

அம்மனுக்கு தாலி கட்டுதல்

பூசாரிக்கு கங்கணம் கட்டிய கையோடு, உடனே அவர் அம்மனுக்கு மஞ்சள் கொம்பினால் ஆன மஞ்சள் தாலியைக் கட்டுவார். அப்போது தங்கத்தால் செய்யப்பட்ட தாலியையும் அணிவிப்பார். அன்று முதல் பதினைந்து நாட்களுக்கு அம்மன் தாலியுடன் மகிழ்ச்சியாக இருக்கும் என்பது நம்பிக்கையாகும்.

சிறுதெய்வ வழிப்பாட்டிற்குரிய பெண் தெய்வங்கள்

மாரியம்மன், செல்லியம்மன், பத்திரகாளியம்மன், பகவதியம்மன், அங்காளம்மன், ஆயி மகமாயி, ஆங்காரி, நீலி, மகமாயி போன்ற பெயர்களால் அழைக்கப்படுகிறது. இதனை,

Complexities of Ethics and Morals in Ian McEwan's Select Novels

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Abstract— The course of study analyses MacEwan's novels, *Sweet Tooth* and *The Children Act* in terms of ethical and moral values. Ian McEwan's of literary theories and studies likes- the ethics and moral of writing, reading, understanding, interpreting and judging. Postmodern critics have an assumption that literature is profoundly ethical and moral activity, which includes materials, methods, aims, punishments and rewards. The art of literature is available because it studies values and morals by engaging readers/ spectators in process of analysing the evolution- particularly by selfevaluation. Literature has been often refined by critics and readers as they have a few moral responsibilities. Today's millennial world is too fragmented to keep this world a monolithic structure where happiness and peace could prevail. Moral and Ethical values are pushed to be in the background prioritising 'survival of the fittest' in the meanest sense. The dream of constructing a morally and ethically strong society and culturally healthy and wealthy families seems to remain a distant dream. Postmodernist novels, in general, attempt to explore and exhibit the corroding nature of this despicable human community. MacEwan, being the ideal dreamer of an ideal society picturises through his novels the process and product of the said disintegration on the verge of collapse.

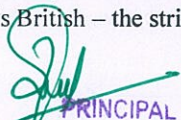
Keywords— *Sweet Tooth*, *The Children Act*, Love, Ethical, Moral, Betrayal and Religion.

I. INTRODUCTION

Sweet Tooth and *The Children Act* explores responsibilities of a country, writer, politics, teacher, court, family, hospital and its ethical and moral dilemma. *The Children Act* investigates the ethical and moral ideology in the institutions like court, hospital, church, social and private sectors.

Ian McEwan has a pressure to create links between morality and the novels, who has suggested two edges of life-knife; one is good another one is evil or destruction of the cultural expression. After 1970s his novels move with special characteristics – feminism, science, rationalism, moral perspective and fragmentation. *Sweet Tooth* and *The Children Act*, display a complex development in women's characters and their roles from feminist perspectives. Significantly the novel *Sweet Tooth* deals with a subject of war of culture, morality literature, and intelligence. By the title 'Sweet Tooth' - McEwan has tackled a number of ethical and moral issues like – communism, anti- communism, scratch of art funding and culture war between well settled countries – America, UK and Russia. In 1970s and 1980s most of the countries cut or stopped their funds and never encouraged their journalists, artists and writers.

McEwan has clearly showed the ethical and moral responsibilities of fiction as well as the characters. Serena is a spy and an agent of 'Sweet Tooth'; her primary duty is to report about Haley's writing progress. But Serena has seduced Haley's life and career; she has forgotten her ethical and moral responsibilities of an agent. Both Serena and Haley become emotionally good lovers but Serena in her position is supposed to keep the secret from Haley that she is an agent. In the critical situation Serena faces ethical and moral dilemma; if she reveals the secret, the organization or 'Sweet Tooth' will fire her. If she wants to protect her true love for Haley, she has to choose one either be a good agent or be a good lover. In this case Serena has violated her moral and ethical subjects and principles– Being a serious and well intellectual agent she should abide by the rules and principles of an organisation but she has broken the ethical and moral responsibilities of a good and intellectual agent, she forgets her duty and falls in love with young writer; even though in the perception of Serena as an individual, her action is right but in the perception of organization her action is erroneous. By the perception of ethics and moral, her love is not true because she has often betrayed her lover Haley in the name of organization. Through using ethical and moral approach McEwan clearly depicts the dilemma of 1970's British – the strikes, the IRA terror, the drug culture, and the general sense of decline and fall.



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The Ethical And Moral Dilemma As Reflected In Ian Mcewan's *Amsterdam*

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Abstract— The present study tries to look ethical and moral dilemma in terms of euthanasia, betrayal, private or personal doctrines, political principles and friendship in the novel of *Amsterdam* (1998). Ian McEwan is a postmodernist critique and he explores the status and consequences of the social, political and cultural issues and how they positively or negatively affect today's world and the same has been applied in the novel. McEwan's characters are tested by circumstances and ethical morality. *Amsterdam* is a satire and dark examination of morality, politics, media and creative life of modern times. It is a tragedy that explores several moral issues viz. euthanasia, friendships, English political system, psychology of human nature, privacy rights, yearning for greatness, sacrifice and media power (press).

Keywords— Amsterdam, Euthanasia, Betrayal, Private, Doctrines, Friendship, Moral and Ethical

1. INTRODUCTION

Ian McEwan has been an eminent and essential figure of the recent revival of the British literature, especially in fiction. British fiction in the 1980s has gone through a period of innovation, discovery excitement, technological and media that expresses the artistic satisfaction and celebration. He has become a strongest novelist of that warning intimation, a writer of the New World Disorder and its deepest anxieties, a shaper and motivator of our present feelings, emotions and imagination. His novels are well-crafted and stylised; they combine rich insights into human condition with plots that comment on public anxieties and concerns. His characters are from middle class viz. writers, university lecturers, quantum physicists, neurosurgeons, spies, judges, musicians, newspaper editors and nurses. His characters show a few important features like interior monologue and reflective contemplation which tend to be thoughtful questioning individual emotions and internal intellectuality. McEwan pays attention to the intricacies of plot, characters and settings. 'Death' is a predominant idea of McEwan's novels and short stories.

2. DILEMMA IN AMSTERDAM

Amsterdam is divided into five parts; all five parts contain a different number of chapters. All the chapters are presented and narrated with free indirect speech, and from multiple perspectives. The composer Clive is the narrator of first and third part; second part is narrated from Vernon's point of view. The final two parts of the novel has mixed narrators; it is narrated by Julian Garmony's wife (Rose Garmony) Vernon, Clive, George and an objective narrator. In the novel *Amsterdam* one of the characters is 'Molly'; her death brings together two of her former lovers, and Julian Garmony, a right-wing politician. Ian McEwan's characters again explore the opposing perspectives on the world like highbrow, lowbrow, arts, commerce, patterns of social ideals and inequality. In the novel *Amsterdam* the city Amsterdam itself symbolizes a paradox: 'There was never a city more rationally ordered (AM 168)'. But it turns out to be the place where people can get away with murder, suicide and euthanasia.

Ian McEwan questions the quality and moral responsibility of the society. In a horrific and terrible situation a woman needs help and protection. But in the case of Clive, he has never cared for the woman and has not reported the incident to the police; Clive offers more importance to his creating symphony. The author criticises the society and every individual for not being conscientious about morality. In the Lake District, Ian McEwan clearly projects immoral incidents:

The man had hold of her wrist and was trying to drag her round the tarn towards the shelter of the sheer rock face directly below Clive. She was scrabbling on the ground with her free hand, possibly looking for a stone to use as a weapon, but that only made it easier for him to jerk her along... he was in his music. His fate, their fate, separate paths. It was not his business (AM 88-89).

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TIRUCHIRAPPALLI, TAMILNADU

Mythological Impacts on Igbo Culture in Select Novels of Chinua Achebe

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Abstract:

This research may be a continuation on the works that are done on Achebe's Things Fall Apart and Arrow God because it considers the parable that are inherent there in it from an eco-critical perspective. It hopes to determine that African literary writings are rich in ecological issues and attempts to use the myths that are in Things Fall Apart to elucidate the connection between nature and human culture. Eco-criticism is that the theoretical approach on which this work is anchored on because its study that moves nature from just a mere framing device and to the middle as far as literary criticism cares. The myths that are in Things Fall Apart and Arrow God includes the story of the quarrel between the sky and therefore the earth, the locust visitation every seven years etc. the importance of those myths among other things is to determine the harmony that previously exist between man and nurture; which may be a furtherance of the difficulty that shows men indebtedness to natural praxis. Finally, this research has established the importance of nature in a number of the myths in Things Fall Apart and suggested that more works should be done within the African literary culture to point out how nature has been discussed or utilized in various literary works.

KEYWORDS: Myth, History, Culture, Society, Civilization.



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