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RESEARCH ARTICLE

Hydroquinone Solubility in Pure and Binary Solvent Mixture at Various Temperatures with FTIR

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ABSTRACT:

Gravimetric method is used to measured hydroquinone solubility in water, ethanol and in water+ethanol binary mixtures at temperatures (293.15, 295.15, 298.15, 300.15, 303.15, 305.15, 308.15, 310.15 and 313.15)K. Mole fractions solubility of hydroquinone are correlated with temperature by using the Apelblat equation. The combined nearly ideal binary solvent (NIBS)-Redlich-Kister equation is used to fit experimental hydroquinone solubility data in mixed solvents at constant temperature. ΔH^0_{soln}, ΔG^0_{soln}, and ΔS^0_{soln} are thermodynamic functions of hydroquinone in different solvents, obtained from the modified van't Hoff equation. FTIR study is done for some hydroquinone solution.

KEYWORDS: Hydroquinone, Solubility, Density, Apelblat equation and FTIR.

INTRODUCTION:

Dyes, paper, pesticides, polymeric material, pharmaceutical and petrochemical product etc are produced by using hydroquinone as the major benzene metabolite. It is used as a developing agent in photography, dye intermediate, stabilizer in paints, varnishes oils and motor fuels. In addition, hydroquinone has been used as an antioxidant in the rubber and food industry. From 1950 to 2001 hydroquinone is applied in the commercially available cosmetic skin lightening formulations in European Union countries and since 1960 hydroquinone is commercially available as a medical product, cosmetic formulations of products for coating finger nails and hair dyes[1,2].

The antimicrobial properties of arbutin as the main compound and hydroquinone as the active metabolite was determined and compared with the antimicrobial properties of *A. unedo leaf* extracts so as to test the extent to which arbutin is responsible for antimicrobial activity[3]. Wide used of such substances increase phenolic compounds in industrial wastewater, these are toxic to aquatic life and human bring[4].

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Solubility data is required for selection of proper solvent and design an optimized crystallization process, in this paper the systematic study of solubility and densities of hydroquinone in water, ethanol and water + ethanol binary solvents over the entire composition range from zero to one mole fraction at temperatures (293.15 to 313.15) K is reported. The thermodynamic functions for saturated hydroquinone solution are calculated using modified van't Hoff equation.

MATERIALS AND METHOD:

Material:-

Triple distilled water is used in all experiments. Other chemicals is supplied by

Chemical Name	Supplier Name	Percentage purity	Standard
Hydroquinone	Sigma-Aldrich co.	99%	Reagent Grade
Ethanol	Merck, Darmstadt, Germany.	≥99.8%	G.R.

Selected solvent ethanol is very common and mainly used for many industrial processes. Temperature selected is closer to room temperature.

Apparatus and Procedure:-

Many methods are available to determined the solubility[5, 6]. In this work the solubility of hydroquinone is measured using an apparatus similar to that described

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DFT Study of Interaction between 2-Naphthol with Water, Methanol and their Binary Solvent Systems

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ABSTRACT

Theoretical study using Gaussian 03 software, with DFT/ B3LYP method at 6-31G(d) basis set was performed to understand the fundamental interactions between water-methanol and 2-Naphthol-solvent molecules and data obtained is used for guide line for overall stability of 2-Naphthol in different solvents. Computational study of 2-Naphthol, 2-Naphthol+water, 2-Naphthol+methanol and 2-Naphthol+methanol+water systems are found to be useful to get the HOMO, LUMO, thermodynamic properties HOMO-LUMO energy gap used to calculate global chemical reactivity indices by using Koopmans theorem.

KEYWORDS: DFT, HOMO-LUMO, 2-Naphthol, Koopmans theorem.

INTRODUCTION

Phenolic compounds have wide application to produced pesticides, polymeric material, pharmaceutical, dyes, paper and petrochemical product etc. There has been an increasingly concern about industrial waste water containing phenolic compound, which are damaging and toxic to aquatic life and human bring[1]. 2-Naphthol commonly used as dye possesses a very good antimicrobial property[2-3].

EXPERIMENTAL

Computational details: In this study 2-Naphthol, Methanol, Water are experimental molecules and their combinations were optimized on Window-7, Intel core i7 with 16 GB RAM of system. Computational study using Gaussian 03W software, DFT/ B3LYP method, 6-31(G)d as basis set was performed to understand the fundamental interactions between solvent-solvent and solute-solvent molecules. Theoretical study helps to understand the stability and orientation of molecular systems.

According to Koopmans theorem[4], global reactivity descriptor such as:

- Electronegativity (χ): It is the attracting power of an atom in a molecule. Higher is the electronegativity, greater its electron accepting power. It is calculated as

$$(\chi) = -1/2\ (E_{HOMO} + E_{LUMO}) \quad (1)$$

- Chemical potential (μ): It is the negative value of electronegativity of a molecule. It is also calculated as half of the sum of HOMO and LUMO energy as given below

$$(\mu) = 1/2\ (E_{HOMO} + E_{LUMO}) \text{ or } \mu = -\chi \quad (2)$$

- Chemical Hardness (η) and Chemical Softness (σ): Chemical hardness is related with the electronic excitation or charge transfer. It gives the stability and reactivity of chemical system[5]. It is calculated as

$$(\eta) = 1/2\ (E_{LUMO} - E_{HOMO}) \quad (3)$$

Chemical Softness is reciprocal of global hardness[6-8], calculated as follow

$$(\sigma) = 1 / \eta \quad (4)$$

- Electrophilicity index (ω)[9]: It is the ability or capacity of a chemical species to accommodate additional electronic charge from its surrounding and stabilization of its energy state. It is calculated as;

$$(\omega) = \mu^2 / 2\eta \quad (5)$$

- Ionization energy (I) and Electron affinity (A): According to Koopmans theorem ionization energy and electron affinity are approximated as the negative values of the HOMO and LUMO energies respectively. They are obtained as;

$$(I) = -E_{LUMO} \quad (6)$$

$$(A) = -E_{HOMO} \quad (7)$$

स्त्रियांचे श्रम आणि अर्थकारण

अजय एकनाथ अहिर

सहयोगी प्राध्यापक, इतिहास विभाग, म.स.गा महाविद्यालय मालेगाव कॅम्प, ता.मालेगाव जिल्हा नाशिक

डॉ बाबासाहेब आंबेडकरांनी २० जुलै १९४२ रोजी नागपूर येथे आयोजित 'ऑल इंडिया डिप्रेस्ड क्लासेस विमेन्स कॉन्फरन्स' मध्ये महिलांना उद्देशून केलेल्या भाषणात म्हंटले होते, "स्त्रियांची प्रगती ज्या प्रमाणात झाली असेल त्यावरून एखाद्या समाजाची प्रगती मी मोजित असतो" आजच्या संदर्भात भारतासारख्या विकसनशील देशामध्ये स्त्रियांची प्रगती झाली आहे कि अधोगती होत आहे हे पाहण्यासाठी विकासाचे जे मॉडेल भारताने स्वीकारले आहे त्याचा विचार करणे क्रमप्राप्त आहे. दूरदर्शन वरील मालिका, पंचायत राज व्यवस्था,माहिती तंत्रज्ञान ते बचत गट अशा अनेक क्षेत्रात स्त्रियांनी प्रगती केलेली दिसून येते, परंतु त्याच बरोबर भारतातील लिंगगुणोत्तर, स्त्रियांवरील हिंसा, संसदेत स्त्रियांचे नगण्य प्रमाण, उदारीकरणाच्या काळात वाढलेला जमातवाद यामुळे स्त्रियांचे दुय्यमत्व अधोरेखित केले जाते. इ.स १९७० पासून विकासाचे जे प्रारूप स्वीकारले गेले ते स्त्रियांसाठी दडपणूक करणारे आणि पूर्वग्रह दुषित होते.मानवी समाजात काम म्हणजे बाजाराशी संबंधित वेतन रुपात आर्थिक मोबदला प्राप्त होणारी कृती समजली जाते.अर्थशास्त्र व संख्याशास्त्र सारख्या विषयांमधील विश्लेषणाने स्त्रियांच्या कामाला विनाआर्थिक क्षेत्रामध्ये ढकलले जाते व त्यांच्या अनोंदणीकृत कामाची गणना असंघटीत अथवा निर्वाहाच्या क्षेत्रामध्ये केली जाते (देहाडराय स्वाती, २०११ : ५) 'काम' या व्याख्ये मध्ये घरात तसेच घराबाहेर केलेल्या विनामोबदला कामाचा समावेश केला जात नाही. समाजाच्या आर्थिक रचने मध्ये वस्तू आणि सेवांच्या फक्त विनियोग मूल्याला महत्व दिले जाते उपयोगिता मूल्याला नाही. स्त्रिया करीत असलेल्या बहुतांश कामामधून उपयोगिता मूल्य तयार होत असते त्यामुळे स्त्रियांचे बहुतांश काम हे बाजारपेठेच्या कक्षेबाहेर राहते.

२१ व्या शतकात स्त्रिया मोठ्या प्रमाणात जागतिक बाजारपेठेशी संबंधित आर्थिक कार्यक्षेत्रात काम करू लागल्या आहेत परंतु तरीदेखील त्यांची अवैतनिक कामे ही सांस्कृतिक व्यवहाराच्या माध्यमातून समाजात कायम टिकविली जातात.जागतिकीकरण या विरुदाखाली अनेक आर्थिक व सामाजिक बदल घडत आहेत.जागतिकीकरणात व्यवस्थापन पद्धती व सिद्धांत, क्रयवस्तूंचे वाटप, आर्थिक संरचानेतील सेवा क्षेत्राचे स्थान, नागरी जीवनाची रचना, वर्गजाणीवा आणि विचारसरणी, कुटुंब संस्था व सांस्कृतिक जीवन या सर्वच बाबतीत बदल घडून आलेले दिसतात. स्त्रियांच्या कामावर या सर्व बदलांचा व्यापक परिणाम झालेला दिसतो. ओद्योगिक व सेवा क्षेत्रात स्त्रियांना अनेक रोजगाराच्या संधी उपलब्ध झाल्या.

नवभांडवलशाही आणि नवउदारमतवाद हे राज्यसंस्थेच्या भूमिकेचे अवमूल्यन करतात आणि आर्थिक, वित्तीय बाबींमध्ये सरकारी हस्तक्षेपविरोधी भूमिका घेतात, यालाच खाजगीकरण असेही म्हणतात ज्यामध्ये भांडवलीव्यवस्था हि राष्ट्राच्या आर्थिक बाबींचे नियमन करीत असते. या संदर्भात स्त्रियांचे श्रम आणि जागतिकीकरण यामध्ये गुंतागुंतीचे संबंध निर्माण होतात. सुलभा ब्रम्हे आपल्या लेखात जागतिकीकरणाच्या संदर्भात भारतीय स्त्रीची स्थिती स्पष्ट करताना म्हणतात, स्त्रीला हक्काचे मानवी स्थान मिळविण्यासाठी जगण्याचा हक्क,शिक्षणाचा हक्करोजगार-नोकरीच्या सुयोग्य संधी मिळविण्याची गरज आहे. जागतिकीकरणाने या मागण्यांच्या मुळावरच घाव घातलेला दिसतो. गरीब –शोषित स्त्री हि जागतिकीकरणाच्या खुल्या स्पर्धेत कदीच उतरू शकणार नाही. शिक्षणाच्या व्यापारीकरणामुळे शिक्षण खर्च वाढतो आहे याचा परिणाम मुलींच्या शिक्षणावर प्रथम होत आहे. कायम नोकऱ्यांचे स्वरूप बदलून कंत्राटी पद्धतीचा अवलंब वाढतो आहे. तयार कपडे, इलेक्ट्रोनिक्स, खाद्य

येवले शहर राजकीयदृष्ट्या जागृत शहर म्हणून महाराष्ट्रात प्रसिद्ध होते. अभिनव भारत चळवळीने येवल्याचे नाव महाराष्ट्रातील जहाल केंद्र म्हणून पुढे आणले. या क्रांतिकारी केंद्रात महाराष्ट्रातील विविध राजकीय प्रवाह येऊ लागले. टिळक विद्यालयसांस्कृतिक राष्ट्रवादाचे केंद्र म्हणून उदयास आले. येवल्याच्या स्वातंत्र्य आंदोलनात ब्राम्हण, खत्री, नागपुरे, कोष्टी, भोई, शिंपी, निऱ्हाळी, साळी, गुजराथी-पाटीदार, परदेशी, राऊळ-राऊत अशा निरनिराळ्या जातीतून विशेषतः विणकर जातीतून स्वातंत्र्यसैनिक निर्माण झाले. या सर्वात टिळक विद्यालयाने प्रेरणा दिली, मार्गदर्शन केले.

येवल्यातील वनिता संघाची चळवळ आणि स्त्री कार्यकर्त्या यांनाही प्रेरणा राष्ट्रीय विद्यालयाने दिली. यामध्ये राधाबाई आपटे, कमळाबाई वाडेकर, उषाताई महाजन या कार्यकर्त्या पुढे आल्या.

आपटे गुरुजींचे योगदान

पांडुरंग श्रीधर आपटे यांचा जन्म येवल्या मध्ये इस १८९० साली झाला.येवल्यातील लोक त्यांना आपटे गुरुजी या नावाने संबोधत.आपटे गुरुजी हे येवल्यातील स्वातंत्र्य चळवळीचे नेते होते.आपटे गुरुजींनी धार्मिक संस्काराची जोडणी हि समतावादी मूल्यांशी केली. आपटे गुरुजींचे योगदान म्हणजेच येवल्याच्या स्वातंत्र्य चळवळीचा इतिहास आहे. गुरुजींनी १९२३ साली मुळशी सत्याग्रहात भाग घेतला. यासाठी त्यांना ४ महिने तुरुंगवास घडला. टिळक विद्यालयाचे मुख्याध्यापकपद स्वीकारून त्यांनी अनेक सत्याग्रही निर्माण केले. येवल्यात राष्ट्रवादाची विचारसरणी रुजवण्याचे महत्त्वाचे कार्य गुरुजींनी केले. येवल्याच्या शैक्षणिक सांस्कृतिक व राष्ट्रीय घडणीत आपटे गुरुजींचा फार मोठा वाटा होता.

सत्याग्रही जनआंदोलन

नाशिकचा कलेक्टर जॅक्सन याच्या खुनाच्या खटल्यात डॉ. विष्णू महादेव भट यांना ५ वर्षे सक्त मजुरीची शिक्षा झाली. पंडितराव बर्वे, विष्णू कुलकर्णी, काशिनाथ टोणपे हे सर्व क्रांतिकारी सैनिक होते. सशस्त्र चळवळ येवल्यात पाय रोवू शकली नाही. सशस्त्र प्रतिकाराचा मार्ग अवलंबण्यात सुशिक्षित मध्यम वर्गातील ब्राम्हण तरूण पुढाकारावर होते. ब्रिटिश सत्तेचा मुकाबला शेतकरी-श्रमिक जनतेच्या मागण्यांभोवती लढे संघटित करून होऊ शकला असता परंतु या ब्र
वर्गास या प्रकारच्या जनआंदोलनाचा वारसा भारताच्या जाती व्यवस्थेने उपलब्ध हो
अशा परिस्थितीत वैयक्तिक स्तरावरील सशस्त्र प्रतिकाराचा मार्गच त्यांन .. शिक्षण,
आर्थिक विकास आणि राजकीय जागृती यांच्या विकासामुळे ..तकरी व मागास
जातीतून नवे वर्ग उदयास येण्यास प्रारंभ झाल्यावर .ा दखल घेणे राष्ट्रसभेला
आवश्यक झाले. म. गांधींना म्हणूनच आपल्या ा तंत्रे बदलावी लागली. गांधीजींच्या

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Climber plants used as medicine by Tribal of Nasik District (M.S.) India

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Abstract
Present paper deals with report 22 Climber medicinal plants collected from different localities of Nasik district. Some of them are naturalized & now they are the part of our indigenous flora. A part from non tribal people there are many tribes inhabiting in nasik district. They are Mahadeo-koli, Bhils, Kokani (Kokana kunbis), Vanjaris, Thakurs, Varlis, Vadars, Katkaris, Vaidus, Kangaris, Bhamta's and Berads. Since long medicine mean Vaidyas & tribals used various plants parts in preparation of crude drugs. The aim of the present investigation is to enumerate medicinal plants used by tribal people & their medicinal uses.

Keywords: climber plants, medicine, tribal, Nasik district

Introduction
The Nasik district of Maharashtra is located between latitudes 19°35' and 20°50' and longitude 73°55' and extended an over an area of 15.582 sq. km. It is finite on the north-west by the Dang and Surat district of Gujarat, on the north by Dhulia district, and on the east by Jalgaon district and towards the south-west the Thane district. Climber plants found in Nasik region of Maharashtra are naturalized in some parts of forest along roadsides, dams, canals under, on hedges of fields and they are dominating to the native vegetation. Some plants are harmful to animals and human beings. During exploration tour in forest found that the tribal communities and villagers are regularly using some plants for the purpose of medicine and so we have collected medicinal plants. A large a part of population is dominated by the social group inhabitants like Varlis, Mahadev Kolis, Konkanas, Bhila, Mali etc. The social group individuals cure their ailments by easy remedies. Ethnobotanical work carried out by Desai & etal (2009) [3], Jain, (1989) [5], Karnik, (1966) [6], Karnik (1966) [6], Pereira (2006) [8] Rajendran & Rengamani. (2006) [9]. Shah etal (1983) [10]. Vartak (1957) [11] and Vartak & Madhav Gadgil (1980) [12]

Material and Method
Present studies was carried out in Nasik district in the year 2014-2015.for the study of climber medicinal plants of Nasik region. The climbers of the area are represented 22 species under 20 genera belonging to 12 families. The ethnobotanical data was collected through interviews, discussions with them collected the data on medicinal uses also the literature available on same plants, it is found that most of the climbers are now used by them instead of indigenous plants probably they may have better results. Climbers found in field survey are along with their botanical name, local name, family and their medicinal uses in alphabetical order. The climber medicinal plants identified by using flora like, Flora of (Almeida (1990), Naik (1999), Lakshminarsimhan & Sharma (1991), Shah (1978), Garud & etal (2009) [4], Arinathan & etal (2006) [1], Cherian & Pataskar (1971) [2]. All these climber plants are enumerated (22 climbers) in the following ways.

***Anamirta Cocculus* (L.) Wight & Arn**
Local Name: 'Vatoli'.
Family: Menispermaceae

Medicinal Uses
The fruits are used for bronchitis, inflammations, ringworm, and skin diseases. The tender leaves are used by tribal contraction of the uterus immediately after delivery.

***Aristolochia Indica* L.**
Local Name: 'Sapsund'
Family: Aristolochiaceae

Medicinal Uses
Leaf decoction is used for fever and bowel complaints. Leaf paste is applied over the leucoderma and skin inflammations. Root decoction is treat to fever, dyspepsia and bowel complaints. Root paste is used for antidote for snake bite.

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New Congruence Method towards Assignment Problem

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Abstract

In this paper, we have develop the new congruence method for assignment problem in minimum steps which gives the result in minimum stipulated time as compare to other method to solve assignment problem. Also as an application we have compare the result with Hungarian method.

Subject Classification:[2010] 90B06, 90B80, 11A07
Keywords: Transportation Problem, Assignment Problem, Congruence

1 Introduction

Though the theory of Transportation problems generally evolved during the world war II, origin of its roots are right from the 400 B. C. or from 3500 B. C. after wheel was invented in the Middle East of Asia ([4],[8]). On the other hand the origin of an assignment problem were discovered by the great mathematician Carl Gustav Jacobi in 19^{th} century. Whenever one think of an assignment problem the first case come into our mind ([4],[7],[8]) is transportation problem in which the objective depends upon available resources which were depending upon machines with different efficiency of performing job. The assignment problem tells us that ([4],[8]) How should the assignment be made so as to optimize the given objective? this is because the assignment problem has varying degree of efficiency for performing different activities. Therefore cost, profit or time of performing different activities is different ([4],[8]).
To overcome this difficulty it is interesting to modify the given transportation problem as number theoretic approach using the congruence relation. We know that, the congruence relation $a \equiv b(modm)$ is an equivalence relation [3] which tells us that $m \mid (b-a) \Leftrightarrow a \equiv b(modm)$.
The paper mainly consists of three parts. In first part some basic definitions were given while in second part the algorithm for proposed new method were given. In the third part, this new method along with numerical example were explained. In the fourth part, we have compared the result with Hungarian method along with conclusion.

2 Basic Definition

1) **Transportation:**
Let there be 'm' origins $O_1, O_2, ..., O_m$ having $a_i (a_i > 0\ , i = 1, 2, ..., m)$ units of avail-

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On Summation of Cardinalities of Subsets of A Finite Set

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Abstract :

When we think about set to be included in some process. Cardinality of set always gives a rough idea about future calculations. Thus, cardinality of set is a primary measure about the set. In this paper, By using power set of a set we give some results about cardinality of set and summation of cardinality of all its subsets. Also, we will give recurrence relation about summation of cardinality of all its subsets, and derive a formula for calculating summation of cardinality of all its subsets.

Keywords: - Cardinality of set, recurrence relation, power set.

1. Introduction:

Here we will give brief introduction of concepts required to prove some results. Cardinality of set is denoted by |.| and is number of elements in a given set. All subsets of given set are given by its power set. In [1,2], recurrence relations are used to calculate next term in a sequence with help of few previous terms. For example, we calculate next term in Fibonacci sequence 1, 1, 2, 3, 5, 8, 13, ... by using recurrence relation

$a_{k+2} = a_k + a_{k+1}$, $a_1 = a_2 = 1$, $k = 1, 2, 3, \ldots\ldots$

2. Recurrence Relation Between Summation of Cardinalities Of Subsets:

Here we give generalization method to to summation of cardinalities of all subsets of given set by considering some initial values.

A) If |A|=0:

Here A is empty set φ and empty set has only one subset viz. empty set φ itself. Thus summation of cardinalities of all subsets is 0.

B) |A|=1:

Here A have two subsets viz. empty set φ and A itself. Thus summation of cardinalities of all subsets is 1.

C) |A|=2:

If A={ a,b} then A have following subsets with cardinality as shown below:

Subsets of set A	Cardinality of Subsets (k)	n = No. of subsets of cardinality k	n*k
φ	0	1	0
{a} , {b}	1	2	2
{a, b}	2	1	2
		Σ |.| =	**4**

Thus summation of cardinalities of all subsets of A (i.e. Σ |.|) is 4.

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Determination of unknowns in Electrical Circuits using Linear Equations and Matrices

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ABSTRACT: This paper is useful to explain simple ideas to solving problems involving electrical circuits in the general format. In a electrical circuit, if batteries and resistors are connected by wires, determine all unknown values of electrical current flowing through the wires, potential difference across the batteries, and resistance in the resistors, given enough known values of same quantities.

KEYWORDS: Wire, Battery, Resistor, Current node, Voltage loop, Kirchhoff's voltage law, Kirchhoff's current law.

I. INTRODUCTION

In this paper we introduce the basic laws of electric circuits and then use to analyze electric-circuits consisting of batteries, resistors and wires.

A source of direct current(or voltage) in the circuit is called a battery, A device, such as a light bulb, that reduces the current in circuit by converting electrical energy into thermal energy is called a resistor, and a conductor that allows a free flow of electric current is called a wire. A closed connection of resistors, batteries, and wires is known as simple electrical circuit. When circuits are represented by diagrams, batteries, resistors, and wires are depicted as follows:

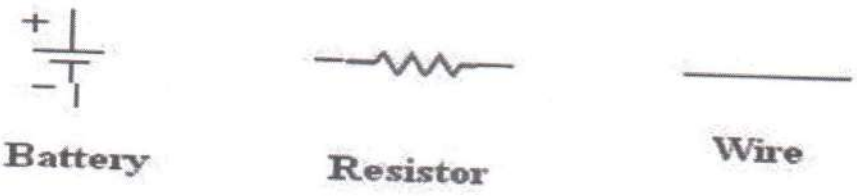

Figure 1 shows a simple electrical circuit consisting of three batteries and four resistors connected by wires.

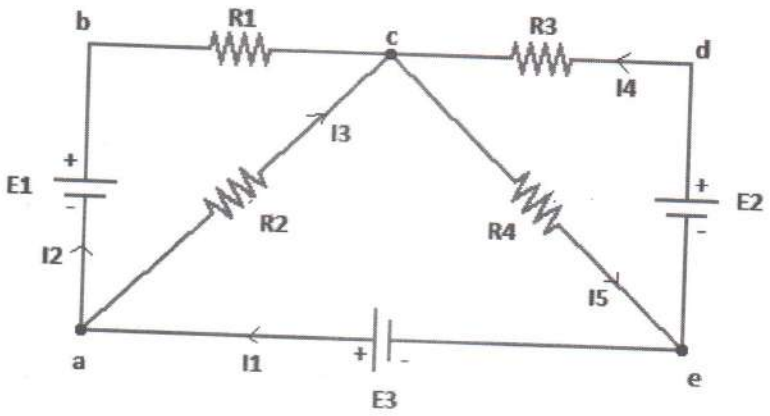

Figure 1

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A SYSTEMATIC REVIEW: USE OF CHLOROQUINE AND HYDROXYCHLOROQUINE IN COVID-19

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ABSTRACT

Chloroquine and Hydroxychloroquine have been used in the treatment of various diseases like lupus erythematosus, rheumatoid arthritis, malaria, amebiasis that is occurring outside the intestines, rheumatoid arthritis, and lupus erythematosus for more than 70 years. On 11 of march in the afternoon World Health Organization (WHO) declared that covid-19 was a pandemic disease and they also declared that already the number of cases outside China was increased 13-fold, and the number of affected countries has tripled. But at that time no such medical treatments were available for covid-19. So, in this emergency, the only option available the use of existing medications. This systematic review aims to summarize the chemical structure, mechanism of action, pharmacokinetics, and available evidence regarding the role of chloroquine and hydroxychloroquine in treating coronavirus infection. In this review, we discuss the available evidence for the use of chloroquine (CQ) and hydroxychloroquine (HCQ) against COVID-19. Chloroquine and hydroxychloroquine both have unusual pharmacokinetic properties with enormous apparent volumes of distribution (chloroquine > hydroxychloroquine) and very slow elimination from the body. There is theoretical, experimental, preclinical, and clinical evidence of the effectiveness of chloroquine in patients affected with COVID-19. There is adequate evidence of drug safety from the long-time clinical use of chloroquine and hydroxychloroquine in covid-19.

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८. १९ व्या शतकातील महाराष्ट्रातील परीवर्तन – ऐतिहासिक विश्लेष

सुभाष लक्ष्मण अहिरे
सहयोगी प्राध्यापक, इतिहास विभाग, म. स. गा. महाविद्यालय, मालेगांव कॅम्प.

शोधनिबंधाचा हेतु व उद्देश

मानव संस्कृतीत नवे व्यापारी युग निर्माण झले या युगाने आपले राष्ट्र कसे संघटीत करावे आणि दुसऱ्या राष्ट्रावर कसे करावे याबाबतीत धोरण आखले. युरोप खंडाने व्यापार व वसाहतवाद या धोरणानुसार आशिया खंडातील हिंदुस्थानात आ रोवले. हिंदूस्थानातील युरोपियन शक्तीच्या प्रवेशामुळे हिंदुस्थान व त्यातील राज्य यामध्ये पाश्चात्य संस्कृतीच्या प्रवेशामुळे प संस्कृती, चालीरिती, रूढी, परंपरा यामध्ये बदल होवू लागला. ह्या बदलाच्या क्षमतेत दक्षिणेकडील मराठ्यांचे राज्य म्हणजे यामध्ये पाश्चिमात्यांनी प्रवेश केला. १९ व्या शतकात युरोपियन ब्रिटिशांनी महाराष्ट्रात प्रवेश केल्यावर येथील राजकीय, स धार्मिक, आर्थिक क्षेत्रात अमुलाग्र बदल झाला या बदलांना Transformative Movement म्हणजे `सामाजिक बदल आणण्यासाठीची सामाजिक चळवळ` असे म्हणतात. महाराष्ट्रावर झालेल्या या परिणामांना परिवर्तन असे म्हणतात. परिवर्तन वस्तुमध्ये होणारे बदल. प्रक्रिया किंवा सामान्यपणे वस्तु बदलते त्याला आपण परिवर्तन म्हणतो.

हा विषय निवडतांना इतिहासकार इ. एच. कार यांचे म्हणण्याप्रमाणे ``इतिहासातील प्रत्येक निर्णयाच्या बुडाशी व्य गरजा असतात. त्यामुळे सर्व इतिहास, समकालीन इतिहास होतो. इतिहासात घटना कितीही दूरच्या असोत, प्रत्यक्षात इतिहासा वर्तमानकाळातील गरजा आणि परिस्थितीच्या दिशेने असतो.``

पेशवाईच्या अस्ताच्या वेळेस या युरोपियन ब्रिटिश सत्तेचा महाराष्ट्रात प्रवेश झाल्यावर मराठ्यांना हा नवा शत्रु निर्माण हा शत्रु पुर्वीच्या कोणत्याही शत्रुपेक्षा अनेक पटीने भारी, नवी शस्त्रास्त्रे, नवे सुसज्ज लष्करं, नवी विद्या, नवे विज्ञान आणि अशी राष्ट्रनिष्ठा या गुणांनी भरलेला होता. १८१८ मध्ये पेशवाई व १८४८ मध्ये मराठी सत्ता काबीज केल्यावर या महारा बदल, परिणाम व परिवर्तन घडून आले त्याचा इतिहासाचा अभ्यासक म्हणून विचार करणे आवश्यक आहे. इ. एच. का म्हटल्याप्रमाणे ``सर्व इतिहास हा विचारांचा इतिहास आहे, इतिहास म्हणजे केवळ घटनात्मक वर्णन नसून तो मुख्यत: अ परिशिलन असते. भूतकाल व वर्तमानकाळ यांच्यात सातत्याने चाललेला तो एक संवाद आहे.``

युरोपियन ब्रिटिशांच्या प्रवेशामुळे १९ व्या शतकाबरोबर जातीविषयक, धार्मिक, स्त्री-पुरूष आणि विवाहविषयक विचारांच स्त्रीचे समाजातील स्थान, बालीका वधाची समस्या, सती व केशवपनासारखी प्रथा, बालविवाहाची समस्या, स्वयंवर, पुनर्विवाहाच स्त्री-शिक्षणाचा प्रश्न, स्त्री-पुरूष समतेचा प्रश्न इ. विविध विषयावर पाश्चात्याच्या आगमनामुळे बरेच विचारमंथन घडून आले.

प्रा. अरविंद देशपांडे यांनी पाश्चात्य प्रबोधनाचा वारसा महाराष्ट्रात तीन मार्गांनी पोहचला असे तीन मार्ग पुढी सांगितले. १) नवी शासन पध्दती २) इंग्रजी शिक्षण ३) ख्रिस्ती धर्म प्रसार इ.

सदर शोधनिबंधावर प्रकाश टाकतांना अनेक संदर्भ साधने याची मला मदत मिळाली. या संदर्भ साधनांमध्ये या परि

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2

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Review Article

MEDICINAL PROPERTIES OF SCHIFF BASES AND METAL COMPLEXES: A REVIEW

Vinod S. Aaynor*., Dinesh F. Shirude., Pankaj S. Pawar., Narendra A. Dokhe and Nilesh J. Mali

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Article History:
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Key words:
Schiff bases, Metal Coplexes, Multifunctions, Bioactivities.

ABSTRACT

Metal complexes play an essential role in chemical and medicalsciences for their importance and variety of actions. Schiff bases were multifunctional pharmacophores able to form chelating complexes with several metals in different oxidation states. Complexes with Schiff bases are widely described in the literature for their multiple actions and numerous advantages, such as low cost and easy synthesis. They show multifunctional bio-activities, such as antimicrobial, antioxidant, antimalarial, anti-inflammatory and antitumor, anticancer, DNA binding etc. Schiff bases may also form complexes with many Inner-transition elements acting as catalysts (e.g., in various synthetic processes) and antitumor agents. This review offers to extends preparation and the uses of Schiff bases as antitumorals, highlighting the importance, in the field of the anticancer agents, of these tools as ligands of metal complexes.

INTRODUCTION

Schiff bases ($R_1R_2C=NR_3$) are interesting organic compounds containing an azomethine (-CH=N-) or an imine (-C=N-) group generally formed by the condensation of active carbonyl groups and amino compounds, in which the nitrogen atom is bonded to an aryl or alkyl group. These compounds form highly stable complexes with transition metal ions and Inner transition metal ions. Metal complexes in which the metal is coordinated to different ligands, able to stabilize the metal and modify its chemical and medicinal properties, have gained considerable importance in Pharmaceutical chemistry as antibacterial agents [1-5], antifungal agents [6-10], antimicrobial agents [11-15], antioxidant activity [16-20], anticancer [21-25], DNA binding agents [26-30]. Complexes containing the transition metals copper, zinc, cadmium, platinum, palladium, gold and silver have attracted much attention due to their various biological activities.

Antibacterial

(Shoaib, 2013) were synthesized many metal complexes of Cu(II), Co(II), Ni(II), Mn(II), Zn(II) are tested for antibacterial activity versus Staphylococcus aureus strain were screened. Both ligands exhibited a potent effect, although the Mn complex of HL1 and the Ni complex of HL2 exhibited high efficacy against the reference medication [1]. (Gulcan, 2011) synthesized many metal complexes of Cu(II), Ni(II), Co(II), Pd(II) and Pt(II) and all shows Antibacterial property towards Staphylococcus aureus ATCC 4230 was determined using Ampicillin trihydrate as a comparative medication. All of them inhibits the growth of bacteria but the antibacterial activity of Co(II) and Cu(II)exhibit antibacterial activity that is both efficient and selective against gram-positive and negative bacteria [2].Several metal complexes of Zn(II), Cd(II), and Hg(II) derived by(C & Sekhar, 2018) and evaluated for antibacterial activity towards bacterial bacillus megaterium (Gram-positive) and Klebsiella pneumoniae, respectively (Gram-negative). Researchers can conclude that the complexes are more effective than the ligands alone using this data. Hg complexes of all the chemicals investigated exert a higher action on the bacteria than any of the other compounds[3]. (Abdulghani & Hussain, 2015)were synthesized many metal complexes of Pt(II), Pd(II), Cu(II), Ni(II) and their antibacterial activity were carried out versus E.coli Staphylococcus aureus, Pseudomonas arginosa and Streptococcus pneumonia. All metal complexes show selective activity against one or two bacteria but Pt complex [Pt (Ln)Cl_3](H_2O. 0.5 OH) was active against all contains highest activity against Streptococcuspneumonia and Pseudomonas aeruginosa [4].(Sumrra *et al.*, 2020)derived many metal complexes of Co(II), Ni(II), Cu(II) and Zn(II), all were checked for antibacterial activity versus E.coli, Streptococcus farelis, Pseudomonas aeruginosa, Khensiella pneumonia, Staphylococcus aureus and Bacillus subtilis. While all complexes were microcrystalline and all but Zn(II) complexes exhibited a strong color, only the MIC compounds significant antibacterial properties were chosen for MIC investigations[5].

Antifungal

(Tyagi & Chandra, 2012)synthesised many Schiff bases and their metal complexes of metal Pd(II), Pt(II), Rh(II), Ir(II) and tested their antifungal activity against Aspergilusniger, Aspergilusfumigares, and Fusarium odum. They found that

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Schiff bases ($R_1R_2C=NR_3$) are interesting organic compounds containing an azomethine (-CH=N-) or an imine (-C=N-) group generally formed by the condensation of active carbonyl groups and amino compounds, in which the nitrogen atom is bonded to an aryl or alkyl group. These compounds form highly stable complexes with transition metal ions and Inner transition metal ions. Metal complexes in which the metal is coordinated to different ligands, able to stabilize the metal and modify its chemical and medicinal properties, have gained considerable importance in Pharmaceutical chemistry as antibacterial agents [1-5], antifungal agents [6-10], antimicrobial agents [11-15], antioxidant activity [16-20], anticancer [21-25], DNA binding agents [26-30]. Complexes containing the transition metals copper, zinc, cadmium, platinum, palladium, gold and silver have attracted much attention due to their various biological activities.

Antibacterial

(Shoaib, 2013) were synthesized many metal complexes of Cu(II), Co(II), Ni(II), Mn(II), Zn(II) are tested for antibacterial activity versus Staphylococcus aureus strain were screened. Both ligands exhibited a potent effect, although the Mn complex of HL1 and the Ni complex of HL2 exhibited high efficacy against the reference medication [1]. (Gulcan, 2011) synthesized many metal complexes of Cu(II), Ni(II), Co(II), Pd(II) and Pt(II) and all shows Antibacterial property towards Staphylococcus aureus ATCC 4230 was determined using Ampicillin trihydrate as a comparative medication. All of them inhibits the growth of bacteria but the antibacterial activity of Co(II) and Cu(II)exhibit antibacterial activity that is both efficient and selective against gram-positive and negative bacteria [2].Several metal complexes of Zn(II), Cd(II), and Hg(II) derived by(C & Sekhar, 2018) and evaluated for antibacterial activity towards bacterial bacillus megaterium (Gram-positive) and Klebsiella pneumoniae, respectively (Gram-negative). Researchers can conclude that the complexes are more effective than the ligands alone using this data. Hg complexes of all the chemicals investigated exert a higher action on the bacteria than any of the other compounds[3]. (Abdulghani & Hussain, 2015)were synthesized many metal complexes of Pt(II), Pd(II), Cu(II), Ni(II) and their antibacterial activity were carried out versus E.coli Staphylococcus aureus, Pseudomonas arginosa and Streptococcus pneumonia. All metal complexes show selective activity against one or two bacteria but Pt complex [Pt (Ln)Cl_3](H_2O. 0.5 OH) was active against all contains highest activity against Streptococcuspneumonia and Pseudomonas aeruginosa [4].(Sumrra *et al.*, 2020)derived many metal complexes of Co(II), Ni(II), Cu(II) and Zn(II), all were checked for antibacterial activity versus E.coli, Streptococcus farelis, Pseudomonas aeruginosa, Khensiella pneumonia, Staphylococcus aureus and Bacillus subtilis. While all complexes were microcrystalline and all but Zn(II) complexes exhibited a strong color, only the MIC compounds significant antibacterial properties were chosen for MIC investigations[5].

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(Tyagi & Chandra, 2012)synthesised many Schiff bases and their metal complexes of metal Pd(II), Pt(II), Rh(II), Ir(II) and tested their antifungal activity against Aspergilusniger, Aspergilusfumigares, and Fusarium odum. They found that

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Review Article

MEDICINAL PROPERTIES OF SCHIFF BASES AND METAL COMPLEXES: A REVIEW

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ABSTRACT

Metal complexes play an essential role in chemical and medicalsciences for their importance and variety of actions. Schiff bases were multifunctional pharmacophores able to form chelating complexes with several metals in different oxidation states. Complexes with Schiff bases are widely described in the literature for their multiple actions and numerous advantages, such as low cost and easy synthesis. They show multifunctional bio-activities, such as antimicrobial, antioxidant, antimalarial, anti-inflammatory and antitumor, anticancer, DNA binding etc. Schiff bases may also form complexes with many Inner-transition elements acting as catalysts (e.g., in various synthetic processes) and antitumor agents. This review offers to extends preparation and the uses of Schiff bases as antitumorals, highlighting the importance, in the field of the anticancer agents, of these tools as ligands of metal complexes.

INTRODUCTION

Schiff bases ($R_1R_2C=NR_3$) are interesting organic compounds containing an azomethine (-CH=N-) or an imine (-C=N-) group generally formed by the condensation of active carbonyl groups and amino compounds, in which the nitrogen atom is bonded to an aryl or alkyl group. These compounds form highly stable complexes with transition metal ions and Inner transition metal ions. Metal complexes in which the metal is coordinated to different ligands, able to stabilize the metal and modify its chemical and medicinal properties, have gained considerable importance in Pharmaceutical chemistry as antibacterial agents [1-5], antifungal agents [6-10], antimicrobial agents [11-15], antioxidant activity [16-20], anticancer [21-25], DNA binding agents [26-30]. Complexes containing the transition metals copper, zinc, cadmium, platinum, palladium, gold and silver have attracted much attention due to their various biological activities.

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"ECONOMICAL ANALYSIS OF INTERMEDIARIES IN FRUIT MARKETING OF MAHARASHTRA"

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ABSTRACT:

Marketing of fruits assumes a special significance in the orchard cultivation. But due to long distances between production and consumption regions involve a large number of intermediaries who take maximum share of consumer prices. In this context, present work deals with analysis of fruit marketing in the study area. In order to explain the marketing operations and intermediaries involved in fruit marketing the random sampling method for fruit growers was adopted. It was found that over 95% of produce is marketed through local channels by on farm sale to private traders or pre harvest contractors and local markets within district. In contrast, distant places like state or national markets are generally avoided.

KEYWORDS: Maharashtra, Intermediaries, Fruits, Marketing

INTRODUCTION:

According to Thompen (1951) an effective and efficient marketing system is one which facilitates the production of those products, which, when sold to consumers will yield maximum returns after the deduction of marketing charges and farm production cost incurred by farmers. In other words, marketing is the last stage in the crop production where the grower converts all his efforts and investment in cash.

Successful fruit growing not only requires knowledge, skill and accuracy in the production but also in the marketing (Acharya, S., 2004). Therefore, marketing of fruits assumes a special significance in the orchard cultivation, when the economy of small and marginal farmers is striving hard to move forward from the subsistence level to commercial agriculture. An efficient market system becomes the backbone of such economy. The economic position of a farmer can't be improved by producing only more unless he gets, 'fair price' for his produce (Phule 2002).

The marketing is one of the post production activities, which consistently influences the extent and nature of cultivation as well as settle on profits to growers. No doubt, pomegranate is a profitable venture but with the rapid increase in acreage and production several issues in marketing have emerged. Existing trade of pomegranate fruits in study area is characterized by high transportation, packing costs and mal practices in market and lack of storage facilities etc. Due to such deficiencies, the growers are getting low net returns even though prices of pomegranates are higher in consumer or retail market, which needs careful analysis. Against this background, present paper deals with analysis of fruit marketing in the study area.

HYPOTHESIS:

Fruits harvested in Maharashtra state are marketed through local channels by on farm sale; it is most accepted channels by growers in all types of orchard holdings.

OBJECTIVES

i) To describe in detail the operations and intermediaries involved in marketing of fruits.

ii) To explain pattern of fruit distribution in terms of type of market and channels used by the sample growers.

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Impact of bacterial blight disease (B.B.D.) on pomegranate orchards in Maharashtra

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Abstract
The pomegranate is mainly cultivated in Nashik district and about 15 different districts of Maharashtra. The Solapur District was identified as other pockets of pomegranate cultivation in the state. However epidemic spread of Bacterial blight disease occurred in every pomegranate district of Maharashtra. To collect primary data the field survey method, the interviews and discussions with pomegranate growers were liberally used. Random sampling method was used to interview the growers. The respondents to the extent of about 27.50% were affected this disease. The agronomic practices adopted by growers is interesting to find out the possibility to cultivate pomegranates in the study area and consequently the problems faced by growers.

Keywords: pomegranate, bacterial blight disease, Maharashtra

Introduction

Day by day developing of pomegranate is hard for farmers. The trouble of wilt disorder changed into a big issue, then growers were attempting a whole lot to remedy the killer trouble of bacterial disorder (hereafter known as as B. B. D.) on pomegranate. However manipulate measures but no longer observed to eliminate this ailment absolutely. The bacterial blight disorder is principal obstacle in further development of pomegranate cultivation. Jadhav and sharma (2009) [2] reports of bacterial blight prevalence in India are widely emphasised. Yet these days it turned into maximum studied pomegranate ailment in India. To perceive the character of bacterial blight disorder trouble, its reasons and results on pomegranate farming in addition to offer first-class viable tips for grower to adopt suitable treatments. In Bijapur and Bellary districts of northern Karnatakaa disease of much less financial importance posed its outbreak severity inside the year 2001-02. Then after the disorder spread of B. B. D. Additionally extended in neighbor districts solapur and sangali as well as in other pomegranate regions of Maharashtra (Yenjarappa and *et al.* 2006) [3]. It have become a negative component of pomegranate orchards. The boon materialistic fruit crop became as massive destruction after the intense attacks of this ailment to the affected growers inside the have a look at region.

Study area: The pomegranate is cultivated as a cash crop in extra than 17 districts of Maharashtra. But, its location, manufacturing and productiveness differ widely. Initial evaluation of secondary records for place below pomegranate cultivation became conducted by means of the use of technique of place quotient given by using Bhatia (1965) [1, 8] to choose the look at place. Based totally at the results of crop concentration indices, Solapur and Nashik district were diagnosed as most important pockets of pomegranate cultivation in the kingdom. However epidemic spread of bacterial blight ailment came about in each pomegranate district of Maharashtra. Consequently complete state became taken into consideration for look at. It's far well worth mentioning that the qualitative and quantitative evaluation made within the gift research work is more often than not primarily based on primary information collected from explorative interviews of growers through great area survey work.

1. Primary records: the technique of the examine become geographical in nature so procurement of primary facts for the observe place was crucial venture. It became executed via the sphere survey technique, the interviews and discussions with pomegranate growers have been liberally used to accumulate primary statistics. Random sampling method changed into used to interview the growers. The questionnaire together with 3 sections regarding declaration of B. B. D. Hassle viz. i) reasons ii) consequences, iii) treatments followed became designed in line with the goals of gift study.
2. Secondary information: except, the secondary statistics have been additionally received from authorities places of work, reviewing books, studies journals and reviews, published magazines, newspapers.

Methodology

Choice of pattern growers: the primary unit of the sampling became the pomegranate growers. Village sales information are used to make a list of pomegranate growers for every sample village. It is worth bringing up that the qualitative and quantitative evaluation made in the present studies work is typically based totally on primary statistics gathered from explorative interviews of growers via widespread discipline survey paintings.

Out of the overall growers in that respective sample village, 5% growers on the premise of 'pomegranate maintaining' were decided on for the reason of the interview. These are divided into three businesses according to length of keeping for inter farm contrast; as under.

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Poetry: A Therapeutic Tool to Combat Loneliness in Times of Covid Pandemic

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Abstract - **Postmodern aftereffects cut the modern man from men and milieu resulting in the vacuum of communication in his life. As a result, the feelings of loneliness pushing him into the quagmire of ill mental health. The Covid pandemic worsens the situation. The form of poetry emerges the best therapeutic healing for his mental transactions. It is also the perfect opportunity to utilize poetry to instill courage and confidence amongst the affected and lonely individuals. By nature, man is a social being. Therefore, social isolation is leading him towards several mental disorders including, fear and anxiety which gives way to depression, psychological stress, and loneliness. The present paper reveals that poetry can be a powerful tool to combat loneliness. Aristotle also recognized the therapeutic power of poetry. According to Aristotle, Poetry cleanses morbid feelings and provides homeopathic healing. Listening, writing, and reading poetry is associated with a reported improvement in pain. Poetry has been changing moods positively and nurture mental health. It provides the modern man a space to vent, reflect, and come to terms with his respective situations. It strengthens connections amongst men. It bestows us sight to see the silver linings in a dark cloud. All in all the voice of poetry breaks the silence of loneliness. William Wordsworth's poetry provides vibrant instances of voice of poetry. Poetry eventually fulfills our psychological need for 'expression'. In the time of oxygen scarcity poetry provides pristine oxygen to the suffocating lungs and turn them with the vibrant spirit of life.**

Index Terms - **mental health, Covid pandemic, expression, loneliness, Social isolation, healing morbid feelings, homeopathic healing, catharsis.**

INTRODUCTION

Man is a social animal gifted with language and literature to communicate his feelings and thoughts. You cannot imagine him living in a society without the language and literature that adds meaning to his existence. His acute psychological need for expression has fulfilled, else he may go mad. Men and milieu, wherein, he lives to help him pacify his need for the face-to-face communication. Postmodern aftereffects cut him from men and milieu results in the communication vacuum of his life. As a result, the feelings of loneliness pushing him into the quagmire of ill mental health. The Covid pandemic worsens the situation. Literature comes to the rescue and helps him express himself by exploiting its various forms such as play, poetry, fiction, and essay. In this context, I quote William Wordsworth's lines which touch upon the subject of loneliness,

For oft, when on my couch I lie
In vacant or in pensive mood,
They flash upon that inward eye
Which is the bliss of solitude;
And then my heart with pleasure fills,
And dances with the daffodils.

In other words, the 'bliss of solitude' can be found by pausing to appreciate what one encounters, alone.

The form of poetry emerges the best for mental transactions. It can combat loneliness and growing mental health problems. It can play a very relevant role and have an impact on mental health. It combats loneliness and also plays crucial roles in helping patients along with the medical fraternity. The Covid-19 pandemic is the perfect opportunity to utilize poetry to instill courage and confidence amongst the affected and lonely souls. Social isolation leads to several mental disorders including, fear and anxiety that gives way to depression, psychological stress, and loneliness. Loneliness increases the risk of premature mortality. It affects the cardiovascular, immune, and nervous systems. It is becoming a public health issue and must be addressed urgently by the medical fraternity.

POETRY: A THERAPEUTIC TOOL

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Reflection of Women Marginalization in Select Indian English Poetry

- Dr. Mukund Shriram Bhandari, Malegaon, Nashik

Abstract :

Literature reflects life with its socio-cultural background. How could Dalit literature be an exception? In the post-modern times, it emerges in India as an attempt to bring to the forefront the experiences of discrimination, violence and poverty of the downtrodden masses generally and women particularly. The figurative use of the word, 'marginalize' can take over the literal one. Poetry has in all times, been a recuperative medium to relieve humankind of the complexities of life. How have marginalized women been portrayed in Literature? Mulk Raj Anand's 'Untouchable' and Kamala Markandaya's 'Nectar in a Sieve' and 'A Handful of Rice' are to show the portrayal of the underprivileged sections of the society. In the Modern era, Kamala Das rebels against the marginalization of women in Indian society. Rukmini Bhaya Nair and Mamta Kalia are the recent Indian English poets. Mamta Kalia gives sway to the reverence and filial bonds so commonly expected in the Indian context. Rukmini Bhaya Nair reveals the exploitation of women since time immemorial. Post-modern poets, viz., Rukmini Nair, Suniti Namjoshi, Mamata Kalia are sensitive and highly assimilative. They show a sense of alienation, double home situation, uprootedness and impact of marginalization on the masses. And above all the marginalization of women.

Key-Words :

MARGINALIZATION, POSTMODERN, MARGINALISED WOMEN, DOWNTRODDEN MASSES,

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New Education Policy (NEP) and Academic Bank Credit (ABC)

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Abstract— **Education instils knowledge into the young minds and transforms those minds into learned citizens. Appropriate education in the developed countries led them towards prosperity. New India is also thinking on the same line. This National Education Policy 2020 aims to transform India's education system by 2040. In this new National Education Policy 2020, the 10+2 structure will be replaced with the 5+3+3+4 model. It proposes a multi-disciplinary bachelor's degree in an undergraduate programme with multiple exit options. National Education Policy 2020 introduces the system of Academic Bank of Credits (ABC). It is a virtual store that maintains data about the credits earned by students throughout their educational life. It will be accountable for opening, closing, and validating the academic accounts of students. It increases students' freedom in choosing their courses and academics, would act as a reference point for faculty to check the credit records of students. Online & offline both types of courses are included in this ABC scheme. The credits earned by students will be valid for seven years. The UGC expects a positive impact that will be brought via the practice of the ABC in the upcoming years.**

Index Terms: **National Education Policy 2020 (NEP 2020), Higher Education, Academic Bank of Credits (ABC), credit structure, Credit's Validity, online & offline, inter-disciplinary, multi-disciplinary.**

INTRODUCTION

Education is the backbone of any country on the planet earth. It instils knowledge into the young minds and transforms those minds into learned citizens who become innovative think tanks ultimately. These think tanks decide the fate of their country. The secret of prosperity of the developed countries obviously concealed in their appropriate education policies employed as per the demand of the time. New India is also thinking on the same line with the remembrance of the remark made by a great poet, Alfred Lord Tennyson, "The old order changeth yielding place of new, and God fulfils Himself in many ways" The appropriateness of this remark brings home the fact that the exigency to embrace change is a need of time. The old National Education Policy (1986) has also been gone through the change and replaced with National Education Policy 2020. This National Education Policy 2020 is a comprehensive framework for elementary education to higher education as well as vocational training in both rural and urban India. It aims to transform India's education system by 2040. It was approved by the Union Cabinet of India on 29th July 2020. It outlines the vision of India's new education system.

National Education Policy 2020 (NEP 2020) Vision:
National Education Policy 2019 envisions an India-centric education system that contributes directly to transforming our nation sustainably into an equitable and vibrant knowledge society by providing high-quality education to all.

School Education:
The 10+2 structure will be replaced with the 5+3+3+4 model. This will be implemented as follows:

- Foundational Stage: This is further subdivided into two parts: 3 years of pre-school or 'Anganwadi', followed by classes 1 and 2 in primary school. This will cover children of ages 3-8 years. The focus of studies will be on activity-based learning.
- Preparatory Stage: Classes 3 to 5, which will cover the ages of 8-11 years. It will gradually introduce subjects like speaking, reading, writing, physical education, languages, art, science and mathematics.

Higher Education:

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कच्चा तेलाच्या किंमती आणिभारतीय अर्थव्यवसस्था

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गोषवारा:

कच्चा तेलाच्या जागतिक किमतीमध्ये होणारी वाढ नेहमीच भारतीय अर्थव्यवस्थेसाठी आर्थिक संकटाच्या रूपात आली आहे. त्याचे अर्थव्यवस्थेवर बहुआयामी दुष्परिणाम होतात. केवळ रेहरिजनुसार भारत 157.5 कोटी बॅरल कच्चे तेल खरेदी करतो. अशा कच्चा तेलाच्या किंमतीत 1 डॉलर प्रति बॅरलने वाढ झाली तरी आयातीमध्ये 10,000 कोटी रुपयांची वाढ होतेम्हणजेच डॉलरच्या तुलनेने रुपया कमकुवत होतो आणि आयातीची किंमत वाढते. अशा बेजेस अर्थव्यवस्थेची चालू खात्यातील तूटही वाढते. शेवटी, वित्तीय तुटीच्या अंदाजावरही याचा परिणाम होतो. या सगळ्याचा नकारात्मक परिणाम भारतीय शेअर बाजारावरही होतो. तसेच याचा परिणाम तेल कंपन्यांच्या नफ्यावरही होतो. या सगळ्याचा सामना करण्यासाठी सरकारसमोर पेट्रोल, डिझेल आणि एलपीजीच्या देशांतर्गत किमती वाढवणे हा एकमेव उपाय आहे. पण या समस्येवर हा एकमेव उपाय आहे. त्यामुळे येत महा वाढते. जर आपण केंद्रीय उत्पादन शुल्काच्या दरांकडून पाहिले, तर मेल्या काही वर्षांत केंद्रीय उत्पादन शुल्क मोठी वाढ झाली आहे. पाच-सहा वर्षांपूर्वी पेट्रोलवरचे उत्पादन शुल्क जिथे प्रतिलिटर 9.48 रुपये होते, ते ये वर्षांपर्यंत ते 35 रुपयांच्या आसपास पोहोचले आहे. पेट्रोलच्या तुलनेत डिझेलच्या दरात अधिक वाढ झाली आ त्यामुळे कच्चा तेलाच्या किमतीत होणारी वाढ ही भारतासाठी नक्कीच चिंताजनक आहे.

प्रास्ताविक:

जागतिक अर्थव्यवस्थेवर तेलाचे अधिराज्य आहे हे आपल्या सगळ्यांनाच ठाऊक आहे. तेलाचे अर्थकार आणि पेट्रो-डॉलर या संकल्पना त्यामुळेच अस्तित्वात आल्या. प्रामुख्याने कच्चा तेलाचा साठा हा जमिनीखा असतो तिथून ड्रिलिंग पद्धतीने तो बाहेर काढून, प्रक्रिया उद्योगांना विकेपर्यंत त्याची वॅरल किंवा पाईपमध्ये साठ करावी लागते. बाहेर काढलेले हे कच्चे तेल मग शुद्धीकरण आणि इतर प्रक्रिया करून इंधन या स्वरुपात वापरले ज या इंधनामध्ये विमानांसाठी लागणारं इंधन, पेट्रोल, डिझेल, केरोसिन इ. अनेक प्रकारचं इंधन असतं. साधारण कूड तेलाचे दोन प्रकार विभून येतात त्यामध्ये अमेरिकेत बनते ते *लाईट कूड* तेल व जगभरात बहुतेक करून बनत *ब्रेंट कूड* तेल होय. भारतात मात्र ब्रेंट कूड तेलच वापरल जात.जगभरात दररोज अंदाजे 100 दशलक्ष बॅरल ! तेलाचा वापर होतो. अमेरिका सध्या जागतीक पातळीत मोठा तेल उत्पादक देश आहे. पण अमेरिकी खनिज ! तुलनेने महाग आहे."भारत हा जगामध्ये तेलाचा उत्पादक नाही तर मागणी आणि खप असलेला देश म्ह जोडला जातो". भारत कच्चे तेल आयात करणारा जगातला तिसरा मोठा देश असून, तेलाच्या गरजेच्या 80 म्हणजे दरवर्षी सुमारे १.५ अब्ज बॅरल कच्चा तेलाचीआयात केली जाते. त्यामध्ये सौदी अरेबिया आणि इराक प्रमुख देश आहेत ज्यांच्याकडून भारत(ओपेक घटनातून) तेल खरेदी करतो.

कच्चे तेल (crude oil) महाग झाल्यामुळे देशात पेट्रोल आणि डिझेलच्या किंमतीत आणखी वाढ होईल, कारण आयात कच्चा तेलावर प्रक्रिया केल्यानं तेलाच्या किंमती जास्त असतात, त्यामध्ये शुद्धीकरणासाठी लागणारा खर्च, वाहतूक, वितरण आणि करासाठी अतिरिक्त शुल्क किरकोळ किंमतीमध्ये जोडला जातो.या वाढत्या किंमतीमुळे मालवाहतूक महाग झाली असून शेतीचा खर्चही वाढला आहे, अशा बेजेस महागाईवर नियंत्रण ठेवण्यासाठी रिझर्व्ह बँकेला रेपो दर वाढवावा लागतो. यामुळे बाजारातील रोख रक्कम कमी होते.

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भारतात विविध उत्पादनांपासून ते घरांमध्ये वापरल्या जाणाऱ्या वस्तू पुरवण्यापर्यंत सर्व गोष्टींसाठी इंधनाचा वापर केला जातो. थोडक्यात,कच्चा तेलाची गरज लोकांच्या दैनंदिन जीवनाशी संबंधित आहे.

उद्दिष्टे:

जागतिक बाजारातील कच्चा तेलाच्या किंमतीत होणारे बदल जाणून घेणे व त्याचे भारतीय अर्थव्यवस्थेवर होणारे परिणाम.

संशोधन पद्धती:

सदर शोधनिबंध हा पूर्णतःदुय्यम साधन सामग्रीवर आधारित असून यासाठी वर्तमान पत्रातील कच्चा तेलाच्या किंमती व भारतीय अर्थव्यवस्था संदर्भातील विविध लेख, मासिकांमध्ये प्रकाशित झालेले लेख, संकेतस्थळावरीलमाहिती, इ.संदर्भ साहित्य म्हणून वापर केलेला आहे.

कच्चा तेलाच्या किंमतीतील बदल आणि भारतीय अर्थव्यवस्था

जागतिक स्तरावर कच्चा तेलाचे दर ठरविण्याचा अधिकार प्रामुख्याने OPEC (Organizations of Petroleum Exporting Countries) या संघटनेचा आहे. मात्र कच्चा तेलाची मागणी व पुरवठा हा एक प्रमुख घटक किंमतीतील बदलामागे आहे. तसेच युद्धजन्य परिस्थिती, महामारी, आर्थिक अस्थिरता, इ. बाह्य घटकांचा देखील कच्चा तेलाच्या किंमतीच्या बदलावर परिणाम होतो. 2000 या वर्षामध्ये ब्रेंट कूड तेलाचे भाव 26.72 डॉलर इतके होते. 2003 पासून जागतिक अर्थव्यवस्थेत मोठी तेजी पहावयास मिळाली आणि सी 2007 पर्यंत टिकून होती. हा बुडबुडा फुटल्यावर 2008 मध्ये ते परत 44.6 डॉलरवर घसरले. 2012 आणि 2013 मध्ये पुन्हा त्यामुळे कच्चा तेलाच्या पुरवठ्याचा एक नवीन स्रोत पुढे आला. अमेरिकेमध्ये शेल

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Effects of Water scarcity on agribusiness in Malegaon taluka in last decade.

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Abstract

Agriculture is the backbone of the Indian economy. This sector of the Indian economy contributes about one-third of the national income. Significant changes have been takes place in the planning structure of the Indian agricultural economy over many years. The prosperity of the whole nation depends on the development of agriculture. The progress of agriculture depends on water for sustainable economic growth.

Malegaon taluka is an important and fast developing taluka in Nashik district. But as Malegaon taluka is coming under the rain shadow, water scarcity is on a large scale. As a result, it has an adverse effect on agricultural production. On the basis of data regarding rainfall in the last decade, annual rainfall declined yearly in Malegaon tehsil. Reason behind this was deforestation in large scale and urbanization. Built in different form of irrigation techniques also reduced ground water level of the region. As a result, problem of water scarcity increased day by day.

The two major rivers flowing through Malegaon taluka are Girna and Mausam. Prior to 1972, the wells in both the river basins had good water levels. Therefore, cash crops like sugarcane and grapes were being grown in this taluka. After 1972, Chanakapur dam was built on Girna River and Haranbari dam on Mausam River. As a result, the water level in the wells in both these river basins started declining. It affected sugarcane and grapes production in the taluka. And in recent times, farmers have begun to choose low-water crops. As a result, the economic condition of the farmers became weak. Farmers in this taluka became indebted.

Due to decreased production of sugarcane major factories like Armstrong Sugar Factory (Girna Sakhar Karkhan), Dabhadi and Sugar factory Ravalgaon, got abandoned. It affected, mainly on large scale on farmers of the region as well as daily wage workers of factories, economically and socially.

To overcome this crisis of water scarcity in this region, big dams constructed on the rivers like Girna and Mausam can be deformed into smaller dams prior to the region availability. It will cause percolation of water in fields. As a result, ground water level will increase and wells in region will start sustaining water for longer duration. It will help farmers to cultivate abandoned crops like sugarcane and grapes in this region.

Afforestation on large scale will increase the annual rainfall in this region and simultaneously increase ground water level as well as water storages. Use of new sustainable types of irrigation techniques will minimize the use of over water in the region. Thus, issue of water scarcity can be reduced.

"Life depends on water but water conservation depends on you"

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प्रस्तावना: उत्तम क्रीडा कौशल्य योग्य मन:स्थितीची साथ असेल तर प्रत्यक्ष खेळतांना उच्च यश मिळते.त्या वेळच्या मन:स्थितीत जाण्याचे योग्य प्रशिक्षण आधीच घ्यावे लागते. तत्काल एकाग्रता होऊन सर्वत्र निरपेक्षता निर्माण व्हावी लागते. त्याच बरोबर आदर्श प्रावीण्य स्थितीमध्ये व पर्यायी मानसिक स्थितीमध्ये त्याने प्रवेश करावा लागतो. क्रीडा कार्यमानासाठी क्रीडा मानशास्त्राचे खास प्रयोजन आहेच.

सुखी व संपन्न जीवन जगण्यासाठी आधुनिक शिक्षक हे व्यक्तीचा शारीरिक बौध्दिक सामाजिक नैतिक आर्थीक विकास करावयाचे महत्वाचे असे साधन आहे. शिक्षकाने व्यक्तीचा सर्वांगीन विकास करतांना शिक्षणाचाच शारीरिक शिक्षण हा एक अविभाज्य घटक आहे. हे लक्षात घेवुनच शिक्षण दिले पाहिजे. शारीरिक शिक्षणात खेळ घेऊनच शिक्षण दिले पाहिजे. शारीरिक शिक्षणात खेळ घेऊनच शिक्षण दिले पाहिजे. शारीरिक शिक्षणात खेळ आणि मार्गदर्शन यांना महत्वाचे स्थान आहे. खेळामध्ये खेळाडुला मार्गदर्शन करतांना मार्गदर्शकाने मानसशास्त्राचा अभ्यास करुन खेळाडुला मानसशास्त्राच्या दृष्टीकोनातुन मार्गदर्शन करणे आवश्यक आहे. कारण खेळाडुचे मानसिक संतुलन चांगले आहे किंवा नाही हे पाहणे अतिशय गरजेचे आहे. खेळाडुचे मानसिक संतुलन चांगले नसेल तर तो खेळामध्ये प्राविण्य मिळवु शकत नाही.

भूमिका : मानसशास्त्र हे मानवी वर्तनाचा अभ्यास असलेले शास्त्र आहे. एखादया खेळाडुला फक्त खेळाचे तंत्रे व कौशल्य अवगत असतील तर तो चांगला खेळाडु बनु शकतोच असे नाही. खेळात फक्त कौशल्य व सुदृढ शरीरयष्टी असुन चालत नाही. तर शरीराचा व मनाचा ही समन्वय असणे आवश्यक असते. हा समन्वय घडविण्यासाठी कीडा मार्गदर्शकाला मानसशास्त्राचे ज्ञान असणे आवश्यक आहे तरच खेळाडुचे मानसिक संतुलन राखण्यासाठी मानसशास्त्राची भूमिका आहे. मानसशास्त्र खेळाडुची एकाग्रता वाढविण्यासाठी खेळाडुमध्ये खिळाडुवृत्ती निर्माण करण्याचे काम करते विविध परिस्थितीत खेळण्याची क्षमता निर्माण करण्यासाठी मार्गदर्शकाला कार्य करावे लागते मार्गदर्शकाला प्रत्येक खेळाडुचा स्वभाव त्याच्या सवयी प्रतिक्रिया पध्दती त्यांची शारीरिक स्थिती ओळखुन त्याला मार्गदर्शन करण्यासाठी मार्गदर्शकाला मानसशास्त्राची मदत आवश्यक आहे. त्यासाठी मार्गदर्शकाने मानसशास्त्राचे ज्ञान अवगत करणे अत्यंत महत्वाचे आहे. एखादा कमकुवत खेळाडु खेळतांना दडपणाखाली खेळतो त्याला त्याच्यामध्ये काही कौशल्याची व गुणांची कमतरता असते ते त्यामुळे तो मानसिक तान घेतो. त्याचा मानसिक ताण कमी करण्यासाठी त्याला मानसशास्त्राची मदत

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PILATES PRACTICE ON CORE FITNESS OF INTERCOLLEGIATE MALE TRACK & FIELD PLAYERS

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Abstract:

The purpose of this study was to examine the "Pilates practice on core fitness of intercollegiate male Track & Field players". It was an experimental study in which pre-test & post- test non equivalent groups design was used. In this study 20 male Track & Field players mean of age (21.17±2.10) were selected as sample by using purposive sampling technique from M.S.G. Arts, Science & Commerce College, Malegaon Camp Malegaon, Nashik. Players were equally divided into, Experimental group (n=10) and Control group (n=10). Minimum muscular fitness test was conducted on both the groups obtained data was analyzed by using Independent sample t-test. The results showed that the descriptive statistics gain of pre and post tests of subjects on Test 1 Abdominal and Psoas muscles, Test 2 Abdominal muscles without Psoas, Test 3 strength of Psoas and Lower Abdominal muscles, Test 4 strength of the Upper Back muscles, Test 5 strength of the Lower Back muscle and Test 6 strength of Back and Hamstring muscles was evaluate significant effect shown. To determine the effect of Pilates practice on core fitness of intercollegiate male Track & Field players. It was also researcher concludes that there was improvement of core strength performance of experimental group as compared to control group due to the treatment given.

Keywords: Pilates Practice, Core fitness & Intercollegiate Track & Field Players.

Introduction:

Pilates is a very effective exercise that combines both eastern and western concepts by including yoga (a mind body method), breath, flexibility, relaxation, strength and endurance. It is well designed to enhance both physical and mental well-being. Pilates training also strengthens the deep, core muscles and improves movement, efficiency and muscle control. Pilates is excellent for fitness, conditioning, and improving overall quality of life. Pilates process uses both the floor and specialized tools in order to complete exercises. Pilates is original exercise method which caters to each and every one, of all body types, and all fitness abilities. Pilates main purpose is to organize the mind, body, and breathe to build up sleek and strong abdominal muscles and a strong and agile back. Pilates aims to develop physical harmony, balance and conditioning. Pilates for the body work out it actually provides; toned and strengthened core muscle groups, heightened body awareness, injury prevention, improved flexibility and control, developed posture and balance, and comfort of movement through daily life. Kraus - Weber tests for muscular fitness are not designed to determine optimum level of muscular fitness but rather to determine whether or not the individual has sufficient strength and flexibility in the part of the body upon which demands are made to normal daily living. Lot of awareness is seen among the people of our country regarding the level of physical fitness.

Material and Method:

Method of the study

The present study was an experimental research which was conducted with a purpose to examine

IMPORTANCE OF MEDITATION AND YOGA IN DAILY LIFE

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Director Of Physical Education, MGV's MSG Arts, Commerce & Science College Malegaon Camp Nashik,

INTRODUCTION:

It is no secret that physical activity is necessary to a person's well-being. Because children are continuously developing physically and emotionally, they are especiallyaffected by the benefits of activity — and inversely, the negative effects of inactivity. Educators can control the amount of exercise a child gets at home no more than they can control his eating habits or his family situation, and according to numerous studies, many children are neither active at home nor at school. Consequently, it is vital that schools provide physical education programs to ensure that each child stays active.

We usually never thought of meditation, yoga and studying all together in a same sentence, but it is worth noting that they all can be interrelated. Well wonder no longer, meditation is absolutely fantastic for young people and there are a lot of benefits of meditation for young people and students that they can avail of. Through the practice of yoga, you can become more aware of your emotional, mental and physical health. Yoga techniques date back to at least the 5th century, and throughlot of research it has been proved that its benefits for students and youngsters are outstanding. Yoga includes physical poses called asana, breathing techniques and meditation. It has been suggested that practicing yoga sessions two or three times per week for at least 20 minutes per session can lead to some considerable positiveeffects.

Teenage is the part of life when there are a lot of things going in the life like school, tuition, exams, sports etc leading to a lot of stress as a result mental health disorders commonly develop in the teenage years, yoga may serve a preventive role in adolescent mental health.

Adolescence is an important time for the development of mental health, including healthy coping responses to stress. It is very important to deal with this in a right manner. Several types of school-based stress management and wellness programs have been developed with the goal of encouraging healthy coping strategies and resilience among teens out of which a lot of students have gained benefits.

Benefits of Yoga and Meditation

If practiced regularly, yoga and meditation can yield some progressive results that can be quite beneficial for the students as well as for other people in general. Someproven studies have revealed that yoga and meditation essentially have a biochemical effect on the human body that resembles the benefits of antidepressantand anti-anxiety medications and thus can help a lot to relieve mental tension as well as stress. Studies also reveal that in addition to reduced adrenaline production, yoga and meditation result in decreased production of the neurotransmitter dopamine (lower dopamine levels produce an overall feeling of calm), along with an increase in the hormone oxytocin, the bonding

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Women's Participation in Physical Activities and Sports Benefits

Dr. Manish M. Deore
(Director of Physical Education), Mahatma Gandhi Vidyamandir's, M.S.G Art's Science & Commerce College, Malegaon Camp, Malegaon Nashik, Maharashtra

Abstract:

The purpose of this study was to describe the "Women participation in physical activities and sports benefits". It was a descriptive study. In this study focused the women play the vital role in the field of physical education and sports. Women participation in various sports for physical and mental fitness as well as success to achievement awards. Participation women in physical activity and sports in physical health benefits of regular physical activity are well established. Regular participation in such activities is associated with a longer and better quality of life, reduced risks of a variety of diseases and many psychological and emotional benefits. Regular activity can have a positive effect upon girls' psychological well-being; indeed, some studies indicate that girls may respond more strongly than boys in terms of short-term benefits.

Key words: Women Participation in Physical Activity and Sports.

Introduction:

There is an international consensus that participation in physical activities can offer a great deal to individuals, Communities and nations. Evidence suggests that from an early age, differences in gender-based attitudes towards and opportunities for sports and physical activities can have a vital influence on children's participation. This may, in turn, affect later involvement in physically active lifestyles, and the social and health benefits that may result for them. This report offers a summary of research into girls' participation in sports and physical activities. It focuses upon the following themes:

1. **Benefits of Sports and Physical Activities;**
2. **Patterns of Girls' Participation in Sports and Physical Activities;**

To make the paper as useful as possible for readers from different backgrounds, and to keep the main paper of a manageable size, we have appended some additional information,

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CONSERVATION OF FORTS IN MAHARASHTRA THROUGH TOURISM DEVELOPMENT POLICY

Dr. Ravindra Shivaji Deore

Department of Geography, MSG Arts, Science & Commerce College Camp, (Nashik)

Abstract-

The present research paper has given an emphasis on the study of the problems and conservation of forts in Maharashtra .The forts are Famous for heritage tourism in Maharashtra. Now a day's tourism has become important concern economic activity at the national as well as international level. Forts of destination of attraction for adventure tourists. The most of foreign tourists come in India adventure tourism. Researcher also collected the secondary data from the concerned government office. The observation of authors concludes theforts in Maharashtra essential for conservation as well as tourism development. This study important for adventure tourism industry in Maharashtra

Key Words: Tourism Development, Adventure tourism, Fort, Conservation.

Introduction

Tourism in the form of activity influences the regions where it is developed and received with economic, social, cultural, and environmental dimensions. In most of the development programmes and studies, focus is given only on the economic and social dimensions whereas environmental dimension is under estimated or ignored. Therefore, it is essential to maintain the balance between tourism and the environment which helps to develop the policy for tourism development of an area and imposition of the special limits. Thus, the tourism does not lead to the degradation of the environment and in long terms to the tourist disdain of an area, but it helps in its protection or its conservation. In other words, the environment influences the tourism and vice versa. The environment of the region is negatively influenced most times by the increase of tourism, whereas the growth of tourism depends on the quality and characteristics of the environment. Thus it becomes necessary to conserve and preserve the forts in Maharashtra which would not only develop tourism but also raise the economic, social, cultural, and environmental dimensions of the Maharashtra state. Maharashtra is the third largest state of India, both in area and population. It is located on the west coast line along the lush green Konkan region. Nestled in the Western Ghats and the Sahyadri mountain range are several hill stations and water reservoirs with semi-

Bengal, Past and Present

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IDENTITY FORMATION: ROLE OF PARENTING STYLE AND SELF-ESTEEM AMONG INDIAN ADOLESCENTS

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Dr. N. V. Deshmukh
Head, Department of Psychology, MSG College, Malegaon Camp, Nashik.

Abstract
In the current study the researcher has studied the Identity Formation, Parenting Style, and Self-Esteem among adolescents. The study focused on the gender difference with Identity Formation, Parenting Style, and Self-esteem. In this study, a sample of 200 adolescents (100 boys and 100 girls) ranging in age from 12 to 17 years, were selected from various schools of Pune, Maharashtra (India). They were administered Extended Objective Measure of Ego Identity Status-2 by Bennion and Adams, (EOMEIS-2 1986), Parenting Authority Questionnaire by Buri (1991), and Self-Esteem Scale by Morris Rosenberg (1965)). The result is shown there is no gender difference was found it means male and female are equal on terms of Identity Formation, Parenting Style and Self-esteem.
Keywords: Identity Formation, Parenting Style and Self-Esteem, Adolescents.

Introduction

Adolescence is the transitional phase between childhood and adulthood. It is the phase that is characterized by physical and hormonal growth. Hence it is essential to pay attention to the appropriate physical, intellectual, emotional, social, moral, and spiritual development of our children. Indian Government has made many provisions for this category of children so that these children will be taken care of. According to various researchers the children from the properly taken care of families academically perform excellently and personalities wise also they get develop effectively. Therefore, these kinds of adolescents create their own identity and progress in future life. The present study was one such which tried to investigate the basic aspects of life, namely, identity formation, self-esteem, self-efficacy, and parenting style among adolescents. This research tried to focus on adolescent identity development.

Identity Formation

Identity formation is widely considered one of the defining features of adolescents Hill, Bromell, Tyson, and Flint (2007). According to Erikson (1968) Identity refers to the sameness and continuity of the person's psychological functioning, interpersonal behavior, and commitment to roles, values, and beliefs. The psychologist believed that adolescents should have an identity intact in themselves before the end of secondary school. Having a true identity all human beings need to function properly. However, it has been said that the adolescent years are challenging for adolescents to find an identity. These are the years adolescents will get into a crisis about their career decision. Research has tried to understand why adolescents turn into crises about their identity formation. Romano (2004) Proposed that adolescent years are when a person undergoes dramatic changes where they are expected to form an identity. Who they are as well as think they want to do with their life. Adolescent's stage is the turning point of the life, where most of the cognition and physical development milestone is supposed to be achieved. At this stage, adolescence involves crisis and commitment as applied to occupational choice, religion, and political ideology. Crisis refers to the adolescent's attempt to choose among meaningful alternatives; commitment refers to the adolescent's investment in the task.

Parenting Style

Baumrind (1971, 1984) has reported that children of authoritative parents are more independent, self-reliant, responsible, and goal-oriented than are children of permissive or authoritarian parents; furthermore, children of authoritarian parents have displayed particular deficits in these areas.
According to Rankin Williams (2009), parenting style is thought to provide the emotional climate for

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Thermophysical, Acoustic and FTIR Study on Binary Mixtures of Nitrobenzene and Aniline with 2-Methyl-2-propanol at Temperature 308.15 K and Atmospheric Pressure

Narendra A. Dokhe, Pankaj S. Pawar and Vinod S. Aaynor

P.G. Department of Physical Chemistry, M.S.G. College (affiliated to SPPU, Pune), Malegaon Camp, Dist. Nashik-423105, India

ABSTRACT

Densities, viscosities and speeds of sound of binary mixtures of nitrobenzene and aniline with 2-methyl-2-propanol have been measured at temperature 308.15 K and atmospheric pressure. From the experimental densities, viscosities and speeds of sound, the excess molar volumes V^E, deviations in viscosity $\Delta\eta$, and deviations in isentropic compressibility ΔK_S have been calculated. The excess molar volumes and deviations in isentropic compressibility are positive for the binary systems studied over the whole composition, while deviations in viscosities are negative. The excess molar volumes, deviations in viscosity, and deviations in isentropic compressibility have been fitted to a Redlich–Kister type polynomial equation. FTIR study of these mixtures is also reported.

KEYWORDS: Density, Viscosity, Speed of sound, IR.

INTRODUCTION

The thermophysical, acoustic, and transport properties of non-electrolyte liquid-liquid mixtures are important for engineering calculation, research of mass transfer, heat transfer, and fluid flow. They provide information about type and extent of molecular interactions and can be used for the development of molecular models for describing the behavior of solutions [1-5].

Marsh et.al. [6,7] investigated the variation of density, viscosity, speed of sound, and isentropic compressibility of binary liquid mixtures of protic, aprotic, and associating liquids with changing mole fraction of one of the components. The trends of changes, either positive or negative, have been interpreted by these workers in terms of differences in size of molecules and the strength of specific or nonspecific interactions taking place between the components of the mixtures. Nikam et al., 1997 [8] reported the effect of molecular size, shape and molecular association of alkanols. In the present study, the densities and viscosities for the binary system of nitrobenzene and aniline with 2-methyl-2-propanol at 308.15 K and atmospheric pressure have been measured. The nature of interactions in binary systems studied have been explained on the basis of certain thermophysical properties, such as excess volumes V^E, deviations in viscosity $\Delta\eta$, deviations in isentropic compressibility ΔK_S.

EXPERIMENTAL

Nitrobenzene (s.d.fine chem., purity 99%), aniline (s.d.fine chem., purity 99%) and 2-methyl-2-propanol (Qualigens 99%) were used after a single distillation. The purities of the solvents, after purification, were ascertained by comparing their densities, viscosities and ultrasonic velocities with the corresponding literature values at 308.15 K (Table 1). Binary mixtures were prepared by mass in air-tight stoppered glass bottles. The masses were measured using an Adairdutt balance to an accuracy of ±0.0001 g. Care was taken to avoid evaporation and contamination during mixing. The estimated uncertainty in mole fraction is <±0.0001.

Table 1: Comparison of Experimental Densities, ρ, Viscosities, η, and Speed of Sound, u, of pure components with literature values at 308.15 K.

Pure liquid	ρ (g ·cm^{-3})		η (mPa.s)		u (m.s^{-1})	
	Exptl.	Lit	Exptl.	Lit	Exptl.	Lit
2-methyl-2-propanol	0.7700	0.7702[9]	2.642	2.644[10]	1094	1093[11]
Nitrobenzene	1.1883	1.1883[12]	1.430	1.437[13]	1423	1423[14]
Aniline	1.0087	1.0084[15]	2.521	2.510[16]	1599	1595.1[17]

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KEYWORDS: Density, Viscosity, Speed of sound, IR.

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Synthesis and Computational Insights on Molecular Structure, Frontier Molecular Orbital, Molecular electrostatic surface potential of (E)-3-(2,3-dihydrobenzofuran-5-yl)-1-(2- hydroxyphenyl)prop-2-en-1-one

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Abstract: **In the current work, we described experimental and theoretical properties of chalcone, (E)-3-(2,3-dihydrobenzofuran-5-yl)-1-(2- hydroxyphenyl)prop-2-en-1-one (DHBFHP). The titled molecule were practically synthesized and characterized by FT-IR, 1HNMR, and 13C NMR spectral techniques. The density functional theory approach (DFT) at the B3LYP/6-311G(d,p) basis set was used to inspect structural, spectroscopic, and chemical reactivity aspects of the synthesized molecule.To understand the geometrical architecture, a comprehensive investigation of bond lengths and bond angles is discussed. Mulliken atomic charges, molecule lectrostatic potential surface, and electronic parameters are used to investigate its chemical behaviour. The time-dependent DFT (TD-DFT) method was used to determine the detailed examination of electronic properties such as HOMO and LUMO energies. The dipole moment of the titled molecule was found to be 4.8670 Debye with C1 point group symmetry. The positive electrostatic potential is predicted to be near hydrogen atoms by the molecular electrostatic potential map. To evaluate the reactive electrophilic and nucleophilic sites, the electronic properties with consideration to the frontiers molecular orbitals, the quantum reactivity descriptors, and the molecule electrostatic potential were used.**

Index Terms: **Chalcone, benzofuran-5-carbaldehyde, DFT, FMO, Molecular electrostatic surface potential.**

I. INTRODUCTION

In the View of the growing of bacterial resistance, which has become a medical problem today [1-3], the quest for novel antibiotics is intensifying. Bacterial resistance is caused by a variety of reasons, include low plasma membrane permeability, drug adherence to the cell wall, efflux pump ejection, and the action of enzymes that reduce or prevent antibiotic effect [4, 5]. Natural biocides, chalcones are well-known intermediates in the synthesis of a wide range of heterocyclic chemicals [6]. The chalcone derivatives are possesses a wide range of biological activities including antimicrobial [7], anti-inflammatory [8] and anticancer [9], antimalarials [10], antiproliferative [11] etc. activities. Chalcones are flavonoids and isoflavonoids' precursors [12, 13], but they can also be obtained by synthesis [14]. The chemical scaffold for chalcone molecules is 1,3-diaryl-2-propen-1-one, also known as chalconoid, which comes in trans and cis isomers, with the trans isomer being more thermodynamically stable [15]. Several chalcone-based drugs have received clinical approval. Metochalcone, for example, was once sold as a choleretic, whereas sofalcone was earlier marketed as an antiulcer and mucoprotective medication Figure 1. [16].

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PHYSICO-CHEMICAL CHARACTERISTICS OF WATER FROM WAGHDARDI DAM, MANMAD (DIST. NASHIK) AT DIFFERENT SEASONS

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ABSTRACT

Waghdardi dam was constructed on Panzan river in 1970 in Nashik District. During the present investigation, surface water samples were collected from Waghdardi dam during March 2020 to Feb 2021 and analyzed for water quality by examining various parameters like pH, temperature, electrical conductivity, total solids, total dissolved solids, alkalinity, hardness, dissolved O_2, dissolved salt etc. The importantance of the water quality in regard to both human health and agricultural practices can not be ignored. Present study of Physico-chemical analysis of water are useful for contributing the knowledge about awareness of water pollution and needs of water purification techniques. Nearly all parameters were within the permissible limits. Hence the water was found to be suitable for drinking and irrigation purpose.

KEY WORDS : Physico-chemical parameter, Waghdardi dam, Water quality, Pollution.

INTRODUCTION

Lowering of water level during summer stagnation during winter and dilution in rainy season imparts a deep impression on water chemistry. Water quality is dynamic and its changing parameters require suitable traetments. The importantance of the water quality in regard to both human health and agricultural practices can not be ignored. Surface water is collected in the dam from different out water sources. Some sources are polluted by human activities and other are polluted by agricultural waste cattle waste street runoff, which are flowing along with rain water and stagnate in dam in much large proportion specially during monsoon. The use of fertilizers, pesticides in agricultural practices as well as irrigation has a result in degradation of water quality, both direct by discharging waste and indirectly by increase demand of water. In rural areas this water is directly used for domestic, drinking, and agricultural practices. Ultimately human life and production from agricultural practices get affected by using this polluted water. Many diseases spread over wide areas around the water bodies in which the polluted water is used. This can be avoided by using suitable water treatment. Physico-chemical analysis of water useful for suitability of water for a variety of purposes. This observation is also useful to estimate pollution load and quality of water from different sites of the dam, and give the direction towords required treatment. Many organic and inorgnic impurities are present in soluble, insoluble and colloidal form in water with ,there corrosponding effect. Present study of Physico-chemical analysis of water is useful for contributing the knowledge about awareness of water pollution needs of water purification technique,excess use of fertilizer,pesticides and its corrosponding effect awareness of decomposition of agricultural waste and cattle waste and use as fertilizer.

Waghdardi dam was constructed on Panzan river in 1970 in Nashik District. The Dam is situated three kilometer from Manmad city in between 20014' 30"

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5-6+3-5=9-1

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ELECTRO-OPTICAL PROPERTIES OF CU-DOPED ZNS THIN FILM USED AS WINDOW LAYER IN SOLAR CELL

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Jitendra A Borse Department of Physics, Late Pushpadevi Patil Arts & Science College Risod. 444506, India.

Abstract:
The simplified 2-electrode Electrochemical deposition method was carried out to prepare pure and Cu doped ZnS thin films on Fluorine doped tin oxide (FTO) glass and stainless steel substrate using an aqueous solution of 0.1M Zinc sulfate (ZnSO4), 0.1M Sodium thiosulphate (Na2S2O3). The 0.1M copper sulfate (CuSO4) was used as a dopant. The Cyclic voltammetry method was used to investigate the deposing potential of Zn, S, and Cu ions. The Cu-doping in ZnS thin film was achieved by adding different amounts of 0.1M CuSO4 solution in the main electrolyte bath. The XRD pattern of all film samples have seen a Zincblende cubic structure. The lattice constant and crystallite size decreases by increasing Cu in ZnS thin film. The Field Emission Scanning electron microscopy (FE-SEM) micrograph images showed some samples are composed of big grains with 135-375 nm dimension embedded in the matrix of nanoflakes. The average thickness of the nanoflakes was found to be 65.37 to 219.50 nm when copper doping was increased by 0-2% and decreased to 219.50-102.78 nm after increasing from 2-3%. The UV-Visible spectroscopy confirmed the energy band gap of Cu-doped ZnS thin film varied from 3.97- 2.11 eV. The electrical resistivity of ZnS thin film decreases with increasing Cu-doping. The hall coefficient values of the film samples showed the all deposited films are n-type electrical conductivity.
Keywords: Electrochemical deposition, Cu-doped ZnS thin film, Optical properties, electrical properties.

1. Introduction:

Zinc sulfide is an important society II-VI chalcogenide semiconductor material with a wide energy band gap which has application in solar cell, light-emitting diode, and photocatalysis [1]. The band gap of ZnS is about 3.95 eV. The optical band gap of ZnS makes it a potential material to replace CdS in heterojunction of CdS/CdTe solar cell [1]. The zinc sulfide is used as a window layer due to its suitable band gap. It allowed and delivered high- energy photons to absorbing material which improves the short circuit current in a solar cell. ZnS can be deposited by various techniques such as electrochemical deposition [2, 3], chemical bath deposition [4,], Chemical vapor deposition [5], physical vapor deposition, sputtering [6], atomic layer epitaxy, and SILAR method [7]. ZnS can be an n-type or p-type semiconductor in electrical conduction depending on the composition of Zn and S ions. The electrical conduction is important to the fabrication of solar cells [8]. The electrical conduction can be varied by various dopants [8]. The n-type ZnS as a window layer in ZnS/CdTe solar cell gives 12% efficiency [9]. The n-type or p-type electrical conductivity of ZnS can be achieved by varying the Zn/S ratio or suitable doping. The ZnS thin films with various dopants have been grown by many researchers by using different techniques. ZnS has a refractive index of 2.40. ZnS can be used as a reflector in optics because of its high reflective index [10]. ZnS can be used to manufacturing light-emitting diodes because of its wide energy bandgap [10]. The optical property of chalcogenide semiconductors depends on the size of their nanoparticles due to quantum confinement effect [11]. ZnS has two allotropic structures one is cubic sphalerite and another is wurtzite hexagonal structure [12]. Doping is the one method to tailor the energy bandgap. It influences optical, structural, and electrical properties. The transition metals such as Cu^{2+}, Ag^{2+}, Mn^{2+}, and Pb^{2+} can be dope in ZnS to achieve tunability of energy band gap [13]. It has been investigated by various techniques to reveal the effect of doping on the energy bandgap. The electro-optical properties of n-type ZnS thin films were analyzed by various atomic percentages of Cu-doped in ZnS material [14]. In this paper, the electrical parameters such as resistivity, mobility, hall coefficient, and carrier concentration have been investigated of Cu-doped ZnS thin films.

2. Experimental Details

2.1 Film Preparation

The Pure and Cu-doped ZnS thin film deposition was carried out by using a 2-electrode electrodeposition method consisting of stainless steel/FTO glass as working electrode, high purity graphite as counter electrode immersed in an electrolyte which is made up of pure distilled water. The aqueous electrolyte bath containing 0.1M $ZnSO_4$ (AR grade), 0.1M $Na_2S_2O_3$ (AR grade), and 0.1M $CuSO_4$ (AR Grade) were used as precursors for Zn, S, and Cu ions respectively [15]. 0.1M Triethanolamine was added to the electrolyte as a complexing agent [16]. The main electrolyte bath of 100 ml prepared by a mixed solution of 0.1M $ZnSO_4$ and 0.1M $Na_2S_2O_3$. The adding different amounts such as 1%, 2% and 3% correspond to 1 ml, 2 ml, and 3 ml of 0.1 M $CuSO_4$ as Cu-dopant added in the main electrolyte bath. The stainless steel (316 L) and FTO glass substrates are used for deposition. The stainless steel substrates were cleaned with double distilled water. The growth of ZnS and Cu was estimated by the cyclic voltammetry technique.

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Research Article

Investigation on microstructural and spectroscopy properties of $Sn_xO_2W_{1-x}O_3$ Thick Film Resistors

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Abstract: Thick films of WO_3 and $Sn_xO_2W_{1-x}O_3$ based were prepared using standard screen printing technique. To study the effect of tin oxide doped WO_3 thick films were fired at 700^{0}C for 30 minutes in air atmosphere and transition metal oxides on spectroscopy properties of WO_3. The microstructure of Sn_xO_2-$W_{1-x}O_3$ thick films was characterized with X-ray diffraction, scanning electron microscopy, EDAX for elemental analysis. The XRD results revealed that WO_3 and $Sn_xO_2W_{1-x}O_3$ thick films confirm the formation of mixed phases of the film together with majority of monoclinic phase was observed. It also shows the presence of two sets of diffraction peaks corresponding to WO_3 as well as the SnO_2 (rutile tetragonal) phase indicating the formation of SnO_2-WO_3 composite. The Nelson-Riley curve show high quality of crystallization of WO_3 and $Sn_xO_2W_{1-x}O_3$. The W–H plots show the size and nature of the strain incorporated in peak broadening of X- ray diffraction peaks. Some of the observed peak broadening can be attributed to crystallite size and microstrain effects, dislocation density, hkl-dependent peak broadening and peak shifts are clearly associated with stacking faults. These films were calculated average of crystallite size, RMS microstrain, dislocation density, stacking fault probability. The observed IR spectrum has confirmed the functional groups and

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Cadmium Selenide thin film by electrochemical deposition

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Abstract

This review provides information of fabrication of thin film solar cell devices based on Cadmium Selenide (CdSe) by electrochemical deposition technique. For industrial scale applications this technique is useful for reducing the fabrication cost. It has potential to prepare large thin films due to cheap raw material source and equipment capital. This article focuses on various approaches in electrochemical deposition, parameters which affects the electrodeposition and the reaction mechanism. This article is helpful for researchers entering the field to understand the basics of CdSe and its application to photovoltaics.

Keywords : Electrochemical deposition, thin films, optical properties.

Introduction

CdSe is a II-VI semiconductor which is used in solar cells fabrication, LEDs, FETs, biosensors, opto-electronic devices and biomedical imaging. It is a n-type material suitable as a buffer, window or absorber layer in thin film solar cells. It has a bandgap of ~ 1.80 eV and ~ 1.71 eV in the wurtzite crystal phase and zinc blende phase respectively. [1]

The CdSe thin film can be prepared by various methods such as thermal evaporation, pulsed laser deposition,[2] electrochemical deposition[3], chemical bath deposition (CBD) and spray pyrolysis[4].

Among this techniques electrodeposition method is suitable because of its low capital cost, control over the film thickness by changing the deposition time and deposition potential. In this method the material properties such as optical, structural, electrical and morphological properties can be control by varying the parameters like growth temperature of the electrolyte, pH, stirring, concentration of the electrolyte, deposition time and post-deposition annealing temperature. The substrate for thin film growth in this method must be conductive. Substrate can be gold [5], indium-doped tin oxide (ITO)-coated glass[6], stainless steel [7], Fluorine-doped Tin Oxide (FTO), nickel [8] and titanium [9]. Table 1 shows the properties of CdSe.

A few works have been completed to-date on electrochemical deposition of CdSe thin films by three-electrode cell from aqueous and non-aqueous solution in either acidic or basic medium.

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Optical Properties of In-doped CdS Thin film prepared by Electrochemical Deposition Used as Window Layer in Thin film Solar Cell

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Abstract

Pure CdS and In-doped CdS thin films were deposited using simplified 2-electrode electrochemical deposition technique and investigated using cyclic voltammetry, XRD, UV-Visible spectroscopy and Hall Effect by vander pauw method. 1%, 2%, and 3% 0.1 M $InCl_3$ was used for In-doping. The effect of In-doping on dislocation density and microstrain has been estimated from XRD data. Absorption, transmittance, and refractive index were investigated in spectral range 200-1100 nm by variation upon In-doping. The band gap was found to decrease from 2.40 to 2.20 eV with increase in In-content from 1% to 2%, and increases about 2.26 eV at increase in In-content from 2% to 3%. 2% In-content in CdS thin film show highest transparency due to low refractive index at wavelength 565 nm in visible region. The electrical resistivity, carrier concentration, mobility, and hall coefficient were directly estimated by vander pauw method. In-doped CdS thin film show n-type electrical conductivity and it may be further used as window layer in thin film solar cell.

1.Introduction:

CdS is the II-VI group semiconductor material has lot of attention in material science from very few decades due to modification of optical and structural properties quantum confinement effect [1,2] and electro-optical properties was varied by various ion doping [3,4]. CdS is n-type semiconductor material with direct optical bang gap energy 2.4 eV at room temperature. Due to its electro-optical properties its use in application thin film solar cell [5, 6], thin film transistor [7, 8], photo diodes [9], and light emitting diode [10]. CdS can be exist in two crystal phase cubic (Zinc blende) and Hexagonal (Wurtzite) [11]. CdS can be deposited by

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Synthesis and Characterization of ZnO/CuO Nanocomposites as an Effective Photocatalyst and Gas Sensor for Environmental Remediation

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Abstract

Current study delineates the synthesis and environmental applications of ZnO/CuO nanocomposite in photocatalysis and gas sensing. The ZnO/CuO nanocomposites (1:1, 1:2, and 2:1) were synthesized by a cost-effective and simple co-precipitation method. X-ray diffraction and high-resolution transmission electron microscopy investigation confirms the monoclinic crystal phase for the CuO and hexagonal wurtzite for ZnO in ZnO/CuO nanocomposites. The Raman spectroscopic analysis also revealed the monoclinic crystal phase for the CuO with C_2h space group. The morphological features were explored by scanning electron microscopy. The successful synthesis of the ZnO/CuO nanocomposites with their very stable + II oxidation state is revealed by the X-ray photoelectron spectroscopy investigation. Optical properties and band gap measurements were explored by ultra-violet diffuse reflectance spectroscopy and the synthesized ZnO/CuO nanocomposite (1:1) was found to exhibit the direct band gap of 2.34 eV. The photocatalytic degradation by ZnO/CuO nanocomposite (1:1) was studied for the degradation of crystal violet (CV) dye. Nearly 90% photocatalytic degradation of CV dye was accomplished using this photocatalyst. The parameters like effect of pH, contact time, catalyst dose, kinetic study and scavenging study were investigated in the present study. The photocatalytic degradation products were analyzed by LC–MS analysis and fragmentation pathway has been depicted. Besides, the synthesized ZnO/CuO nanocomposites (1:1, 1:2, and 2:1) were studied as gas sensor for monitoring gases like LPG, ethanol, ammonia and NO_2. ZnO/CuO nanocomposite was proved to be efficient ethanol gas sensor as compared to other tested gases.

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Potentiometric Study and Statistical Analysis of Human Urine Samples using Reduced Graphene Oxide Screen Printed Electrodes

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ABSTRACT

In this work, the reduced Graphene Oxide (rGO) based screen printed electrodes (SPEs) were fabricated by using standard screen-printing technique to study electrical response of human urine samples. Under-test solutions of randomly collected human urine sample from different persons with different health condition were tested with the fabricated SPEs. For all tests, variation of output signal was noted for 1 minute at the interval of 2 seconds. For the urinalysis of collected samples, ion selective potentiometric method to sense generated electric signal was used which shows that electric potential of sensing layer change caused by adsorption due to hydrophobic or hydrophilic nature of urine samples of normal and diabetic persons. From the histogram and boxplot, we observed that the distribution seems to be normal for both normal person (range of -138.80 mv to -6.60 mV) as well as diabetic patients (range of 19.81 to 586.66 mV). So, we have performed two-sample t-test to check the significance within these two samples. We compare our test statistic i.e. p-value $< 2.2e^{-16}$ with a critical value ($p < .05$). It is found that true difference in means is not equal to 0 and our results fall within the acceptable level of probability and hence, we conclude that there is difference between the two samples which will be useful for testing of human urine samples.

KEYWORDS: Urinalysis, rGO, SPEs, Potentiometric method, t-test.

INTRODUCTION

Urine is a sterilized liquid comprising of water, urea, and salts, which is by-product of the body. This is secreted by the kidneys through a process called urination. Urinalysis is a standard clinical analysis method used to study the physical or chemical components of urine which helps to understand the processes within the body for several disease conditions. Physical appearances like pH, density, colour, odour, and transparency of urine samples are prominent and distinguishable by vision only but, laboratory testing is required for few of them. Abnormalities in any one of these features will be the symptoms of minor problem in health condition of a person but can actually be indication of severe diseases, like diabetes. Diabetes could be a metabolic disease that affects the body's capability to either produce or use insulin. This is caused by the presence of high glucose levels resulting either weakened insulin excretion or malfunctioning insulin action, or both[1, 2]. Body utilize the glucose for energy in the form of insulin.

Approximately 422 million people worldwide are diabetic with a very high incidence every year as per report of World Health Organisation. Diabetes leads to blood glucose that upsurges to unusually high levels. Glucose level in healthy persons' urine is in the smallest amount typically 0 to 0.8 mmol/L. Presence of higher glucose level in urine sample is the indication of un-healthiness. Diabetes is that the most typical reason behind elevated glucose levels. It also merely reflects the state of your glucose over the prior few hours. If urine samples of persons shows pre-diabetic symptoms, more clinical tests of glucose level for diagnosis of diabetic condition of person will be required, but when neglected, led to severe disease related to diabetes, like neuropathy, nephropathy, retinopathy, and disorder, which arise in both type 1 and sort 2 diabetes, are core factors of severe morbidity, mortality, and big economic burdens[3–8]. Therefore, screening at an early stage is vital for the management of diabetes persons. Evaluation of glucose levels as screening and diagnostic criteria for diabetes[9]. However, both biomarkers have limitations. For blood sugar, fasting for a minimum of 8 h is required.

When quick treatment responses are essential, a urine glucose test which may be a non-enzymatic way for the testing and monitoring of diabetic. Additionally, people that potentially had diabetes could use the urine testing as the simplest method of measuring and monitoring the effectiveness of treatments to control glucose level.

राष्ट्रीय कृषी पीक विमा योजना : सिंहावलोकन

डॉ. एम. व्ही. हिरे

सहयोगी प्राध्यापक, अर्थशास्त्र विभाग प्रमुख, म.स.गा.महाविद्यालय, मालेगाव कॅम्प, नाशिक

प्रस्तावना:-

भारतीय अर्थव्यवस्थेत शेती क्षेत्राचे महत्त्व अनन्य साधारण आहे.देशातील एकूण लोकसंख्येपैकीसुमारे 55 टक्के लोकसंख्या प्रत्यक्ष आणि अप्रत्यक्षपणे शेती क्षेत्रावर रोजगारासाठी व उदरनिर्वाहासाठी अवलंबून आहे. म्हणून भारतीय अर्थव्यवस्थेला कृषिप्रधान अर्थव्यवस्था असे देखील म्हटले जाते. भारतातील शेती क्षेत्राचा विचार केला असता औद्योगिक क्षेत्राप्रमाणेच शेती क्षेत्रात उत्पादनासाठी अनेक धोके आणि अनिश्चितता असतात. यात काही मानवनिर्मित व काही नैसर्गिक धोके असतात. यामुळे कृषी उत्पादनात व उत्पन्नात नेहमीच अनिश्चिततेचे सावट तयार झालेले असते. शेतकऱ्यांना पूर, दुष्काळ, किड,रोग व नैसर्गिक आपत्तींचा सामना करावा लागतो. परंतु शेतकऱ्यांना त्यांच्या उत्पन्नातीलअनिश्चिततेची जाणीव नसते. शेतकऱ्यांना त्यांच्या शेती व्यवसायातील अनिश्चिततेचा सामना करता यावा आणि झालेल्या उत्पन्नातील नुकसानाचे भरपाई मिळावी या विचारातून कृषी पीक विम्याची संकल्पना पुढे आली.

रशिया, जापान, अमेरिका, इंग्लंडआदी.देशांमध्ये प्रथमता कृषी पीक विमा योजना सुरू करण्यात आली. त्यानंतरकॅनडा,फ्रान्स,श्रीलंका,चीन,रूमानिया,मेक्सिको, इजराइल इत्यादी विकसित व विकसनशील देशांनी सुद्धा कृषी पीक विम्याचा स्वीकार केला.रशियामध्ये कृषी पीक विमा योजना 1923 पासून सुरू करण्यात आलेली होती. जपान सरकारने सन १९४७ मध्ये कृषी विमा योजना लागू केली व शेतकऱ्यांना नुकसान भरपाई देण्याची तरतूद केली. कोणत्याही प्रदेशात अथवा राज्याच्यासर्व भागांमध्ये एकाच वेळी नैसर्गिक आपत्ती येत नाही. यामुळे कृषी विमा योजनेच्या माध्यमातून जी रक्कम जमा झालेली असते त्या रकमेचा विनियोग आपत्ती प्रभावित क्षेत्रातील शेतकऱ्यांना मदत म्हणून उपलब्ध करून देता येते.जपानमध्ये सुरुवातीला कृषी पीक विम्याची भरपाई आणि आपत्कालीन कर्ज पुरवठ्याची रक्कम यांची सांगड घातली गेल्याने ही पद्धत यशस्वी झाली आणि नंतरच्या काळात लोकप्रिय ठरली. फ्रान्समध्ये शेतकऱ्यांचे नैसर्गिक आपत्तीमुळे होणारे नुकसान कमी करण्यासाठी सन 1964 पासून कृषी पीक विमा योजना सुरू करण्यात आली. कॅनडा सरकारने सन १९५९ पासून कृषी पीक विमा योजना सुरू केली. श्रीलंका सरकारने देखील 1974 पासून कृषी पीक विमा योजना सुरू केली.

भारतात कृषी पीक विमा योजनेचे विचार स्वातंत्र्यपूर्व काळापासूनच सुरू होते. अमेरिकेतील संघीय पीक विमा योजनेच्या आधारावरच भारतात पीक आणि पशू विमा सुरू करावी असे मतडॉ. नायडू समितीने मद्रास प्रांतातील अभ्यासात सुचविले होते. याशिवायसरैयासमिती,प्रयोळकर समितीव इतर काही संस्थांनी पीक विम्याचे आग्रही प्रतिपादन केलेले होते. भारताला स्वातंत्र्य मिळाल्यानंतर सन 1969 मध्ये पंजाबच्या काही भागात गहू,हरभरा, कापूस आणि ऊस या पिकांसाठी पीक विम्याचा प्रयोग सुरू करण्यात आलेला होता.परंतु त्याला फारशी यश मिळाले नाही. यामागे धारण क्षेत्राच्या लहान लहान आकारामुळे वैयक्तिक आधारावर पिक विमा योजना लागू करणे कठीण असल्याची जाणीव यावेळी झाली होती. यामधूनच क्षेत्राधारित किंवा गट आधारावर विमा काढण्याची संकल्पना पुढे आलीव त्यानंतर कृषी पीक विम्याचा मार्ग सुकर झाला. प्रस्तुत संशोधन लेखात भारतातील राष्ट्रीय कृषी पीक विमा संदर्भात सविस्तर माहिती विश्लेषित करण्यात आलेली आहे.

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Godless World of the Small Things: A Study of Katherine Mansfield's Short Story, The Doll's House

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Abstract :

This paper attempts to analyse the socio-psychological conditions of the school children in the short story, The Doll's House, and therefrom it defines an ironic vision of the writer regarding social justice and empowerment as it emerges from the short story. Through the newness of her short-stories and poems, Katherine Mansfield artistically reflects on the predicament of female life amidst patriarchy and social class relations. In The Doll's House, the situation of co-life between the rich and the poor collapses to the extent of forming psychological vacuities on the part of the Kelvey sisters. The writer poses a question with regards to their development and happiness as the ultimate nature of life. The evil sense of social discrimination forwarded from the adults to the rich school children does not only reduce their innate sense of innocence and goodness but destroys the cognitive and physical abilities and health of the Kelvey girls, Lil and Our Else. It thereby creates a serious social imbalance.

Key words :

Modernist, childhood, social class, social discrimination, acceptance, boldness, happiness, rejection, timidity, depression, mind-set, identity.

Introduction :

Though paradoxical, there can be no disagreement over the fact that the modern world has agonizing history of the evils of social discrimination. In fact, it evolves from a strong sense of social

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Dr. B.R. Ambedkar's Perspective on Buddhism

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Abstract
The present paper casts a lurid light on the status of Buddhism during and after the time of the Buddha, the great conversion of Dr. B.R. Ambedkar, and the present condition of Buddhism in India. It also discusses the reasons behind its growth, its popularity, its ethical spreading across the world by the different scholars, its establishment in different countries and its getting a national religion in some countries, its ethics, its decay, its migration, its dislocation from its birthplace, its rehabilitation and rejuvenation in India again and its present state in India.
Keywords: Buddhism, Buddhatwa, Dhamma, Sangha, conversion, ethics.

Introduction

Buddhism, since having its birth history in the period 2500 years' back, it becomes impossible to discuss every aspect of it thoroughly, so the paper would briefly view the points mentioned above through the perspective of Dr. B.R. Ambedkar. In order to know what Buddhism is it'd be worthwhile to know about Siddharth's departure from his motherland and a very specific reason behind it. As the scholars know the fact that as a member of the Panchayat, Siddharth Gautam should have accepted the decision of the Panchayat though he's a prince, however, he objected the decision of not giving water of the river Kosal to the people of the other side and to wage a war upon them. Due to which the Panchayat as a rule put before him some options as a part of punishment, banishment was one of them, and he thought it best suited and left home to seek the root cause of sorrow when he got sammaasait (the knowledge to see within), and awakened from within (reached to Buddhatwa), became self–enlightened, realized the knowledge he was running after, he became very happy and sad at the same time. He was happy for the thought to see how great it is to know the root cause of human life and how great it's to annihilate the grief from human life by certain way but he's also sad thinking if I tell people the knowledge I got and if they don't understand it then it would be quite troublesome to the both.. This was the *Atmglani.* He was in utter dilemma, but eventually decided to enlighten people with the Four Truths, Eight Ways of reaching to the phase, Buddha, and five basic ethics viz "Panchashil" in the language people knew.

Dr. B.R. Ambedkar was greatly influenced by this way of thinking and bringing revolution of the minds, in the minds of the people to seek transformation and a real development of human being and society as well. It was the beginning of revolution, with no bloodshed, no noise of the swords and weapon, no quarrels and war but purely non-violent way to uplift peoples' lives thoroughly, for their welfare, social, economical, political and above all personal.

The Glorious Past

Gautam Buddha first preached the five friends of his who had left him alone thinking his ways quite eccentric. However. after Buddha came back. they agreed with and accepted his way of thinking and the 'journey' began. Many joined him. Wherever he went and preached. people collectively accepted his way and this way it became tradition which was later known as Buddhism. Buddhism was accepted by people. Dr. Ambedkar as a Buddhist scholar thought the Dhamma the best to find it a very clear way of living life, having no miracles and no declaration of any godliness and no promises of heaven but purely based on the everyday lives of the people, the problems they confronted and their solutions by themselves, so it attracted and enticed them to cuddle it. Dr. Babasaheb Ambedkar, a staunch follower of logical thinking found Buddhism

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Importance Value Index (IVI) study of some Satana Forest of Nashik District (MS), India

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(Received 24 February, 2021; Accepted 31 March, 2021)

ABSTRACT

Frequency (%), density and basal areas data converted into relative frequency, relative density and relative basal area. The sum of all the three gives an Importance Value Index (IVI) of each species. This will gives an overall picture of ecological importance of a species with respect to community structure.

Key words: Importance ValueIndex, Frequency, Phytosociology, Satana.

Inrtoduction

Phytosociology deals with the qualitative study of the structure of the vegetation with an emphasis on quantitative relationship of a few species which are judged to be dominant on the belief that these largely control the community and there by the occurrence of a large number of rare species. As far as the author are aware, there are detailed accounts on the Phytosociology of (I) Chhotaudepur (Shah, Yadav and Parabia, 1979) (II) Panchamahals (Shah and Bhatt, 1980) and (III) Phytosociological studies on Dang forest (Yadav, 1979). (IV) Phytosociological studies on Trymbakeshwer, Vani and Saptashringi forest of Nashik District (Jadhav, 2002, 2004, 2016, 2018, 2019 and (2020). A similar investigation is carried out in this study area with a view to study the communities in different localities and to analyse them.

The data on frequency (%), density and basal area are converted into relative frequency, relative density and relative basal area. The sum of all the three gives an importance value index (IVI) of each species. This will gives an overall picture of ecological importance of a species with respect to community structure.

Materials and Methods

Four areas located randomly in the forests of Satana. Quadrats of 10 x 10m were laid down in different directions in each of the places in different forests, so that quadrats represented almost all species in the area. 20 plots were laid for trees and shrubs. Sampling was done for a total area of 2000 Sqm. Frequency (%); density and abundance were calculated by the formulae given by Raunkiaer (1934). The comparison between species of a community, the data collected on dispersion frequency (%) is index for the establishment of species in communities based on frequency (%) of all species,suggested by Pichi –Sermolli (1948), number (density and abundance) and cover (basal cover) can also be profitably used in comparing the vegetation composition of two or more stands, or of same stand over a period of time. The importance value index gives a total picture of sociological structure of a species in a community community but it does not give the dimention or share of relative values of frequency, density and basal cover.

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Importance Value Index (IVI) study of some Herbaceous plants from North-East Malegaon Forest of Nashik District (MS), India

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(Received 23 February, 2021; Accepted 31 March, 2021)

ABSTRACT

Herbaceous diversity indicates the importance of species diversity for producing primary production in herbaceous plants in forest. Frequency (%), density and basal areas data converted into relative frequency, relative density and relative basal area. The sum of all the three give an Importance Value Index (IVI) of each species. This will gives an overall picture of ecological importance of a species with respect to herbaceous community structure. Vegetation determines many ecological parameters such as climate, energy,photosynthesis,surface runoff and soil temperature (Tappeiner and Cernusca ,1996)

Key words: Importance ValueIndex, Herbaceous, Frequency, Phytosociology, Malegaon.

Introduction

Phytosociology is the branch of science which deals with qualitative study of the structure of the vegetation plant communities, their composition and development, and the relationships between the species with an emphasis on quantitative relationship of a few species. Which are judged to be dominant on the belief that these largely control the community. There by the occurrence of a large number of rare species. The structure of a community is determined mainly by the dominating plant species and not by other characteristics

There are detailed accounts on the Phytosociology of (I) Chhotaudepur (Shah, Yadav and Parabia, 1979) (II) Panchamahals (Shah and Bhatt, 1980) and (III) Phytosociological studies on Dang forest (Yadav, 1979). (IV) Phytosociological studies on Trymbakeshwer, Vani and Saptashringi forest of Nashik District (Jadhav, 2002, 2004, 2016, 2018, 2019 and 2020), Phytosociological Study of Herbaceous Plant Community in Yusmarg Forest: A Developing Hill Resort in Kashmir Valley (Asma Absar Bhatti, Rouf Ahmad Bhat, Ashok K. Pandit, 2014). A similar investigation is carried out in this study area with a view to study the herbaceous communities in different localities and to analyse them according to Raunkiaer (1934).

The data on frequency (%), density and basal area are converted into relative frequency, relative density and relative basal area. The sum of all the three gives an importance value index (IVI) of each species. This will gives an overall picture of ecological importance of a species with respect to community structure.

Materials and Methods

Study area

The present study was carried out in Nashik district and located in the Western ghats, is situated at 19°

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SHODHSAMHITA
शोधसंहिता

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UGC CARE Group 1

A STUDY OF INNOVATION AND ECONOMIC GROWTH IN INDIA

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Abstract:
Aim of this research is to examine the function of innovation in the financial increase of India. Research Methodology- This lookup defines innovation that consists of each manufacturing of progressive items and services, and the revolutionary system of producing items and services. World Bank's information financial institution is the important source of this study. Time collection facts have been used to learn about the variables. In this find out about to recognize the monetary growth, GDP increase Rate, GDP per capita boom Rate, and for Innovation R&D Expenditure, Education Spending rate, and Patent purposes variables have been used. Results- According to the end result as Indian economic system will develop monetary it will minimize the R&D Exp, it will limit the training spending, it will limit the FDI, and it will additionally limit the no of patent purposes filed in India. This bad correlation raises the questions to the coverage maker. These questions additionally open the door of future lookup in this field.
Keyword- Innovation and Economic, Growth in India, financial institution, GDP.

Introduction:

The current records looks to exhibit us that innovation is one of the most vital elements for monetary growth. History explains us that financial boom was once continually an intention for human beings, for a society and for a nation. The ride of invention from wheel to web demonstrates how people are thriving in the direction of innovating new goods, new services, and new manufacturing manner as well. Innovation of new merchandise or manufacturing methods is fundamental to a country's long-term monetary boom and greater preferred of living. Today developed nations spending on lookup and improvement is greater than the growing and underdeveloped countries. That's the one of the predominant using pressure that makes developed nations greater developed and chief countries, compare to the different international locations these are the follower countries. To turn out to be a chief country, lengthy time period sustainable monetary boom is one of the most favored intentions for any country. A us of a can obtain this aim with the aid of growing the output of the country. GDP is the size of a international locations output in a given duration of time commonly it is one year.

Then he measured the increase in inputs (of capital and labor) over the identical time period. He then made what had been idea to be life like assumptions about how tons a increase in a unit of labor and how a lot a increase in a unit of capital need to add to the output of the economy. It grew to become out that the measured increase of inputs (i.e., in capital and labor) between 1870 and 1950 may want to solely account for

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Impact Covid-19 on Indian Economy

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Abstract
Economists slashed GDP quotes for the foreseeable future due to the apparent affect of the lockdown. However, it was once additionally estimated that the united states of america would possibly leap again rapidly due to the fact its enterprise composition, with unorganized markets being mostly dominant. Losses from geared up sectors amounted to an estimated 9 trillion rupees in late March, projected to enlarge with the prolonging of the lockdown. COVID-19 is a ailment brought about by using a new stress of Coronavirus. This lookup paper focuses on have an impact on of the outbreak of pandemic Covid-19 on Indian Economy. Covid19 makes negative have an impact on on many sectors of Indian Economy. This paper depicts the have an impact on of Covid-19 on specific sectors of Indian Economy. This paper additionally furnishes the coverage framework of authorities in this regard.

Introduction:
The pandemic got here with uncertainty and implications on all elements of commercial enterprise throughout the world. Despite India being beforehand of most international locations in being in a position to enforce work-from-home measures, especially in white collar work, job and incomes deficits, alongside with instability in costs was once expected. The months of the lockdown resulted in the free fall of employment, which slowly stabilized after the economic system reopened in late May in most components of the country. After zonal segmentation of districts, lookup confirmed that the worst affected areas protected orange and purple zones (districts with greater numbers of COVID-19 infections), and mostly the city economy. Maharahstra, Tamil Nadu and Gujarat had been estimated to have the steepest decline in GSDP at an common of 15 percentage for the following year.
Segments inclusive of customer retail predicted to see sharp falls ranging between three and 23 percentage relying on the market. For the massive gamers throughout segments, this intended running at much less than full capability to maintain afloat. For small businesses, however, it depended on how lengthy they may want to trip out the storm. Overall, the pandemic modified day by day existence drastically.
From a socio-economic standpoint, the pandemic uncovered category and caste brutalities in deciding who had get admission to to simple healthcare. Even in the face of increasing infections and an financial system inching feebly toward its pre-COVID-19 state, the Indian authorities used to be confident in battle and containing the virus with minimal impacts to the country.

Objective of the Study
1. To investigate the impact of a pandemic on different sectors of the economy.
2. To examine the need for policy intervention.

INDIAN AGRICULTURE: ISSUES & CHALLENGES

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Agriculture is the backbone of our country and economy, which accounts for almost 30 per cent of GDP and employes 70 per cent of the population. Though this is a rosy picture of our agriculture, how long will it meet the growing demands of the ever-increasing population? This is a difficult question to be answered, if we depend only on traditional farming. To meet the forthcoming demand and challenges we have to divert towards new technologies, for revolutionization. Our agricultural productivity. In the post-green revolution period agricultural production has become stagnant, and horizontal expansion of cultivable lands became limited due to burgeoning population and industrialization. In 1952, India had 0.33 ha of available land per capita, which is reduced to 0.15 ha at present. It is essential to develop eco-friendly technogolgy for maintaining crop productivity. Since long, it has been recognized that crops and soils are not uniform within a given field. Over the last decade, technical methods have been developed to utilize modern electronics to respond to field variability. Such methods are known as spatially variable crop production, geographic positioning system (GPS)-based agriculture, site- specific and precision farming (precision agriculture). The Term 'spatially variable crop production' seems to be more accurate and descriptive than the term precision agriculture, The concept of Precision Agriculture avails the recent developments in sensors, green-houses and protected agriculture structures. This Technology can be meaningfully deployed for hot and extremely dry regions Where water is scarce, soil is salty, temperature is high and rainfall low. It is also certain that even in developing countries, availability of labour for agricultural activities is going to be in short supply in future. The time has now arrived to exploit all the modern tools available by bringing information technology and agricultural science together for improved economic and environmentally sustainable crop production. Precision Agriculture is an integrated crop management system that attempts to match the kind and amount of inputs with the actual crop needs for small areas within a farm field. This goal is not new, but new technologies now available allow the concept of Precision Agriculture to be realized in a practical production setting.

CHALLENGES & ISSUES:

1. Reducing rural poverty through a socially inclusive strategy that comprises both agriculture as wellas non-farm employment: Rural development must also benefit the poor, landless, women. Scheduled castes and tribes. Moreover, there are strong regional disparities: the majority of india's poor are in rain-fed areas or in the Eastern Indo- Gangetic plains. Reaching such groups has not been easy
2. Ensuring that agricultural growth responus to food security needs: The sharp rise in food-grain production during India's Green Revolution of the 1970s enabled the country to achiveve self-sufficiency in food- grains and stave off the threat of famine. Agricultural intensification in the 1970s to 1980s saw an increased poverty, However agricultural growth in 1990s and 2000s slowed down, averaging about 3.5% per annum, and cereal yields have increased by only 1.4% per annum in the 2000s. The slow-down in agricultural growth has become a major cause for concern. India;s rice yields are one-third of china's and abount half of those in Vietnam and Indonesia. The same in True for most other agricultural commodities.

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Physico-chemical Study of Narmada River at Khalghat, District - Dhar (M.P.) with special reference to pollution status

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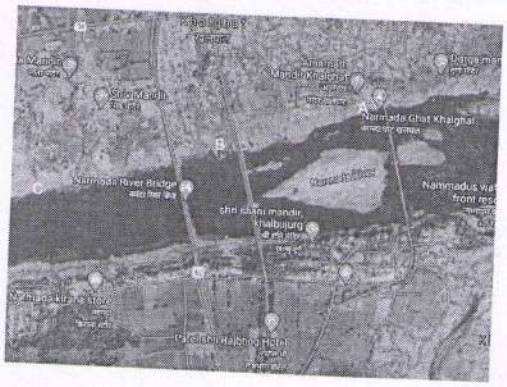
ABSTRACT

Narmada is considered to be the lifeline and west flowing river of the state of Madhya Pradesh and have religious importance. Water from this river is widely used for drinking, domestic use, agricultural etc., purposes. Hence, the monitoring of water quality of Narmada River was carried out for one year March 2017 to February 2018. Sampling stations were selected at downstream of Khalghat village. The water samples collected were analyzed, as per standard methods The water quality parameters, viz, pH, turbidity, electrical conductivity, chloride, nitrate, sulphate, phosphate, calcium hardness, magnesium hardness, biochemical oxygen demand (BOD) and chemical oxygen demand (COD), reflects on the pristine nature of the river in Khalghat. On the basis of various parameters studied, the water quality analysis indicated that the river water in the Khalghat area is polluted.

Key Words: Narmada River, Khalghat Station, Water pollution

INTRODUCTION

Water is an fundamental and very essential need not only for human life but the ecosystem too. To meet the different needs like of drinking water, usage in agriculture, washing and industrial etc. rivers plays important and main sources of water. India has been gifted by rivers by nature. But, unfortunately the human activities under the name development it is now becoming a curse. The rivers are not only being exploited but are also used as dumping place for sewage and solid wastes. Narmada River is one of the victim of these human adverse activities. The Narmada is the 5th largest river in India and largest west flowing river of India. It originated from the Maikal ranges at Amarkantak in Madhya Pradesh. The river Narmada drains the catchment between the Vindhyan Mountains to the north of the river stretching east-west in general, and the Satpura mountain ranges to the south, it flows over a length of 1312 km before draining into the Gulf of Cambay. The river which is known as Life line of central India has come to a critical point due to introduction of refinery waste, Domestic waste, industrial waste, agricultural waste and other wastes into this river. So it becomes necessary to investigate the quality of water in the particular water body. The quality of water of any aquatic resources is based on physico-chemical and biological parameters. Study of such parameters were carried out by Singh and Gupta, 2004; Ashraf, M.P and Mukundan, 2007; Barai and Kumar, 2012; Soni *et al*., 2013; Patil & Sharma, 2016; Pentewar, 2018.



Satellite map of Narmada River Khalgat showing 3 sampling site (A,B,C)

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11. Revolutionary Movement in Maharashtra

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Introduction

The uprising of 1857 marked the end of the company's rule and the beginning of direct British rule in India.There was little change in British policy.The uprising of 1857 seemed to be an inspiration to the revolutionaries. Revolutionary inspired by the work of Mangal pandy, Tatya Tope Bahadurshah, Nanasaheb Peshwa, Queen of Jhansi. Savarkar, Nehru, Netaji hailed this uprising as the first freedom struggle.The Indian national congress was established in 1885. Through this the Indian got a platform. Dadabai Naoroji , Feroz Shah Mehta, justice Ranade , namdar Ghokhale etc. Moderate group took the path of position, request against the British. In this way, Indians will not get their just demands. Leaders like Lokmanya Tilak, Lala Lajpat Rai Bipinchandra Pal accepted the path of extremism. Tilak started Ganeshotsav and Shiv Jayanti celebrations.

Shivaji fought against the Mughal power and established swarajya. The idea was formed in the minds of the revolutionaries that we should also fight for independence from the British. Britishers has been criticized by the extremist. Extremist work inspires revolutionaries. Newspapers and patriotic literature were created. The Indian Mirror, Bombay Samachar, The Hindu, Vande Mataram, Kesari, Maratha Newspaper worked to awaken Indian. Also the literature of Bankimchandra Chatterjee, Rabindranath Tagore, Subramaniam Bhrati, Vishnushastri chiplunkar, S M Paranjape enriched the regional language and conveyed the message of patriotism through his literature. Bankimchandra's vande Mataram became the national anthem of India. Singing this song, even eight to ten year old young children were shot in the chest by the imperialist British.

Economic exploitation of Indians and tyrannical laws created huge dissatisfaction in the minds of the youth. Indian youth begin to dismantle government machinery to plunder government arsenal to assassinate unjusty oppressive British officials. Revolutionaries believe that killing the oppressive British is not a sin but a sacred duty for the freedom of the motherland.Lord Curzons divisive policy provoked many patriotic youths. The decided to respond to the British at gunpoint. Bismark, mezini, garibaldi, cahur the revolutionaries were

does not vanish in the dry desert sand of inanimate habit, where the soul dwells Drawn forward in the ever-expanding thought and karma, in the heaven of the path of salvation, "O! My father! Let my country wake up. " This shows their goodwill towards the nation. This prayer also conveys the message of education.

Conclusion. Gandhiji was an advocate of organizing education according to the influence of the nation. He wanted to create a society free from exploitation through labor, community life, self-reliance, productive labor work, industry, education through mother tongue, self-discipline, cooperation, federal education. The religion understood the formation of society on the basis of truth and non-violence. The interdependent people of Gram Swaraj were interested in positive attitudes and practices through good governance. The aim was to educate ideal citizens. Thus Gandhiji's teachings are considered present for the past, future and present.

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GANDHI'S THOUGHTS ON EDUCATION

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ABSTRACT-

Mahatma Gandhi has given an important place to the curriculum in education. Children should be taught in their mother tongue as the knowledge imparted in the mother tongue can be assimilated by the students quickly. English should not be forced. Children should be given knowledge of local craft as their intellect will be boosted, they will be able to develop themselves and their future life needs will be complete. According to Gandhiji, through education, the common uneducated person in the country will understand the true meaning of freedom, equality and brotherhood. Unemployment, poverty, corruption, and many other problems cannot be solved without education.

INTRODUCTION-

Our education is completelyforeign. Everything is in vain without national education. Swarajya will be achieved today or tomorrow. But it cannot survive without national education. In this thought of Mahatma Gandhi, It seems that he wanted to create a civilized society by reducing the educational and cultural inequality of the country rather than

24. Paithani Business in Yeola

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Introduction

Just as the history of the establishment of Yeola begins with the advent of Raghuji Nayak, the history of the pursuit of Yeola also begins with Raghuji Nayak. Only when '''raghuji Baba established Yeolawadi did he invite the silk artisans for the betterment of this wadi. Shymdas Walji, a Gujrati householder doing business gave him protection and monopoly on his business. He started a silk handicraft business in Yeola. He brought many artisans to Yeola. The future of Yeola was linked to the weaving industry by weavers, artisans and traders. From the beginning of the eighteenth century, Yeola's name began to shine in the surrounding area. The silk of Yeola began to sway on the shoulders of the rich.

Silk Got Married to Gold

Between 1930 to 1935 the city of Yeola became famous for its glittering silk. Paithan in Marathwada was then under the rule of Nizam. There was a conflict between the Nizam's government servants and the gold and silver artisans of Paithan. These artisans migrated from the Nizam's state to Ahmednagar district. Among these artisans Shri Ramchandra Sakharam Baswande was attracted by the silk industry of Yeola. Some of these artisans entered Yeola. On 7th Jan. 1837, a gold wire factory was started by Shri Ramchandra Sakharam Baswande in Yeola. Gold was important. Paithani, Shalu and the golden velvet work, glittering flowers and the golden decoration and the gold alongwith silk is vividly described by J. Nissim in his book "A Monograph on wire and Tensel in the Bombay Presidency". J. Nissim says, "hitherto Yeola had to import the precious thread; henceforth it could manufacture it at its very doors for local consumption and export abroad in this way was the older industry wedded to its handmade the goods smiled on the happy union and showered riches on the descendants of these who had brought it about. "

Financial Relationship of Horizontal Vertical Threads

In the early 19th century, however, Nissim gave detailed description of the work and the silk industry. At that time Vallabhdas Muralidhar was the leading industrialist. Gujrati, Vani and Patni took the lead in making gold on a small scale. The silk industry was boosted by productive

SOCIAL REFORMER - RAJA RAMMOHAN ROY

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ABSTRACT

The maker of modern India, the founder of the greatest socio- religious reform movements, Brahmo Samaj, Raja Ram Mohan Roy has played a crucial role in the abolition of social evils like the sati system. He also advocated various changes in the Indian society by popularizing the study of English modern medicine, technology and science. This is the reason why he was referred as "Raja" by the Mughal emperor. Raja Ram Mohan Roy was an Indian religious social, education reformer and humanitarian, who challenged tradition Hindu Culture and indicated the lines of progress for Indian societies under British rule. He along with Dwarkanath Tagore and other prominent Bengalis of the early 19th century, founded the Brahma Subha in 1828, which engendered the BrahmoSamaj an influential Indian Socio religious reform movement during the Bengal Renaissance. This influence was visible in the field of politics, public administration, society, religion as well as education Raja Ram Mohan Roy may be called the precursor of the modern system of education in India- its moral earnestness and energy, his boldness of imagination and firm grasp of first doctrine mark out Raja Ram Mohan Roy not were as great educational reformer but as a nation builder.

KEYWORDS: Indian Renaissance, social religious reforms, educational reforms, contributions.

INTRODUCTION:

India made tremendous progress both religious and social field in the 19th century. Raja Ram Mohan Roy was as the father of Indian renaissance. Raja Ram Mohan Roy decided to reform Hindu society form its all irrational observance and evil customs. He apposed all discrimination and evil practice against women. He was the founder of Brahmo Samaj. The Brahmo Samaj teaches about monotheism. Raja Ram Mohan Roy welcomed western education Raja Ram Roy gain more popularity through his activities for the abolition of sati- the relevance of present study is that access the awareness of people regarding Raja Ram Mohan Roy.

He himself founded and edited a Bengal journal called the "Samvad Kaumudi" for the spread of his ideologies he started Brahmo Samaj in 1828 A.D. objective of study is to know more about Raja Ram Mohan Roy personality , then to know about sati system and its abolition. And to study how Raja Ram Mohan Roy attack polygamy and child marriage and finally to study about the Brahmo Samaj and its activities and feature

OBJECTIVES:

- To know the value of newspaper as an instrument in the Hindu orthodox society.
- To explain the contribution of Raja Ram Mohan Roy in Journalistic and literary field.
- To know the various reforms of Raja Ram Mohan Roy in the Field of Indian Education.

To Know the Relevance of Raja Ram Mohan Roy in present Hypothesis:

1. To study the growth of literature and journalism in time India.
2. To study the holistic perspective of Raja Ram Mohan Roy journalistic contribution.

METHODOLOGY OF THE STUDY:

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WORKERS MOVEMENT

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INTRODUCTION

After 1920 there was a great interest in Marxist and socialist thinking which strengthened the labour movement. After 1860, there was an increased pace of industrialization. Earlier the British did not encourage new industries because they were out to protect British industries. They had always given the top priority to safeguard the interest of capitalist class of England but despite all adverse circumstance a number of industries like cotton cloth, paper, mining, tea, Indigo, juice, and railways continued to develop albeit slowly some specific cities were developing as the industrial centres; naturally the number of industrial workers in India was also increasing Reasons for formation of working class.

COMMENCEMENT OF RAILWAYS IN INDIA

As the industrial Revolution progressed in England, so did the need for raw materials. This raw material was very cheaply available in India. As it was being manufactured in different parts of India, the British needed railways to collect it and send it to England. This was discussed during the time of lord Dalhousie as a necessity for the industrial policy of England and allowed the construction of new railway lined in India. It was a great revolution in the field of transportation. The first railway line from Mumbai to Thane was started in 1853. The railway line would be very lucrative for the company to do business in a short period of time the work of laying railway line started in many parts of Indi. Thousands of workers were needed for the construction of railway stations etc.

RISING DEMAND FOR COAL

The train started. The locomotive of the train was running on steam and coal was needed to make this steam. The spirit of the industrial revolution is steam in fact, the industrial Revolution was based entirely on the steam. Coal was used to make steam in all places like Madhya Pradesh an Bihar. As the industry grew, so did the demand for coal. Thousands of workers were needed during this period to complete it, which created the working class.

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ARTICLE

Nitrogen Dioxide Gas Sensing Properties of Nanocrystalline In_2O_3 Thick Films for Environmental Protection

S. C. Kulkarni* and D. K. Halwar

The Sol–gel method was utilised to synthesise the nanocrystalline In_2O_3 powder with a cubic structure in the current study. Thick film samples of In_2O_3 powder were prepared on an alumina substrate. A low-cost and straightforward screen-printing method was used for making the film samples. The prepared samples were subjugated to firing at different temperatures in a range of 700 to 850 °C with 50 °C increment. This temperature range assured much better adhesion of films on the alumina substrate. The X-ray diffraction (XRD) study revealed the cubic phase along (222) orientation. The electrical characterization study confirmed the n-type semiconducting nature of the film samples. The film samples fired at 700 °C showed a relatively low resistivity compared to those fired at different temperatures. The particle size was found small with an enormous surface area. The morphology study using scanning electron microscopy (SEM) showed that the particle size also increased as the firing temperature was increased. Film samples fired at 700 °C were also exhibited higher sensitivity and selectivity for nitrogen dioxide gas of 100 ppm concentration at 100 °C operating temperature.

Keywords: Thick Film Sensors, Nanocrystalline, Gas Sensor, Screen Printing, Sensitivity.

1. INTRODUCTION

These days, everyone is aware of unnatural climate change, global warming, greenhouse effect etc., caused due to environmental pollution. The detection of NO_2 gas is significant in ecological insurance, which causes ozone depletion in the atmosphere, and its exposure would induce health disorders such as pulmonary edema and fatality [1]. Hence, there is an incredible enthusiasm for developing gas sensors that use oxides of metals as base semiconductors to detect NO_2. The metal oxide semiconductors such as WO_3 [2], In_2O_3 [3–6] and SnO_2 [7] can be effectively utilized for gases like NO_2 and O_3 that tend to oxidize. The interaction of these gases with n-type semiconductors induces higher resistance. Because of capturing of the electrons from semiconductor's conduction band, there is an increase in resistance, which is a surface process.

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In_2O_3 is a notable conducting transparent oxide (TCO) with a wideband distance (3–4 eV) that assumes an additional standard role in various practical applications like an optoelectronic device, catalyst, dye-sensitized solar cells, including gas sensors. Lately, nano-sized homogeneous Indium Oxide grains have been created by chemical procedures like the Sol–gel method. The developed In_2O_3 film samples are crucial in the applications of gas sensing. Gurlo et al. [8] investigated thin films synthesized using the Sol–gel technique that exhibited an elevated response for NO_2 at 150 °C. Various reports demonstrated that thick and thin films primarily established on cubic In_2O_3 are fragile to small concentration of NO_2 and O_3 present in the air as opposed to the less sensitive carbon monoxide [9, 10]. In_2O_3 Sol–gel developed films of intermediate grain size ranging from 5 to 30 nm had shown the best response towards NO_2 gas. Therefore, for pragmatic applications, the development of Indium Oxide fine grains with crystal structure controlled grain size and shape is vital. Multiple technologies are utilized to develop In_2O_3 powder apt for thick films, but sol–gel is the most straightforward technique. The sensing layer's morphology assumes a vital role in the performance of a device, which is dependent on manufacturing practices and techniques. The Physical

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ARTICLE

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साठोत्तरी ग्रामीण कविता आणि सद्य:स्थिती

डॉ. स्नेहल संजय मराठे
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महाराजा सयाजीराव गायकवाड महाविद्यालय,
मालेगाव कॅम्प, मालेगाव, जि. नाशिक

प्रास्ताविक : १९६० नंतर खऱ्या अर्थाने मराठी ग्रामीण साहित्याचा प्रवाह गतिमान झालेला दिसतो. कथा, कादंबरी, ललित लेखन यांच्यापेक्षा ग्रामीण कविता कमी प्रमाणात आणि काहीशी उशिरा अवतीर्ण झालेली आढळते. सुरुवातीला ग्रामीण जीवनाचे गद्य स्वरुपात केलेले वर्णन पद्य स्वरूपातही वाचकांसमोर यायला लागले. त्या साहित्यात वास्तवतेपेक्षा कल्पकतेला जास्त वाव आहे. केशवसुतांची 'एक खेडे', माधवानुज यांची 'दुष्काळ', चंद्रशेखर यांचे 'काय हो चमत्कार',भा.रा. तांबे यांची 'गुरखी' यासारख्या कवितांत, तसेच रविकिरण मंडळातील गिरीश, यशवंत, ग.ल.ठोकळ यांच्या 'सुगी' या कविता संग्रहातून ग्रामीण पार्श्वभूमी आणि जीवन यांचे वर्णन आलेले आहे.

ग्रामीण लोकजीवन आणि निसर्ग त्याच्या सर्व वैशिष्ट्यंसह आणि रंगरूपासह विविध निसर्ग प्रतिमांच्या रूपाने १९६० नंतरच्या ग्रामीण कवितेत अधिक प्रभावीपणे आणि आकर्षक स्वरूपात व्यक्त होऊ लागला. या कवितांमधून लोकशाहीचे विकेंद्रीकरण, सहकाराचे खरे–खोटे स्वरूप आणि त्याचा शेतकऱ्यांबरोबरच त्याच्याशी निगडित अन्य सर्व समाजातील सामान्य जनांवर होणारा परिणाम यांचे अत्यंत व्यापक आणि वास्तव चित्र पहावयास मिळू लागले. यात आनंद यादव, ना.धों. महानोर, विठ्ठल वाघ, उत्तम कोळगावकर, पुरुषोत्तम पाटील आणि या कालखंडातील अन्य अनेक कवींच्या कवितांचा वाटा फार मोठा आहे. येथूनच ग्रामीण साहित्याचा प्रवाह खऱ्या अर्थाने रूढ झालेला दिसतो.

विश्वास जहागिरदार, वासुदेव मुलाटे यासारख्या विचारवंतांनी ग्रामीण कवितेचे स्वरूप स्पष्ट केले आहे. आत्मभान आलेल्या ग्रामीण तरुण पिढीची कविता या काळात लिहिली गेली. ग्रामीण जीवनातील दैन्य, दारिद्र्य, शोषण या वास्तवाचा वेध ग्रामीण कवितेने घेतला आहे. म्हणजेच १९७५ नंतरच्या मराठी कवितेत समकालीन प्रश्नांचे प्रतिबिंब उमटते. या कवितांमधून शोषणाचा तीव्र निषेध केला आहे. ग्रामीण जीवनाचे अस्सल चित्रण, ग्रामीण संवेदनांची अभिव्यक्ती, ग्रामीण भागातील सुख–दु:ख, भावभावना, श्रद्धा–अंधश्रद्धा इत्यादी गोष्टींचे चित्र ग्रामीण कवितेतून आलेले आहे. ग्रामीण कांव्याच्या स्वरूपाविषयी डॉ. कैलास सार्वेकर म्हणतात, ''ज्या कवितेत ग्रामीण सजन जीवनाचे चित्रण ग्रामीण संवेदनशीलतेने केलेले असते तिला ग्रामीण कविता असे म्हटले जाते. या कवितेमध्ये खेडे गावाची संलग्न असलेले कृषी जीवन खेड्यतील जन जीवनाचे दु:ख, हर्ष, दारिद्र्य, रूढी, परंपरा, संस्कृती या साऱ्यांचा समावेश होतो. सहाजिकच ग्रामीण भागातील निसर्ग, येथील वातावरण, अडी अडचणीत जीवन जगण्याच्या पद्धती, तेथील पारंपारिक मूल्य, ग्रामजीवनातील संघर्ष, दुष्काळ या गोष्टी ग्रामीण कवितेच्या माध्यमातून चित्रित होत' आहेत.''१

१९६० नंतरच्या ग्रामीण कविता —

ग्रामजीवन जगलेल्या, भोगलेल्या कवींच्या अनुभूतीने घेतलेले सहज शब्दरूप असे साठोत्तरी मराठी

मराठी स्त्रीवादी साहित्य

डॉ. स्नेहल संजय मराठे

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प्रस्तावना : स्वातंत्र्यप्राप्तीनंतर जीवनाच्या शैक्षणिक, सांस्कृतिक, राजकीय, सामाजिक, आर्थिक, वैज्ञानिक सर्वच क्षेत्रात अर्थपूर्ण प्रगती झाली. त्याचा फायदा स्त्रीला मिळाला. भारतीय राज्य घटनेने स्त्रियांना समानता दिली. १९५५ साली पास झालेल्या हिंदू कोड बिलाने स्त्रियांना विविध महत्त्वाच्या कायद्यांचा आधारही प्राप्त करून दिला. स्त्रीने जीवनाच्या विविध क्षेत्रात आपल्या कर्तृत्वाचे पंख पसरले. किंबहुना असे एकही क्षेत्र आज सांगता येणार नाही की जिथे स्त्रीने पदार्पण केले नाही. शिक्षण, संशोधन, ललितकला, वैद्यक, स्थापत्य, कृषी, विज्ञान, राजकारण, समाजकारण अशा सर्वच क्षेत्रात स्त्रीच्या कर्तुत्वाची आज नाममुद्रा उमटली आहे. त्याचे चित्र थोड्याफार प्रमाणात साहित्यात उमटले.

१९७५ हे वर्ष संयुक्त राष्ट्रसंघाने 'आंतरराष्ट्रीय महिला वर्ष' म्हणून घोषित केले. जागतिक पातळीवर स्त्री चळवळीला सुरुवात झाली. या पार्श्वभूमीवर स्त्री प्रश्नांच्या संदर्भात विचार करणारे, नवीन ध्येय- उद्दिष्टांना प्रेरित करणारी स्त्री लेखिकांचे स्त्रीवादी साहित्य आले. स्त्रीजीवन, स्त्रियांचे विविध प्रश्न, स्त्रियांचा सामाजिक दर्जा, स्त्रियांकडे बघण्याचा समाजाचा दृष्टिकोन या सर्वच बाजूंनी स्त्रीलेखिकांच्या साहित्यात नव्याने विचार सुरू झाले. १९७५ - १९८५ या आंतरराष्ट्रीय 'स्त्री दशकात' स्त्रीवादी विचारांना बळकटी देऊन विविध संदर्भ प्राप्त झाले. याचा परिणाम असा झाला की स्त्रीवादी वैचारिक लेखन विस्तारत गेले.

मराठीतील संत स्त्रियांचे लेखन :

महाराष्ट्रातील भक्ती परंपरा ज्ञानदेव - नामदेव, मुक्ताबाई- जनाबाई या पिढीपासून सुरू होऊन तुकाराम आणि बहिणाबाई यांच्या पिढीपर्यंत कळसापाशी पोहोचते. जवळपास पाचशे वर्षांचा हा काळ वारकरी संप्रदायाच्या प्रसार आणि प्रभावाने भारलेला आहे. सर्व जातींना दार खुले असणाऱ्या या परंपरेत अस्पृश्यांना

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An overview of Governments Policy Initiatives of Agricultural Inputs Relating to Seeds and Fertilizers.

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Agriculture in India shifted its scope and focuses more on towards commercialization and export-orientation. Creation of employment opportunities and achieving food security are among the top priorities in the policies related to agriculture. Thus agriculture has been a prominent sector accounting for 14.2 per cent of Gross Domestic Product (GDP) in 2011 agriculture and agro-industries are considered to be highly important for the country's economic development. Although the service and industrial sectors showed higher rates of growth and have been contributing higher percentages to Gross National Product (GNP), Worldwide, expansion in agricultural commodities and food products has been accompanied by significant increase in usage of agricultural inputs such as fertilizers, pesticides, farm machinery and improved seed material

Seeds

Seed is the basic and most critical input for sustainable agriculture. The response of all other inputs depends on quality of seeds to a large extent. It is estimated that the direct contribution of quality seed alone to the total production is about 15 – 20% depending upon the crop and it can be further raised up to 45% with efficient management of other inputs.

Fertilizers

Just like humans and animals, plants need adequate water, sufficient food, and protection from diseases and pests to be healthy. Commercially produced fertilizers give growing plants the nutrients they crave in the form they can most readily absorb and use: nitrogen (N), available phosphate (P) and soluble potash (K). Elements needed in smaller amounts, or micronutrients, include iron (Fe), zinc (Zn), copper (Cu) and

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AGRICULTURE INPUTS AND THEIR IMPORTANCE FOR PRODUCTIVITY - AN OVERVIEW

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BACKGROUND OF AGRICULTURE INPUTS

Agriculture in India shifted its scope and focuses more on towards commercialization and export-orientation. Creation of employment opportunities and achieving food security are among the top priorities in the policies related to agriculture. Thus agriculture has been a prominent sector accounting for 14.2 per cent of Gross Domestic Product (GDP) in 2011 agriculture and agro-industries are considered to be highly important for the country's economic development. Although the service and industrial sectors showed higher rates of growth and have been contributing higher percentages to Gross National Product (GNP), Worldwide, expansion in agricultural commodities and food products has been accompanied by significant increase in usage of agricultural inputs such as fertilizers, pesticides, farm machinery and improved seed material. The use of such intensive inputs in agriculture and access to plentiful energy, where they were previously limited or unavailable, has enabled an increase in food production and thus provides better food and livelihood security.

In developing countries increased growth in agricultural production depends on continuous improvement through technological changes. This requires a sustained and rapid growth in the use of agricultural inputs such as seeds, fertilizers, pesticide, farm implements, farm machinery, etc.,

Seeds

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The production and distribution of quality/certified seeds is primarily the responsibility of the State Governments. Certified seed production is organized through State Seed Corporation, Departmental Agricultural Farms, Cooperatives etc.

Fertilizers

Just like humans and animals, plants need adequate water, sufficient food, and protection from diseases and pests to be healthy. Commercially produced fertilizers give growing plants the nutrients they crave in the form they can most readily absorb and use: nitrogen (N), available phosphate (P) and soluble potash (K). Elements needed in smaller amounts, or micronutrients, include iron (Fe), zinc (Zn), copper (Cu) and boron(B).Fertilizer is generally defined as "any material, organic or inorganic, natural or synthetic, which supplies one or more of the chemical elements required for the plant growth".. The main aim of the industry is to provide the primary and secondary nutrients which are required in macro quantities. As per the Fertilizer Control Order (FCO) 'fertilizer' means any substance used or intended to be used as fertilizers of the soil and or crop and specified in part A of Schedule I and includes a mixture of fertilizers and special mixture of fertilizers. Primary nutrients are normally supplied through chemical fertilizers.

Pesticides

The practice of agriculture first began about 10,000 years ago in the Fertile Crescent of Mesopotamia (part of present day Iraq, Turkey, Syria and Jordan) where edible seeds were initially gathered by a population of hunter/gatherers[1]. Cultivation of wheat, barley, peas, lentils, chickpeas, bitter vetch and flax then followed as the population became more settled and farming became the way of life. The first recorded use of insecticides is about 4500 years ago

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Review on Chalcone (Green Synthesis of Chalcone (Microwave), Some Other Methods for Preparation of Chalcone, Medical and Biological Applications)

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ABSTRACT

This survey are provides information on green synthesis (Microwave) methods of chalcone and the diverse pharmacological activities of chalcones such as anti-bacterial, anti-HIV activity, anti-oxidant, anti – inflammatory, anti-microbial, anti-cancer and anti-hepatotoxic attract many research to isolate and illustrate them from nature and to develop efficient synthetic method.

KEYWORDS: Chalcone, Green Synthesis methods, Natural Biosynthesis of Chalcone, biological activity.

INTRODUCTION

Chalcones are abundantly present in nature from famous two higher plants. Chalcone have also been reported to be anti-inflammatory, antibacterial and anti-hepatotoxic activity and some of their derivatives are reported to be Anti mutagenic. Chalcones are synthesized by Claisen-schmidth condensation, which involves cross-aldol condensation of appropriate aldehydes and ketones followed by dehydration. Chalcone is the common natural pigment and one of the important intermediates in the bio-synthesis of flavonoids. Synthetic and naturally occurring chalcones have been extensively studies and develop as one of the pharmaceutically important molecule.

EXPERIMENTAL

Green Synthesis of Chalcone

General procedure for the synthesis of chalcones: The minimum amount of methyl ketone and aromatic aldehyde dissolved in equimolar amount of Ethanol and NaOH (40%) were the mixed and add to the conical flask. Then conical flask was covered with funnel and then the flask was taken in a domestic microwave oven. Then reaction mixture was irradiation for 1 to 2 minutes after every 30 sec. check TLC. Then the reaction mixture was cooled and the obtained solid was recrystallized from suitable solvent, Fig. (1).

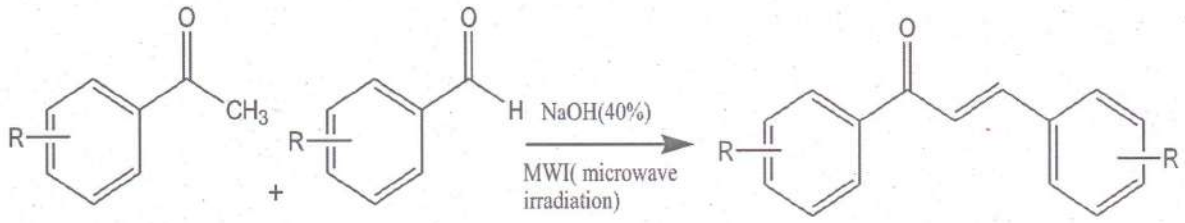

Fig.1.

The substituted acetophenone and substituted benzaldehyde dissolved in 5 ml rectified spirit. The solution was pitch on calcium oxide and well swirled. The solvent was removed under reduced pressure using a rotator evaporator. Resulting synonyms for powder was taken in 25 ml beaker and radio rays in microwave oven at 400 W for 15 minutes. Then the reaction checked by TLC. After completion of the reaction, when reaction mixture was cooled, added to the 20 ml ice cold water and acidify with Conc. HCl , solid was precipitated filter on suction pump, then the washing with water and dried it, A pure sample was obtained by recrystallization, Fig. (2).

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Research Article

SOLUBILITY, MOLECULAR INTERACTIONS THROUGH DFT STUDY OF MALONIC ACID IN WATER, 1-PROPANOL AND THEIR BINARY MIXTURES AT 293.15-313.15K TEMPERATURE

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ABSTRACT

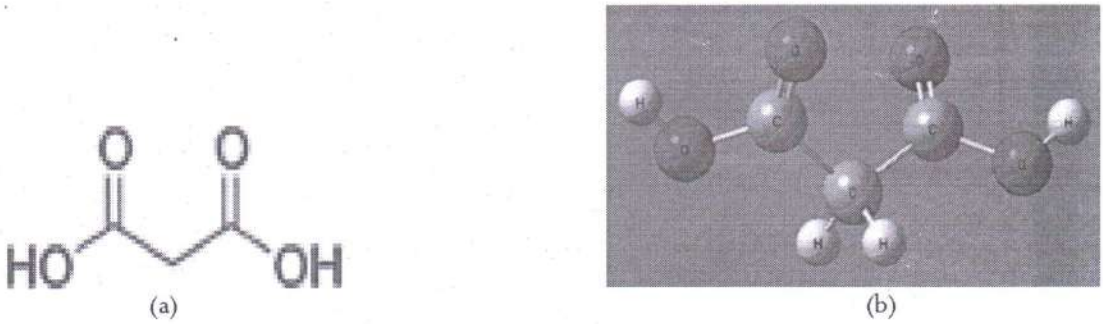
The measurement of solubilities of malonic acid in pure water, 1-propanol and water + 1-propanol binary solvent mixtures were carried out over the entire composition range between 0 to 1 weight fraction of 1-propanol at (293.15, 295.15, 298.15, 300.15, 303.15, 305.15, 308.15, and 313.15) K. The experimental solubility data were correlated by using Apelblat, van't Hoff equation and CNIBS/R-K model. These equations provide better correlation in these measurements. DFT was carried out to correlate solubility in various solvents system. Thermodynamic parameters (ΔH^0_{soln}, ΔS^0_{soln}, ΔG^0_{soln}, %ζH, %ζTS) of solution were calculated using van't Hoff equation.

Keywords: Solubility, Malonic acid, Apelblat equation, DFT.

1. INTRODUCTION

Malonic acid (MA) (fig. 1) is used as a building block chemical to produce numerous valuable compounds [1]. In food and drug applications, malonic acid can be used to control acidity, either as an excipient in pharmaceutical formulation or natural preservative additive for foods. The solubility data of such important organic compounds can be used in industrial, pharma-ceutical, separation, purification, and environmental applications [2]. It is well-known that solid-liquid phase equilibrium data play an important role in the development and operation of crystallization processes [3]. To determine proper solvents and to design an optimized production process, it is necessary to know the solubility in different solvents.

In these investigations, the solubilities of Malonic acid in pure water, 1-propanol and their binary mixtures over different composition were determined at various temperatures. The experimental solubility data were correlated by using Apelblat, van't Hoff and CNIBS/R-K model. Thermodynamic properties of the solutions were calculated by using van't Hoff equation.



(a) (b)

Fig. 1: Chemical Structure of (a) Malonic Acid (b) three dimensional structure

2. EXPERIMENTAL

2.1. Materials and Apparatus

Malonic Acid (99%) was obtained from sigma Aldrich. Methanol (99.8%) and 1-propanol (99.9%) were supplied by Merck. They were used without any further purification. Triple distilled water was used throughout of all these investigations. The method of solubility measurement has been used earlier [4-6].

In this work; an excess amount of malonic acid was added to the binary solvents mixtures prepared by

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Pimelic Acid Solubility in Pure and Mixed Solvent (Water + Methanol): Experimental Data, Correlation and Thermodynamic Analysis

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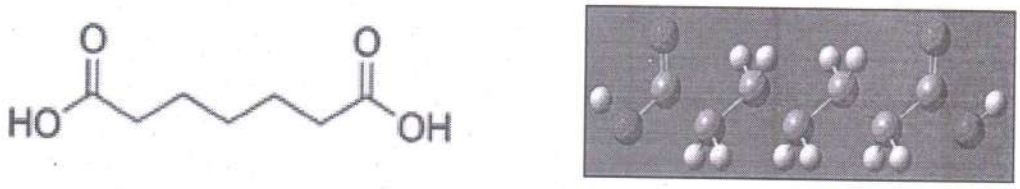
ABSTRACT

In this study, mole fraction solubility of pimelic acid (PA) in pure water, methanol and their binary solvent mixture at atmosperic pressure from T = (293.15 – 313.15) K was determined by gravimteric method. The correlation of solubility data was performed with van't Hoff and modified Apelblat model. Likewise, the thermodynamic parameters of pimelic acid in the corresponding solvent systems were determined and the results demonstrated that the procedure for the dissolution in the pure and mixed solvent is endothermic. DFT was carried out to correlate solubility in various solvents system. The experimental solubility and calculated solubility can be usefully applied to the final crystallization and/or purification process of PA synthesis and to pharmaceutical formulation development of PA.

KEYWORDS: Solubility, Pimelic acid, Apelblat equation, DFT.

INTRODUCTION

Pimelic acid (PA) [1,7-heptanedioic acid, $(CH_2)_5(COOH)_2$, molar mass: 160.17 g mol^{-1}, CAS:11-16-0 as shown in Fig.1)] is an important raw material in chemical and pharmaceutical industry. It is also used as intermediate for manufacturing medicines[1]. It is always used for biochemical studies; some of them have a variety of uses in synthesis[2]. Pimelic acid is also used as a raw material for the synthesis of 1,7-Heptanediol which is an important chemical widely used in the synthesis pharmaceuticals, surfactants, flavors, and cosmetics[3]. To determine proper solvents and to design an optimized production process, it is necessary to know the solubility in different solvents. In these investigations, the solubilities of pimelic acid in pure water, methanol and their binary mixtures over different composition were determined at various temperatures. The experimental solubility data were correlated by using Apelblat and van't Hoff model. Thermodynamic properties (ΔH^0_{soln}, ΔS^0_{soln}, ΔG^0_{soln}, %ζH, %ζTS) of the solutions were calculated by using van't Hoff equation.



(a) (b)

Fig.1 Chemical Structure of pimelic acid (PA) (a) three dimensional structure (b)

EXPERIMENTAL

Pimelic Acid (99%) was obtained from sigma Aldrich. Methanol (99.8%) was supplied by Merck. They were used without any further purification. Triple distilled water was used throughout of all these investigations. The method of solubility measurement has been used earlier[4-6].

In this work; an excess amount of pimelic acid was added to the binary solvents mixtures prepared by weight (Shimadzu, Auxzzo) with an uncertainty of ± 0.1 mg, in a specially designed 100 mL double jacketed flask. Water was circulated at constant temperature between the outer and inner walls of the flask. The temperature of the circulating water was controlled by thermostat to within (± 0.1) K. The solution was continuously stirred using a magnetic stirrer for long time (about 1 h) so that equilibrium is assured and the solution was allowed to stand for 1 h. Then a fixed quantity of the supernatant liquid was withdrawn from the flask in a weighing bottle with the help of pipette which is hotter than the solution. The weight of this sample was taken and the sample was kept in an oven at 343 K until the whole solvent was evaporated. This was confirmed by weighing two or

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स्वतंत्रता आन्दोलन में मैथिलीशरण गुप्त के काव्य का योगदान

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महाविद्यालय मालेगांव कैम्प ,तह –मालेगाँव

भूमिका:-

हिंदी साहित्य भारतीय आजादी की चेतना का इस्पाती दस्तावेज रहा है।इस युग के कवियों ने भारतीय जनमानस में स्वतंत्रता की लौ जगाने का महनीय कार्य किया है। आधुनिक हिंदी कविता के इतिहास में 'द्विवेदी युग' (सन १९०० से १९२०) इस महत्वपूर्ण है।हिंदी साहित्य के कुछ इतिहासकार इस काल को 'सुधार काल' भी कहते हैं। आचार्य महावीर प्रसाद द्विवेदी के 'सरस्वती' पत्रिका के संपादक बनते ही इस युग में नवीन काव्यधारा का उद्रेक हुआ। हिंदी कविता में इसी युग में आधुनिकता की प्रतिष्ठा हुई। द्विवेदी युग ने आधुनिकता को हिंदी साहित्य में विकसित करने में महत्वपूर्ण भूमिका निभाई है। इस युग के साहित्य में नई जीवन दृष्टि और भारतीयता के संस्कार हैं। वह हिंद की मिट्टी की गंध, देश की अर्जित निजी सांस्कृतिक सभ्यता, मानवीय आस्था और जीवन मूल्यों से मंडित है। खड़ी बोली की प्रतिष्ठा, काव्य भाषा के रूप, राष्ट्रीय मूल्यों का साहित्य में समावेश, काव्यगत उपादानों का नए परिप्रेक्ष्य में आनयन तथा व्याकरणिक दृष्टिकोण से भाषागत शुद्धता की प्रवृत्ति का उन्मेष इसी युग में हुआ। इस युग में काव्य रचना के लिए ब्रजभाषा का त्याग कर खड़ी बोली की प्रतिष्ठा की गई। आचार्य महावीर प्रसाद द्विवेदी खड़ी बोली के प्रबल समर्थक थे। उन्होंने अनेक कवियों और लेखकों को साहित्य रचना के लिए प्रोत्साहित किया था। उनसे प्रेरणा लेकर ही इस युग के मैथिलीशरण गुप्त, रामचरित उपाध्याय, श्रीधर पाठक, हरिऔध आदि अनेक प्रसिद्ध कवियों और लेखकों ने उनके द्वारा निर्धारित साहित्यादर्शों का अनुसरण किया। ।

श्री मैथिलीशरण गुप्त द्विवेदी युग के यशस्वी लोकप्रिय, शीर्षस्थ कृती कवि हैं। उनके काव्य का साहित्यिक ही नहीं ऐतिहासिक महत्व भी है। बीसवीं शताब्दी में हिंदी काव्य के क्षेत्र में जिन कवियों ने अपनी विशिष्ट देन प्रस्तुत की है, उनमें मैथिलीशरण गुप्त का स्थान शीर्षस्थ है। गुप्तजी का रचना काल द्विवेदी युग से लेकर नई कविता के युग तक प्रशस्त है। अर्थात् द्विवेदी युग के पश्चात् भी गुप्तजी निरंतर रचनारत थे। इस दीर्घ कालावधि के मध्य हिंदी कविता के क्षेत्र में अनेक काव्यांदलनों का उद्भव एवं विकास हुआ। छायावाद,

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हिंदी सिनेमा में रोजगार के अवसर

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वर्तमान युग वैज्ञानिक युग है। विज्ञान ने आज मानव को विविध आधुनिक आविष्कार इजाद किये हैं। विज्ञान की अद्यतन सुविधाओं की खोज के कारण मानव जीवन सरल,सहज एवं सफल हो गया है। विज्ञान के परिष्कार के कारण ही 'वसुदैव कुटुंबकम' की संकल्पना साकार हो सकी है। विज्ञान के नए पुराने विविध क्षेत्रीय आविष्कार मानव सभ्यता एवं संस्कृति,रहन-सहन, भौतिक सुविधाओं आदि में दिन दुगना रात चौगुना इजाफा कर रहे हैं। विज्ञान ने न केवल मानव की बुद्धि का विस्तार कर उसकी वैचारिक शक्ति को नये आयाम दिये हैं बल्कि विश्व समुदाय के मध्य भौगोलिक दूरी को भी कम किया है। यह विज्ञान की ही देन है कि आज भावात्मक और बौद्धिक दोनों ही स्तरों पर विश्व परस्पर निकट आ गया है। इस निकटता में सिनेमा की भूमिका अग्रणी है। जनसंचार माध्यमों में सिनेमा सबसे लोकप्रिय माध्यम है। मनोरंजन के लिए अमीर-गरीब सभी लोग सिनेमा को प्राथमिकता देते हैं । पिछले कई दशकों से सिनेमा हमारे जीवन का हिस्सा बना हुआ है। सिनेमा के माध्यम से जनसमुदाय की सुखद एवं दुखद भावनाओं को साकार किया जा रहा है। सिनेमा सूक्ष्म मानवीय संवेदनाओं, मानवीय व्यवहारों के विभिन्न पहलुओं को चित्रात्मक शैली में अभिव्यक्त करता है। इसके अतिरिक्त सिनेमा आज सर्वाधिक रोजगार उपलब्धि का माध्यम भी है। भारत की राष्ट्रभाषा,राजभाषा और जनभाषा हिन्दी है,अत:सिनेमा के क्षेत्र का प्रतिनिधित्व भी हिन्दी भाषा ही करती है। बालीवुड में बननेवाली हिन्दी फिल्में और उनका वार्षिक लेखा-जोखा इतना विशाल है,जितना किसी छोटे देश का पूरा वार्षिक बजट होता है।हिन्दी सिनेमा की लोकप्रियता का अंदाजा इस बात से भी लगाया जा सकता है,कि अच्छी फिल्में भारत साहित विश्व के 22 देशों के महत्वपूर्ण थिएटर्स,मल्टीप्लेक्स में एक साथ रिलीज होती है तथा अच्छी कमाई करती है । 'थ्री इडियट्स' इसका सुंदर उदाहरण है। आज भारत का फिल्म उद्योग अपने चरम पर है। लाखों लोगों की रोजी-रोटी और रोजगार प्रत्यक्षत: इससे जुड़े हुए हैं।

फिल्म उद्योग में हिन्दी भाषा का अध्ययन एवं अनुसंधान करनेवालों के लिए उपलब्ध रोजगार के विषय में कहे तो कहा जा सकता है कि,इसमें रोजगार के अनगिनत अवसर हैं। सिनेमा रोजगार के लिए अलीबाबा की गुहा है। "सिनेमा में साहित्य,संगीत,नृत्य,रंगसज्जा,स्थापत्य आदि का सम्मिलित रूप होता है। सिनेमा में मानवीय जीवन की विविध झाकियाँ दृश्यमान होती है। प्रत्येक व्यक्ति अपनी -अपनी दृष्टि से अपने-अपने जीवन की झलक उसमें देखता है और मनचाहा रोजगार भी पाता है"।[1] वैसे तो सिनेमा अन्य माध्यमों से नितांत भिन्न है। फिल्म निर्माण एक टीम वर्क है,जिसमें निर्देशक, निर्माता, अभिनेता,अभिनेत्री,सहायक

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राष्ट्रकवि डॉ. बृजेश सिंह की गज़लों में जल-पर्यावरण चेतना

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भूमिका :-

प्रकृति और मानव का संबंध अन्योन्याश्रित है । प्रकृति के बगैर मानव के अस्तित्व के कल्पना भी नहीं की जा सकती । प्रकृति या पर्यावरण का मानव जीवन पर गहरा प्रभाव है। पर्यावरण में मानव को कई अनमोल उपहार दिए हैं। जिन्हें प्राप्त करके मनुष्य ने अपनी उन्नति का रास्ता आसान बनाया है । विकास की लालसा में मनुष्य ने प्रकृति का बेखौफ दोहन किया है ।प्रकृति ने मनुष्य को शुद्ध हवा दी, शीतल और स्वच्छ जल दिया , तेज चिलचिलाती धूप मे बचने के लिए छायादार पेड़ दिए । परंतु मनुष्य अपनी स्वार्थी प्रवृत्ति से बाज नहीं आया । यांत्रिक जीवन की चमक-दमक में आकर मनुष्य ने कल-कारखानों का निर्माण किया। मोटारकारों पर सवार होकर मनुष्य मिलों की दूरी घंटों में तय करने लगा । परिणामत: मोटरों और कारखानों मे निकलने वाले धुएं ने शुद्ध हवा को प्रदूषित कर दिया । अलग-अलग रसायनों से मिश्रित नालों का जल जब नदी झरनों में सम्मिलित हुआ तब जल का प्रदूषण बढ़ गया । खेती ,कारखानों,बड़ी-बड़ी कंपनियों को बसाने के लिए हरे भरे पेड़ों को काटकर वीरान किया गया। जिसके परिणाम स्वरूप पर्यावरण में ग्लोबल वार्मिंग ,भयंकर अकाल जैसी वैश्विक समस्याएं निर्माण हो गई है । जिसके कारण मनुष्य ही नहीं अपितु सारी जीव सृष्टि का अस्तित्व खतरे में आ गया है ।

वर्तमान समय में पर्यावरण संरक्षण के लिए अनेक संस्थाएं सरकार तथा समाजसेवी काम कर रहे हैं । पर्यावरण का संरक्षण सब का उत्तरदायित्व हो गया है ।पर्यावरण का संतुलन अगर बिगड़ा तो आने वाले दिनों में धरती पर मानव समाज ही नहीं अपितु समस्त जीव सृष्टि के लिए खतरा निर्माण हो सकता है।
अत: मानव समाज को खतरे से आगाह करने के लिए हिंदी साहित्य की ग़ज़ल विधा का विशेष योगदान रहा है। शे'रों के माध्यम से ग़ज़लकार सोए हुए समाज में चेतना भरने का कार्य कर रहे हैं । ऐसे ग़ज़लकारों में सामाजिक, राजनीतिक, दार्शनिक, पारिवारिक, आर्थिक और पर्यावरण चेतना को बखूबी चित्रित किया गया है।

हिंदी ग़ज़ल विधा का स्वरूप और विकास :-

ग़ज़ल हिंदी की अत्यंत प्रभावी विधा है। 'गागर में सागर' भरने की क्षमता ग़ज़ल में है। तथा भावाभिव्यक्ति के लिए ग़ज़ल महत्वपूर्ण मानी जाती है । कवि कम शब्दों में अपने शे'रों के माध्यम से समाज में चेतना निर्माण करता है। इसलिए वर्तमान समय में ग़ज़ल सबसे लोकप्रिय विधा बन गई है ।

ग़ज़ल का इतिहास काफी पुराना है । ग़ज़ल उर्दू की देन है । परंतु हिंदी ग़ज़ल में आज अपना अस्तित्व और लोकप्रियता स्वयं निर्माण की है । हिंदी साहित्य में ग़ज़ल लिखने की परंपरा बहुत प्राचीन है। अमीर खुसरो ने हिंदी ग़ज़ल का सूत्रपात किया । बाद में संत कबीर ,भारतेंदु हरिश्चंद्र से होकर दुष्यंत कुमार तक ग़ज़ल का विकास होता रहा ।दुष्यंत कुमार ने पहली बार ग़ज़ल को आम जन की पीड़ा के साथ जोड़ा और हिंदी ग़ज़ल की लोकप्रियता को व्यापक बनाया । वास्तव में दुष्यंत कुमार ने हिंदी ग़ज़ल को गरिमा दी और इसके बाद समकालीन ग़ज़लकारों ने इसकी वृद्धि की है । इनमें गोपालदास सक्सेना 'नीरज' ,शमशेर बहादुर सिंह, देवेंद्र

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राष्ट्रकवि डॉ. बृजेश सिंह की गज़लों में जल - पर्यावरण संरक्षण

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भूमिका :-

प्रकृति और मानव का संबंध अन्योन्याश्रित है। प्रकृति के बगैर मानव के अस्तित्व की कल्पना भी नहीं की जा सकती। प्रकृति या पर्यावरण का मानव जीवन पर गहरा प्रभाव है। पर्यावरण में मानव को कई अनमोल उपहार दिए हैं। जिन्हें प्राप्त करके मनुष्य ने अपनी उन्नति का रास्ता आसान बनाया है। विकास की लालसा में मनुष्य ने प्रकृति का बेखौफ दोहन किया है।प्रकृति ने मनुष्य को शुद्ध हवा दी, शीतल और स्वच्छ जल दिया, तेज चिलचिलाती धूप से बचने के लिए छायादार पेड़ दिए। परंतु मनुष्य अपनी स्वार्थी प्रवृत्ति से बाज नहीं आया। यांत्रिक जीवन की चमक-दमक में आकर मनुष्य ने कल-कारखानों का निर्माण किया। मोटारकारों पर सवार होकर मनुष्य मिलों की दूरी घंटों में तय करने लगा। परिणामतः मोटरों और कारखानों से निकलने वाले धुएं ने शुद्ध हवा को प्रदूषित कर दिया। अलग-अलग रसायनों से मिश्रित नालों का जल जब नदी झरनों में सम्मिलित हुआ तब जल का प्रदूषण बढ़ गया। खेती, कारखानों, बड़ी-बड़ी कंपनियों को बसाने के लिए हरे भरे पेड़ों को काटकर वीरान किया गया। जिसके परिणाम स्वरूप पर्यावरण में ग्लोबल वार्मिंग, भयंकर अकाल जैसी वैश्विक समस्याएं निर्माण हो गई है। जिसके कारण मनुष्य ही नहीं अपितु सारी जीव सृष्टि का अस्तित्व खतरे में आ गया है।

वर्तमान समय में पर्यावरण संरक्षण के लिए अनेक संस्थाएं सरकार तथा समाजसेवी काम कर रहे हैं। पर्यावरण का संरक्षण सब का उत्तरदायित्व हो गया है।पर्यावरण का संतुलन अगर बिगड़ा तो आने वाले दिनों में धरती पर मानव समाज ही नहीं अपितु समस्त जीव सृष्टि के लिए खतरा निर्माण हो सकता है।
अतः मानव समाज को खतरे से आगाह करने के लिए हिंदी साहित्य की ग़ज़ल विधा का विशेष योगदान रहा है। शे'रों के माध्यम से ग़ज़लकार सोए हुए समाज में चेतना भरने का कार्य कर रहे हैं। ऐसे ग़ज़लकारों में सामाजिक, राजनीतिक, दार्शनिक, पारिवारिक, आर्थिक और पर्यावरण चेतना को बखूबी चित्रित किया गया है।

हिंदी ग़ज़ल विधा का स्वरूप और विकास :-

ग़ज़ल हिंदी की अत्यंत प्रभावी विधा है। 'गागर में सागर' भरने की क्षमता ग़ज़ल में है। तथा भावाभिव्यक्ति के लिए ग़ज़ल महत्वपूर्ण मानी जाती है। कवि कम शब्दों में अपने शे'रों के माध्यम से समाज में चेतना निर्माण करता है। इसलिए वर्तमान समय में ग़ज़ल सबसे लोकप्रिय विधा बन गई है।

ग़ज़ल का इतिहास काफी पुराना है। ग़ज़ल उर्दू की देन है। परंतु हिंदी ग़ज़ल में आज अपना अस्तित्व और लोकप्रियता स्वयं निर्माण की है। हिंदी साहित्य में ग़ज़ल लिखने की परंपरा बहुत प्राचीन है। अमीर खुसरो ने हिंदी ग़ज़ल का सूत्रपात किया। बाद में संत कबीर, भारतेंदु हरिश्चंद्र से होकर दुष्यंत कुमार तक ग़ज़ल का विकास होता रहा।दुष्यंत कुमार ने पहली बार ग़ज़ल को आम जन की पीड़ा के साथ जोड़ा और हिंदी ग़ज़ल की लोकप्रियता को व्यापक बनाया। वास्तव में दुष्यंत कुमार ने हिंदी ग़ज़ल को गरिमा दी और इसके बाद समकालीन ग़ज़लकारों ने इसकी वृद्धि की है। इनमें गोपालदास सक्सेना 'नीरज' ,शमशेर बहादुर सिंह, देवेंद्र

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फीचर : परिभाषा एवं अवधारणा

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फीचर समाचार पत्रों मे प्रकाशित होने वाली किसी विशेष घटना, व्यक्ति, जीव-जन्तु, तीज-त्योहार, दिन स्थान, प्रकृति-परिवेश से संबंधित व्यक्तिगत अनुभूतियों पर आधारित वह विशिष्ट आलेख होता है जो कल्पनाशीलता और सृजनात्मक कौशल के साथ मनोरंजक और आकर्षक शैली मे प्रस्तुत किया जाता है।

आज फीचर लेखन तथा उसके प्रस्तुतिकरण का आधुनिक पत्रकारिता में अत्यधिक महत्व हो गया है। समाचार अगर पत्रकारिता की रीढ़ है तो फीचर पत्रकारीता का सौन्दर्य बढ़ाने वाली शक्ति। पत्रकारिता में समाचार जहा तात्कालिक घटनाओं का तथ्यपूर्ण अभिलेख होता है तो रूपक यानी फीचर समाचार के तत्काल स्वरूप से अलग उसका विस्तार , उसका सचित्र प्रस्तुतीकरण या उससे जुड़े सम्पूर्ण घटनाक्रम का विवरण प्रस्तुत करता है। आधुनिक पत्रकारिता में अब स्थानभाव के कारण समाचार लेखन में शब्दों की सीमा तय कर दी गई है और पत्रकार को उसी शब्द सीमा में सब कुछ कहना होता है। ऐसे में फीचर, पत्रकार के लिए एक मददगार के तौर पर काम करता है। फीचर में ग्राफिक्स, चित्रों, रेखाचित्रों और संक्षिप्त प्रस्तुतिकरण के माध्यम से बहुत छोटे स्थान में बहुत कुछ कहा, लिखा या प्रस्तुत किया जा सकता है। रूपक का विकास विवरणात्मक रचनाओं से हुआ है। लेकिन शब्दों और स्थान की सीमा के चलते अब फीचर संक्षिप्त होने लगे हैं। हालाँकि संक्षिप्त होने के बावजूद फीचर का महत्व कम नहीं हुआ है बल्कि और अधिक बढ़ गया है।

फीचर मे समाचार के विस्तार को ही एक विशेष तकनीक के साथ प्रस्तुत किया जाता है ।इसके लिए फीचर लेखक को यह पता करना होता है कि ,समाचार का मुख्य विषय या मुख्य पात्र कौन है ?समाचार के मुख्य विषय के साथ जुड़े प्रमुख तत्व क्या है ? लेखक को इस सबको प्रस्तुत करते समय उसमे व्यक्तिगत स्पर्श भी देना होता है। मानवीय भावनाओं के स्पर्श के साथ -साथ मनोरंजक ढंग से प्रस्तुत फीचर अधिक लोकप्रिय होते है क्योंकि उनसे विषय के सम्पूर्ण तथ्यों कि जानकारी के साथ-साथ पाठक ,श्रोता या दर्शक का मनोरंजन भी होता है।

समाचार तथ्यों का विवरण तथा विचार देकर खत्म हो जाता है जबकि फीचर मे घटना अथवा विषय के परिवेश ,विविध पक्षो तथा उसके प्रभावों का वर्णन होता है ।समाचार मे लिखने वाले के विचार अथवा उसके व्यक्तित्व की झलक नहीं होती जबकि फीचर मे लेखक की विचारधारा ,उसकी कल्पनाशीलता के साथ -साथ उसके व्यक्तित्व की भी झलक मिलती है ।फीचर मे कथा तत्व की प्रधानता रहती है अर्थात उसके लेखन या प्रस्तुति मे सरलता और प्रवाह दोनों ही होते है ।लेकिन फीचर महज कथा नहीं होता । फीचर कल्पनाजगत की बातों मे खो जाने की जगह विषय की गहराई मे जाकर पाठकों की जिज्ञासा को शांत करने का काम करता है।

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फीचर : परिभाषा एवं अवधारणा

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फीचर समाचार पत्रों मे प्रकाशित होने वाली किसी विशेष घटना, व्यक्ति, जीव-जन्तु, तीज-त्योहार, दिन स्थान, प्रकृति-परिवेश से संबंधित व्यक्तिगत अनुभूतियों पर आधारित वह विशिष्ट आलेख होता है जो कल्पनाशीलता और सृजनात्मक कौशल के साथ मनोरंजक और आकर्षक शैली मे प्रस्तुत किया जाता है।

आज फीचर लेखन तथा उसके प्रस्तुतिकरण का आधुनिक पत्रकारिता में अत्यधिक महत्व हो गया है। समाचार अगर पत्रकारिता की रीढ़ है तो फीचर पत्रकारीता का सौन्दर्य बढ़ाने वाली शक्ति। पत्रकारिता में समाचार जहा तात्कालिक घटनाओं का तथ्यपूर्ण अभिलेख होता है तो रूपक यानी फीचर समाचार के तत्काल स्वरूप से अलग उसका विस्तार , उसका सचित्र प्रस्तुतीकरण या उससे जुड़े सम्पूर्ण घटनाक्रम का विवरण प्रस्तुत करता है। आधुनिक पत्रकारिता में अब स्थानभाव के कारण समाचार लेखन में शब्दों की सीमा तय कर दी गई है और पत्रकार को उसी शब्द सीमा में सब कुछ कहना होता है। ऐसे में फीचर, पत्रकार के लिए एक मददगार के तौर पर काम करता है। फीचर में ग्राफिक्स, चित्रों, रेखाचित्रों और संक्षिप्त प्रस्तुतिकरण के माध्यम से बहुत छोटे स्थान में बहुत कुछ कहा, लिखा या प्रस्तुत किया जा सकता है। रूपक का विकास विवरणात्मक रचनाओं से हुआ है। लेकिन शब्दों और स्थान की सीमा के चलते अब फीचर संक्षिप्त होने लगे हैं। हालाँकि संक्षिप्त होने के बावजूद फीचर का महत्व कम नहीं हुआ है बल्कि और अधिक बढ़ गया है।

फीचर मे समाचार के विस्तार को ही एक विशेष तकनीक के साथ प्रस्तुत किया जाता है ।इसके लिए फीचर लेखक को यह पता करना होता है कि ,समाचार का मुख्य विषय या मुख्य पात्र कौन है ?समाचार के मुख्य विषय के साथ जुड़े प्रमुख तत्व क्या है ? लेखक को इस सबको प्रस्तुत करते समय उसमे व्यक्तिगत स्पर्श भी देना होता है। मानवीय भावनाओं के स्पर्श के साथ -साथ मनोरंजक ढंग से प्रस्तुत फीचर अधिक लोकप्रिय होते है क्योंकि उनसे विषय के सम्पूर्ण तथ्यों कि जानकारी के साथ-साथ पाठक ,श्रोता या दर्शक का मनोरंजन भी होता है ।

समाचार तथ्यों का विवरण तथा विचार देकर खत्म हो जाता है जबकि फीचर मे घटना अथवा विषय के परिवेश ,विविध पक्षो तथा उसके प्रभावों का वर्णन होता है ।समाचार मे लिखने वाले के विचार अथवा उसके व्यक्तित्व की झलक नहीं होती जबकि फीचर मे लेखक की विचारधारा ,उसकी कल्पनाशीलता के साथ -साथ उसके व्यक्तित्व की भी झलक मिलती है ।फीचर मे कथा तत्व की प्रधानता रहती है अर्थात उसके लेखन या प्रस्तुति मे सरलता और प्रवाह दोनों ही होते है ।लेकिन फीचर महज कथा नहीं होता । फीचर कल्पनाजगत की बातों मे खो जाने की जगह विषय की गहराई मे जाकर पाठकों की जिज्ञासा को शांत करने का काम करता है ।

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१. डॉ. बाबासाहेब आंबेडकर आणि सामाजिक सुधारणा

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दलितांचे कैवारी, भारतीय राज्यघटनेचे शिल्पकार, क्रियाशील नेता, हिंदू कोड बिल कायद्याचे जनक, शेतकऱ्यांचे कैवारी, डॉ. बाबासाहेब आंबेडकर यांचे सामाजिक विचार हे धार्मिक व नैतिकतेच्या तत्त्वावर आधारलेले आहेत. समाज, राजकारण, अर्थकारण, शिक्षण, धर्म, राज्यघटना, या विविध क्षेत्रांमध्ये बाबासाहेबांनी आयुष्यभर मूलगामी चिंतन करून त्यावर उपाय शोधून तो यशस्वी करण्याचा प्रयत्न केला आहे. शोषण आणि शोषित हा त्यांच्या विचाराचा केंद्रबिंदू आहे. समाजाने दबून टाकलेल्यांना उभारी देण्याचे काम बाबासाहेबांनी केले आहे. शोषित समाजाचे त्याच जोखडातून त्यांची मुक्तता हा बाबासाहेबांच्या सामाजिक विचारांचा मुळ केंद्रबिंदू आहे. सर्वांना स्वातंत्र्य समता आणि न्याय मिळावा हा त्यांच्या वैचारिक मांडणीचा खरा हेतू आहे. डॉ. बाबासाहेब आंबेडकरांच्या एकंदर कार्यात सामाजिक सुधारणांना विशेषतः दलितोध्दाराच्या गोष्टींना विशेष महत्व आहे. बाबासाहेब स्वतः एका अस्पृश्य कुटुंबात जन्माला आले. या समाजात त्यांना अत्यंत वाईट अनुभव आलेत. हे डोळ्यासमोर घेऊन त्यांनी अस्पृश्यता नष्ट करणे, आणि त्यांचा सर्वांगीण विकास करणे, ह्या आपल्या जीवन ध्येयाची खूणगाठ त्यांनी मनी भांडली होती. डॉ. बाबासाहेबांचे सफल जीवनाचे एक सूत्र होती की, "लक्षात ठेवा तलवारीच्या धारे पेक्षा लेखणीची धार कायम टिकणारी आणि सर्वात खतरनाक शस्त्र म्हणून तलवार हातात न घेता लेखणी हातात घेऊन अन्यायावर मात करा".१ बाबासाहेबांनी आपल्या लेखणीच्या जोरावर दलितांचे प्रेरणास्तोत्रे बनलेत, आपल्या लेखणीने देशाची राज्यघटना लिहिली, स्त्रीयांना 'हिंदू कोड' बिलाच्या माध्यमातून न्याय मिळवून समान हक्क प्राप्त करून दिलेत, शेतकऱ्यांच्या जिव्हाळ्याचे प्रश्न सोडवले, तमाम दीन-दलितांना आपल्या लेखणीच्या माध्यमातून त्यांच्या हक्काची जाणीव करून दिली. एवढी ताकद बाबासाहेबांच्या लिखणीईने करून दाखवली आणि समाजामध्ये परिवर्तन घडवून आणले.

डॉ. बाबासाहेब आंबेडकरांनी समाजातील सर्व घटकांचे निरीक्षण करून त्यांनी आपल्या वेगवेगळ्या ग्रंथांमधून, वर्तमानपत्रातून, भाषणांमधून आणि विशेषता भारतीय राज्य घटनेच्या माध्यमातून सामाजिकतेची कल्पना प्रत्यक्षात आणण्याचा प्रयत्न केला. अस्पृश्य हा भारतीय समाज व्यवस्थेला लागलेला कलंक असून, अस्पृश्य व्यक्तीला माणूस म्हणून असलेले सर्व समतेचे अधिकार चातुर्वर्ण्य व्यवस्थेने नाकारले होते. शतकानुशतके हा समाज दयनीय व अप्रगत अवस्थेत जीवन जगत होता, दलित माणसांना कुत्रे, मांजरी आधी प्राण्यांपेक्षा हिन दर्जाची वागणूक दिली जात होती. अनेक वर्षापासून त्यांना गुलामगिरीचे जोखड सहन करीत जीवनाचा प्रवास करावा लागत होता".२ म्हणजेच सामाजिक

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२५. मालेगाव (नाशिक) तालुक्यातील कला-मनोरंजन क्षेत्रातील कोविड - १९ चा परिणाम

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प्रस्तावना

मानवी जीवनात कला-मनोरंजनाला अनन्य साधारण महत्व आहे. आजच्या माहिती तंत्रज्ञान व हायटेक तंत्रज्ञानाच्या युगात समाजात नैराश्य वाढत असल्याचे निदर्शनास येते. तसेच कामाचा अतिरिक्त ताण-तणाव यामुळे सामाजिक व कौटुंबिक कलहाचे प्रमाणदेखील वाढत चालले आहे. आजच्या अशा हायटेक तंत्रज्ञानाच्या युगात जग हे इलेक्ट्रॉनिक्स संसाधनांच्या द्वारे जोडले जात आहे. पण या प्रक्रियेत मानव समुदाय एकमेकांपासून मनाने दुरावत चालला आहे. हे वास्तव सत्य जवळपास सगळ्यांना कमी-अधिक प्रमाणात अनुभवास येत आहे. यात भर घातली कोविड-१९ या संसर्गजन्य विषाणूने."वॉल स्ट्रीट जनरल' या अमेरिकेतील वृत्त प्रकाशित करणाऱ्या वृत्तसंस्थेने जगामध्ये कोविड-१९ या विषाणूचा निसर्ग चीनमधील वुहान प्रांतांमधून १० डिसेंबर २०१९ पासून बसरला"[१]

कोविड-१९ हा संसर्गजन्य विषाणू 'कोरोना' या नावाने देखील संबोधला जातो. या संसर्गजन्य विषाणूने दोन ते तीन महिन्यात १५० जास्त देशांमध्ये शिरकाव केला आणि मोठ्या प्रमाणात जीवित हानी देखील या संसर्गाने झाली. यामुळेच जागतिक आरोग्य संघटनेने या कोरोना विषाणूचा संसर्ग 'जागतिक महामारी' म्हणून घोषित केले. भारतात कोरोनाचा शिरकाव चीनमधून झाला. "चीनमधील वुहान विद्यापीठात मेडिकलच्या तिसऱ्या वर्षात शिक्षण घेणाऱ्या विद्यार्थ्याला या संसर्गाची लागण झालेली होती. ही विद्यार्थीनी भारतातील केरळ राज्याची रहिवासी होती. सुट्टीच्या कालावधीत घरी आल्यावर तिचा कोरोना रिपोर्ट ३० जानेवारी २०२० रोजी पॉझिटिव्ह आला."[२] " महाराष्ट्रात हा संसर्ग ९ मार्च २०२० रोजी आढळून आला. पुण्यातील एका व्यक्तीचा कोरोना अहवाल पॉझिटिव आला".[३] आणि बघता बघता संपूर्ण महाराष्ट्र कोरोनाच्या विळख्यात सापडला. कोरोनाचा वाढता धोका विचारात घेऊन केंद्र शासनाने मार्च महिन्याच्या २२ तारखेला एका दिवसासाठी "जनता कर्फ्यू" घोषित केला. देशातील सर्व स्तरातील घटकांनी या जनता कर्फ्यूला उत्स्फूर्तपणे प्रतिसाद दिला. यानंतर २५ मार्च २०२० पासून संपूर्ण भारतात लॉकडाउन लागू करण्यात आला"[४]

संपूर्ण भारतातील रस्ते, वर्दळीची ठिकाणे, उद्योग व्यवसाय सेवा, या सगळ्या ठिकाणी स्मशान शांतता पसरली. आपला जीव कोणेना संसर्गापासून वाचावा यासाठी सर्व क्षेत्रातील व्यक्तींनी स्वतःला घरामध्ये कोंडून घेतले. यावेळी प्रत्येकाला आपला जीव वाचावा असेच वाटत होते. परंतू बहुतांश कुटुंबातील

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स्वातंत्र्योत्तर मराठी व हिंदी भाषांमधील दलित कथांचा एकमेकांशी तुलनात्मक अभ्यास

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अर्वाचीन काळामध्ये दलित साहित्याचा इतिहास डॉ. बाबासाहेब आंबेडकरांच्या कार्याबरोबर जन्माला आलेला दिसतो. १९४७ साली दलित सेवक आणि जागृती या साप्ताहिकांमधून तर दलित कथा छापून आल्याच परंतु 'डॉ. आंबेडकरांच्या जनता, प्रबुध्द भारत या साप्ताहिकात ही त्या छापून येत होत्या'.१ या साप्ताहिकाने प्रथम दलित कथा मराठी भाषेत जन्मास घातली हाच दलित कथेचा उगम काळ आहे. असे असले तरी एक गोष्ट खेदाने म्हणावी लागते की या कथा साहित्याची नोंद समकालीन वाङ्मय समीक्षकांनी घेतलेली नाही. स्वातंत्र्योत्तर दलित कथा वर्तमानातील अनेक विषयांना कवेत घेणारी विषय व आशयाच्या दृष्टीने स्वतःची स्वतंत्र वाट निर्माण करणारी आहे. दलित कथा ही मराठीत असो की हिंदीत ती नव्या सांस्कृतिक मूल्यांना जन्म देणारी ठरली आहे. या कथांचे आपल्याला त्यांच्या विषयाच्या दृष्टीने खालील प्रमाणे वर्गीकरण करता येते.

सामाजिक कथा
राजकीय कथा
ऐतिहासिक कथा
मनोवैज्ञानिक कथा
प्रेमकथा

'दलित कथेमध्ये रचनेपेक्षा आशयाला अधिक महत्त्व असल्याचे जाणवते'.२ दलित कथा मराठी कथेत आल्याने एक अनोखे परिवर्तन घडत गेले. ज्या दलित लेखकांनी महत्त्वपूर्ण दलित कथा शिल्प घडविण्याचा मान मिळाला त्यात अण्णाभाऊ साठे हे प्रमुख शिल्पकार आहेत. अण्णाभाऊ साठेंनी तब्बल वीस वर्ष कथालेखन केले. स्वातंत्र्य मिळूनही अन्नाला महाग असणारी माणसे त्यांनी **'चिरागनगरीची भुतं'** यामध्ये रेखाटली आहेत. त्यांनी प्रेम, वासना, द्वेष, मत्सर यास संवेदना कथांत मांडले आहेत. अण्णाभाऊंनी नाजूक-साजूक संवाद न रेखाटता भयानक किडलेल्या, सडलेल्या वास्तवावर आपल्या कथांतून बोट ठेवले. त्यानंतर शंकरराव खरात दलित कथेचे मुख्य आधारस्तंभ ठरले आहेत. खरातांची कथा ही उपेक्षितांच्या जीवनाचे चित्रण करणारी आहे. सुखदुःखाचे कंगोरे असलेली, आशय व अभिव्यक्तीच्या दृष्टीने स्वतंत्र असलेली व डॉ. बाबासाहेब आंबेडकरांच्या तत्त्वज्ञानाचे अधिष्ठान असलेली आहे. एक प्रचंड अशा ताकदीची सामर्थ्यशाली कथा मराठी भाषेला देऊन ज्यांची कथा दलित कथेचा मापदंडच ठरते ते म्हणजे बाबूराव बागूल **'जेव्हा मी जात चोरली होती'**, **'मरण स्वस्त होत आहे.'** यातील कथा गुणात्मक दृष्ट्या श्रेष्ठ असून काळजाचा ठाव घेणा-या आहेत'.३ त्यांची कथा ही नव्या जीवन जाणिवा, नवे तत्त्वज्ञान, वेगळी अभिव्यक्ती असलेली, जीवनांचे वास्तव रूप मांडणारी आहे. त्यांच्या कथेने दलित कथा साहित्याच्या इतिहासात अपूर्व उंची गाठलेली आहे. शोषणावर प्रहार करून त्यांच्या कथेने समता, बंधुभाव हा विचार जन्मास घातला आहे. १९८० साली केशव मेश्राम यांचा खरवड हा कथासंग्रह प्रसिद्ध झाला सवर्ण माणसाकडून होणारा अन्याय त्यांनी रेखाटला असून दलित माणूसही अन्याय सहन करणारा आहे हे सांगितले आहे. त्यांच्या कथांतून स्त्री प्रवृत्ती, स्पृश्य, अस्पृश्य भेद व्यक्त झालेले दिसतात. त्यांनी नवे अनुभव आणि नवे विषय घेऊन दलित कथा सामर्थ्यशाली बनवली. नव्या पिढीतील चांगले कथाकार म्हणून

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दलित कथाकार - अण्णाभाऊ साठे

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दलित समाज हा सामाजिक विषमतेने नाडलेला आणि पिळला गेलेला आहे. हजारो वर्षापासून त्यांच्यावर अन्याय-अत्याचार होत आहेत. रूढी-परंपरेच्या चौकटीमध्ये त्यांना बंदिस्त करून माणूस म्हणून त्यांचे अस्तित्व नाकारले गेले. त्यांना जनावरांप्रमाणे वागवले गेले, पशुंना जवळ घेतले जाते, परंतु दलितांना जवळ घेतले गेले नाही, त्यांची सतत उपेक्षा केली, गुलाम म्हणून वागवले गेले, त्यांचे सर्व प्रकारे शोषण होत गेले. अण्णाभाऊ साठे यांनी जवळपास २१ कथासंग्रह लिहून तत्कालीन सामाजिक परिस्थितीवर आपल्या लेखणीच्या माध्यमातून प्रकाश टाकण्याचे काम केले. यात कृष्णाकाठच्या कथा, गजाआड, नवती, खुळवाडी, आबी, पिसाळलेला माणूस, फरारी, बरबाद्या कंजारी, निखारा, चिरानगरची भुतं, इत्यादी गाजलेले कथा संग्रह. अण्णा भाऊंची कथा नवयुग' मधून प्रसिद्ध झाली. केवळ तिसरीपर्यंत शिकलेला हा युवक सांगली-सातारा परिसरातून पायी चालत पोट भरण्यासाठी मुंबई महानगरात आला. त्यावेळी बाबासाहेबांच्या चळवळीमुळे मुंबई ही दलितांच्या चळवळीचे केंद्र बनली होती. मात्र अण्णाभाऊ या चळवळीत सामील झाले नाहीत. सुरुवातीला अण्णाभाऊ कम्युनिस्ट पक्षाचे सदस्य होते. माणुसकीसाठी आणि पोटासाठी बेभान झालेल्या माणसाच्या जीवनाचे चित्रण अण्णा भाऊंनी केले आहे. आधीच्या मराठी कथेत दलित हा लाचार, दीनदुबळा, अन्याय सहन करणारा, म्हणून रेखाटला जात होता. अण्णाभाऊंनी तो बंडखोर आणि क्रांतिकारक रेखाटला आहे. १९५७ मध्ये खुळवाडी' हा पहिला मराठी कथा संग्रह प्रकाशित झाला. या कथासंग्रहातील नायक-नायिका दलित असून दारिद्र्यामुळे त्यांची नेहमी उपासमार होते. परंतु भुकेसाठी ते लाचार होतांना दिसत नाहीत. या दीन-दलितांवर अन्याय अत्याचार करणारे जमीनदार व इनामदार कसे संपतील याचाच विचार या कथेत प्रकट केला आहे.

अण्णाभाऊंच्या कथेमधून ते जीवन जगले, पाहिले, अनुभवले, तेच त्यांनी

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Review: Pharmacological Applications of Pyrazole Derivatives

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Abstract: Pyrazole is a five-membered heterocycle with two neighboring nitrogen atoms, are the central structure of a variety of compounds with pharmacological applications. The widespread use of pyrazole cores in biologically active compounds has prompted researchers to seek more elegant and efficient methods for producing these heterocyclic leads. Anti-tuberculosis, anti-cancer, anticonvulsant, antiparkinson, antioxidant, and anti-inflammatory are only a few of the fascinating pharmacological applications of this molecule. The purpose of this review is to present an overview of the pyrazole moiety's various pharmacological applications.

Index Terms – Pyrazole, anticonvulsant, antioxidant, anti-inflammatory.

I. INTRODUCTION

Pyrazole has the formula $C_3H_3N_2H$ and is an organic compound. It's a heterocycle with a five-membered ring made up of three carbon atoms and two nitrogen atoms.[1] Pyrazoles are a group of molecules containing the ring C_3N_2 with adjacent nitrogen atoms.[2] Although they are rare in nature, they are characterized as alkaloids due to their nature and pharmacological effects on humans. Drugs containing the pyrazole moiety have been shown to display a wide range of biological activities, including immunosuppressive, anti-inflammatory, and anti-cancer activity. [3-6] The pyrazole fraction's pharmacological potential has been demonstrated in several publications in which researchers produced and tested pyrazoles against a variety of biological agents. Our important aim in this study is to find the most effective molecules for diverse pharmacological actions with the fewest side effects. Pyrazole is a pharmacologically active heterocyclic molecule that has been thoroughly documented in the literature. Due to various wide range of biological applications, these compounds are the target of several research investigations. A review of the literature indicated that pyrazole compounds have a wide range of pharmacological activities

Structure of Pyrazole

The pyrazole moiety represents a variety of Pharmacological applications

ऑनलाईन – ऑफ लाईन संमिश्र शिक्षण पद्धतीचे सहअस्तित्व : काळाची गरज

प्रा. बी. एस. निकम

सहयोगी प्राध्यापक, भूगोल विभाग, म.स.गा.कला,विज्ञान व वाणिज्य महाविद्यालय मालेगाव कॅम्प, मालेगाव ता. मालेगाव जि. नाशिक

प्रस्तावना:-

जेव्हा पासून मानवी संस्कृतीचा उदय झाला तेव्हा पासून भारतीय शिक्षण व्यवस्था आपल्या वैविध्यपूर्ण व वैशिष्ट्यपूर्ण गुणवैशिष्ट्ये यांसाठी जगभर प्रसिद्ध आहे. याचाच अर्थ असा की, भारतीय शिक्षणाचा इतिहास हा भारतीय संस्कृतीचा ही इतिहास आहे. काळाच्या ओघात भारतीय समाजात होत असलेल्या आर्थिक, सामाजिक, राजकीय, सांस्कृतिक, विकासाच्या आणि बदलांच्या चौकटीत शिक्षणाचे स्थान आणि भूमिका ही सतत विकसित होत आहेत. प्राचीन भारतात उदयास आलेली शिक्षण व्यवस्था तत्कालिन-समकालीन जगाच्या शिक्षण व्यवस्थां पेक्षा प्रगत आणि उत्कृष्ट होती. अनेक देश-विदेशातील विद्यार्थी शिक्षण घेण्यासाठी भारतात येत होते ते फक्त आणि फक्त येथील गुणवत्ते मुळेच..!! भारतीय शिक्षण व्यवस्थेला तिच्या संक्रमण काळात अनेक आव्हाने आणि समस्यांना तोंड द्यावे लागले आहे. आजही ही आव्हाने आणि समस्या आपल्या समोर 'आ' वासून उभी आहेत, त्यांचा सामना आपल्याला एकमेकांशी करायचा आहे.

शरीराला श्रमाकडे
बुद्धीला मनाकडे
आणि हृदयाला भावनेकडे
वळवणे म्हणजे खरे शिक्षण होय.

असं म्हटलं जातं. म्हणजेच शिक्षण हे साध्य नसून साधन आहे. ज्याद्वारे विद्यार्थ्यांचा सर्वांगीण विकास घडवून आणणे व त्याला समाजातील एक जबाबदार नागरिक म्हणून घडविले जाते. हेच महत्त्वाचे उद्दिष्ट पूर्ण करण्याचे कार्य भारतीय शिक्षण व्यवस्था देशातील शाळा महाविद्याल यामार्फत करताना दिसते.

उद्देश:-

1. कोरोना महामारीचा शिक्षण क्षेत्रावर झालेला परिणाम अभ्यासणे.
2. कोरोना महामारी मुळे अध्ययन व अध्यापन पद्धतीत झालेल्या बदलांचा अभ्यास करणे.
3. ऑनलाइन शिक्षण पद्धती महामारीच्या काळात कशी उपयोगात येते त्याचा अभ्यास करणे.

तथ्य संकलन:-

प्रस्तुत संशोधन लेख हा प्रामुख्याने दुय्यम व प्रार्थमिक साधन सामग्रीवर आधारित आहे. दुय्यम साधन सामुग्रीत प्रामुख्याने विविध मासिके, शासकीय बातम्या, शासकीय संकेतस्थळे तसेच वर्तमान पत्रातील लेख यांच्या साह्याने तथ्य संकलन केले आहे. प्रार्थमिक साधन सामुग्रीत प्रामुख्याने शाळा व महाविद्यालयीन शिक्षण घेणारे विद्यार्थी, शिक्षक व पालक यांच्याशी चर्चा करून संशोधन लेखाशी संबंधित माहिती संकलित केलेली आहे. प्राप्त माहितीच्या स्पष्टीकरणासाठी निबंधात्मक विश्लेषण तंत्राचा अवलंब केलेला आहे.

नासिक जिल्ह्यातील जलसिंचनाचा झालेला विकास" एक भौगोलिक अध्ययन. (महाराष्ट्र)

भगवान श्याम भाऊ निकम

सहयोगी प्राध्यापक, मसगा, कला विज्ञान व वाणिज्य महाविद्यालय मालेगाव कॅम्प. (भूगोलशास्त्र विभाग)

प्रस्तावना:

भूगोलाच्या मूलभूत दोन शाखा आहेत. त्यात प्राकृतिक भूगोल व मानवी भूगोल या मुख्य शाखांमध्ये संपूर्ण पर्यावरणाचा अभ्यास केला जातो.भूगोलाच्या विविध शाखांपैकी कृषी भूगोल ही एक अत्यंत महत्त्वाची शाखा मानली जाते. विषयास अनुसरून पाणी आणि जमीन या दोन्ही पर्यावरणीय घटकांचे अतूट नाते आहे. म्हणूनच भूगोल विषय तज्ञांनी अभि् क्षेत्रीय दृष्टिकोन डोळ्यासमोर ठेवून जलसिंचनाच्या विविध वैशिष्ट्यांचा व विकासाचा वेगवेगळ्या अंगाने अभ्यास करण्याचा प्रयत्न केलेला दिसून येतो.

प्रारंभीच्या काळात पिकासाठी आवश्यक असणाऱ्या पाण्याची गरज पूर्ण करणे एवढा जलसिंचनाचा मर्यादित उद्देश होता. परंतु आधुनिक शेतीत जलसिंचन ही एक गरज झाली आहे.जगातील व भारतातील सर्वच महत्त्वाच्या व मोठ्या नद्यांवर म्हणून धरणे बांधण्यात आली आहेत. हरितक्रांतीचे तत्व स्वीकारल्यानंतर जलसिंचनाचे महत्त्व अधिक वाढले आहे.

सिंचनामुळे शेती व्यवसायाचा विकास होऊन परिसरातील जनसामान्यांना रोजगार व आर्थिक सोबत काही निर्माण होऊ शकते, त्याबरोबरच जलसिंचनामुळे विविध पिकांचे वर्षभर अंमलबजावणी करता येते उदाहरणार्थ, ऊस कापूस भाजीपाला तेलबिया यासारख्या घटकांचा शेती क्षेत्रात अवलंब करता येऊ शकतो. म्हणूनच जलसिंचन हे शेतीसाठी संजीवनी आहे.राज्यात सतत उद्भवणारी पाणीटंचाई परिस्थिती विचारात घेऊन, सर्वांसाठी पाणी टंचाई मुक्त महाराष्ट्र 2019 अंतर्गत **"जलयुक्त शिवार"**अभियान राज्य शासनाने हाती घेतले आहे.डॉ. नॉल्स, यांच्या मते, जलसिंचनामुळे मानवी जीवन सुरक्षित बनते. त्याबरोबरच दर हेक्टरी उत्पादन वाढते. आणि जमिनीचे मूल्य देखील वाढते. म्हणूनच या आधुनिक काळामध्ये जलसिंचनाला अधिक महत्त्व प्राप्त झाले आहे.

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A STATISTICAL ANALYSIS ON POPULATION GROWTH AND FOOD SECURITY IN INDIA

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ABSTRACT: *-*

India is the second most populous developing country in the world and the seventh largest in terms of geographical area as well as the third largest in terms of cultivable land. When India gained independence in 1947, the country had a population of 34 crores. India became a third world country as the country was plundered more and more by the British during the period of after independence. At the time of independence, the country was facing serious socio-economic problems viz. Malnutrition, starvation and half-starved were the main problems that plagued humanity. To solve all these problems, then the rulers adopted the path of planning and accordingly planning started in India in 1951. The country had a population of 36 crore in 1951 and at that time the country's cereals production was 51 million metric tons. That is 143.72 kg of cereals per capita. But then the problem of malnutrition, starvation and half-starved was very high in the country. That is why the strategy was to increase cereals production. Because they wanted to be self-sufficient in cereals production. The main objective of the time was to develop agriculture to increase cereals production and create alternative employment opportunities.

The economic development of a country depends on the income earned by the population. In India, the population is divided into agricultural, industrial and service sectors. 55% of the total population of the country is dependent on agriculture for employment and livelihood while 45% of the population is dependent on industrial and service sectors. Considering the demand for food grains the working population in all sectors of the country needed food grains. So, the growing population also needs to increase cereals production. In the first five decades after independence, India had a high rate of population growth. Planners did not take into account the challenges of the growing population, but the increase cereals production was due to the implementation of agricultural production plans and approaches in the country. However, with the increasing use of land for urbanization and industrialization, the amount of cultivable land has been declining. However, as the population continues to grow at a slower rate, the demand for food grains has increased significantly. As a result, the government will have to ensure food security for the people of the country by producing food grains at affordable prices. For this, long-term measures will have to be taken to increase food grain production in the country.

KEYWORD: - Food security, Cereal production, Malnutrition, Starvation, Half-starved, Green revolution, Agricultural development, regression analysis, estimation.

INTRODUCTION: -

India is the seventh largest country in the world and the second largest in Asia. India also has the second largest population in the world and the third largest country in the world in terms of cultivable land. This is expected to make India one of the world's leading food producers. India is known in the world as an agricultural country. However, India's agricultural sector is lagging behind

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Teacher's Effectiveness in COVID 19

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Abstract:

It is generally agreed that goodness of an Educational Programme to a large extend is depend on a quality of teachers. In COVID 19 situation educational system is criticized by experts and layman also. Some people express that the all educational system is collapsed. Government policies, education institutional perspectives, teachers' role, misuse of technology all these factors are responsible to educational system. Researcher has the curiosity to know the role of teachers on educational system so he wants to understand teachers' effectiveness quality in education. In present study the population was secondary teachers in Malegaon Tehsil. One hundred secondary teachers were selected with the help of simple random sampling. The data was collected by administering TEACHERS EFFECTIVENESS SCALE (TES). This study emphasizes the teachers' effectiveness in information source, motivator, advice and guidance, relationship with pupils, relationship with colleagues, relationship with principals and parents, teaching skills, co-curricular activities, professional knowledge, general appearance and habits in relation to classroom, classroom management and personality characteristics. Role of gender and teaching experience has not impact on teacher effectiveness. Researcher found that score on test is very high so overall teachers' effectiveness is very effective and it is good sign for education.

Introduction:

The process of education is the continuous evolving process; it has various aspects of diversity and extends it reach and coverage since the dawn of human history. Education is the backbone of human development as well as societal development. The progress of any country is depend upon the quality of education. Newness and advanced education is the sign of development. There are various philosophers as well as experts express their views regarding education. According to Mahatma Gandhi education means an all-round drawing out of the best in child and man's body, mind and spirit.

Swami Vivekananda thinks that the education is manifestation of perfection already in man. Like fire in a piece of flint, knowledge exists in the mind. Suggestion is the friction which brings it out.

Rabindranath Tagore says that the highest education is that which does not merely give us information but makes our life in harmony with all existence. Dr. Sarvhapalli Radhakrishanan states that in Indian tradition education is not merely a means of earning for living nor it is only a nursery of thought or a school for citizenship. It is initiation into the life of spirit and training of human souls in the pursuit of truth and the practice of virtue.

J. Krishnamurthy said that education should have following aims-

a) Global outlook
b) Concern for man and environment
c) Religious spirit which includes the scientific temper.

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Work-Family Conflict and Its Impact on Job Satisfaction among Permanent and Temporary Senior College Professor

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ABSTRACT

Objective:- 1. To find out the difference between work-family conflictof permanent and temporary senior college assistant professor. 2. To find out the difference between job satisfactionof permanent and temporary senior college assistant professor. 3. Find out the relationship of work-family conflict with job satisfaction of permanent and temporary senior college assistant professor. **Hypotheses:- 1.** There is a significant difference between work-family conflict faced by the permanent and temporary senior college assistant professor. 2. There is a significant difference between jab satisfaction faced by the permanent and temporary senior college assistant professor. 3. There is a relationship between work-family conflict and job satisfaction of the permanent and temporary senior college assistant professor. **Sample:-**Permanent and temporary senior college assistant professor of Nashik city (Maharashtra State) was taken as population. 100assistant professors were selected for the present study. Among them 50 were Permanent senior college assistant professorand 50 were temporary senior college assistant professor. Age range of assistant professor22 year to 35 year. (Mean = 26.48, SD = 4.10). **Conclusion: 1.** Temporary senior college assistant professors have significantly high work-family conflict than the permanent senior college assistant professor. 2. Temporary senior college assistant professors have significantly high job satisfaction than the permanent senior college assistant professor. 3. Negative correlation found work-family conflict and job satisfaction of the permanent and temporary senior college assistant professor.

Keyword:-*work-family conflict, job satisfaction, permanent and temporary senior college assistant professor.*

Introduction:-

Work and family are the two fundamental elements of an individual's life. Before the establishing of the twenty first century, adult males have been accountable especially for incomes and offering for their family; however with the altering instances as wives, roles as a breadwinner alongside with the husbands accelerated their roles. According to Abbott (2005), the quantity of women working to assist their households is growing day through day when you consider that the 2nd world war. As the ladies are getting extra and extra employment, so has the Work-Family Conflict expanded considerably. Females conflict to accomplish the growing work function alongside with the household responsibilities, which leads to work-family battle (Kaye & Gray, 2007). Work-Family Conflict arises had been husband and spouse each are working in the household (Livingston & Judge, 2008). It impacts ladies extra as in contrast to men. Working ladies journey the burden of two types; one is from work at their offices which is their paid work, and the different from work at their domestic which is unpaid work. If they can't deal with it properly, it can lead to decrease efficiency, which can have an effect on the complete company (Topper, 2007). Armstrong et al. (2015) expressed that Work-Family Conflict has a massive affiliation with job delight and job stress. Job delight is a sturdy predictor of the well-being of an individual. According to Locke (1969), job pleasure can be analyzed by way of the people pick out their jobs in accordance to their likings or disliking. Job delight can be defined as an necessary mind-set having cognitive, affective and behavioural sides of an individual's work and household lives (Judge et al. 2001). Hayat (1998) mentioned that a employee who is happier will continually be a higher employee with greater desirable output, whereas a upset employee will by no means be in a position to operate well. He concluded that joyful employees are the higher workers. It can be stated that if an worker is at ease with the job, he/she can lift out the obligations better, whereas a disappointed worker can't elevate out the responsibilities at his/her best. Ahmad (1996) mentioned that ladies who have to function a variety of roles and duties at one time face very much less job satisfaction.Professionally comfy and dedicated instructors are the crucial element to produce a trained and profitable nation. In the instructing career overall performance of the instructors is exceptionally structured on the stage of delight of the instructors (Jamal, 2017). Job delight of instructors has a key function in improving the first-rate of the training of a country.

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The Relationship between Emotional Intelligence and Happiness among Senior College Students in Nashik District

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Abstract:

Aim : *The purpose of this research was to study the relationship between emotional intelligence and happiness among senior college students in Nashik district.*

Method : *Population in this study was all the students of senior college (Arts, Science and Commerce faculty) in academic year 2021-22 in Nashik district, among whom 140 students were randomly selected as sample. For data collection Mangal Emotional Intelligence Inventory (2004) and Oxford Happiness Questionnaire (1989) tests were administered on them. Pearson correlation coefficient method has been used for data analysis.*

Result: *The results show that there is a positive relationship between emotional intelligence and happiness among senior college students (Arts, Science and Commerce faculty). Besides, students with high emotional intelligence have more happiness. Therefore it is recommended that techniques of increasing emotional intelligence are necessary. There is need to focus on happiness of students and provide happy educational atmosphere.*

Key words: emotional intelligence, happiness.

Introduction:

Happiness is a very important emotion in human life but psychologists mainly clinical Psychologists have focused on human unhappiness (depression, anxiety, emotional disorders, etc.) and neglected the positive aspects of human potential (Seligman, 2003). Most psychologists consider happiness as one of the six basic emotions; basic human emotions are: anger, fear, disgust, surprise, happiness and sadness. Happiness is one of important emotion and it has three essential components are: 1. Positive emotions, life satisfaction, lack of negative emotions, 2. Positive relations with others, having purposeful life, personal growth and 3. Love of others. Studies indicate that different factors such as Socio-economic status, education, social success, social intelligence, cognitive and behavioral and type of personality effect on happiness. Mainly Research related to happiness has been started by work of Kantryl, Brad Bernell and Campbell and Kanrus and Rogers. Since then a lot of literature and articles in different fields related to happiness has been published.

Emotional intelligence is one of the important factor that determine success in life and psychological wellbeing and therefore awareness of emotional literacy is important in today's conflict life. A person who has emotional intelligence gives order and stability to his life in such a way that with high emotional intelligence, the person will experience less negative events in his/her life, based on the results of Richardson and collaborators' research as quoted by Ismaili. Mayer and Saluvy research shows that emotional intelligence is related to mental health components. In this regard, several studies have been conducted on emotional intelligence. For example, Faraqdany in her research between components of emotional intelligence and social adjustment in students. Assadi, also found a meaningful positive relationship between emotional

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ZnS nanostructures: An efficient heterogeneous catalyst for the synthesis of Di (indolyl) methane's (DIMs)

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ABSTRACT

The zinc sulphide (ZnS) nanostructures were synthesized using solvothermal reaction technique at 200°C for 12 h in presence of ethylenediamine (EDA) as a solvent and was characterized by X-ray diffraction (XRD), scanning electron microscopy (FESEM), and transmission electron microscopy (TEM). XRD indicates the formation hexagonal phase of ZnS. FESEM analysis validates the formation of submicron sized structures with spiny rod like morphology with uniform size and smooth surface having size in the range of 150 to 200 nm with the thickness of ~15 nm, at 12 h reaction time. The catalytic performance of nanostructured ZnS as a heterogeneous catalyst was investigated for the synthesis of Di (indolyl) methane's(DIMs) with several substituted aldehydes and indoles under thermal condition affording the corresponding product in excellent yield. Simplicity of operation, high yields, easy work-up, recyclability of catalyst are the major advantages of this work.

Keywords: Di (indolyl) methane's, ZnS nanostructures, aldehydes, recyclability, spectral analysis.

INTRODUCTION

In recent years nanostructured ZnS has attracted much attention because of their properties in the nano forms differ considerably from those of their corresponding bulk material, hence more attention is paid to the synthesis of these nanostructured materials. Wide efforts have been taken for the synthesis of various ZnS morphologies such as nanoparticles [1], nanorods [2], nanobelts [3, 4], nanotubes [5], nanosheets [6], well aligned tetrapods [7], nanowires bundles [8, 9], and hollow spheres [10-14]. It is used preferably in various applications due to high surface to volume ratio of one-dimensional nanomaterial, which has shown the improved performance in the development of devices. ZnS nanoparticles (NPS) have been intensively explored because of their efficient heterogeneous catalyst, low Curie temperature and high coercively [15-17]. The one-dimensional ZnS nanostructures like nanoparticles, nanorods and nanowires have been synthesized by variety methods such as electrochemical deposition, laser ablation, solvothermal method, microwave irradiation, epitaxy, sonochemical method [18-27] etc.Amongst these methods, the hydrothermal/solvothermal method is desirable due to its cost effectiveness, simplicity, high yield and to form a controlled morphology [28-30].

Synthesis of heterocyclic compounds has received considerable attention because of its wide range of pharmacological and biological applications.Di (indolyl)methane's(DIMs)are known as an important class of heterocyclic compounds which are used as bioactive intermediates in pharmaceuticals, agrochemicals and material science[31]. They exhibit a broad spectrum ofbiological activities such as antimicrobial and antifungal [32], antibacterial [33], analgesic and anti-inflammatory [34], antitumor [35], anticancer and antioxidant [36] etc. Recently, Maciejewskaet al [37] used DNA-based electrochemical biosensors to demonstrate that bis(5-methoxy-3-indolyl) methane considerablyreduces the growth of cancer cell lines such as HOP-92 (lung), A498 (renal), and MDAMB-231/ITCC (breast).Tris(indolyl)methane's (TIMs) found in bacteriaserve as bacterial metabolic and cytotoxic agents.These compounds for centuries form the basis for many common drugs such as Morphine (analgesic), Captopril (treatment of hypertension) and Vincristine (cancer chemotherapy).The condensation of aldehydes and ketones with indole is an important reaction in Organic Chemistry which afford di (indolyl)methane's. Various methods have been employed to effect this transformation using variety of reagents such as protic acids [38], silica sulfuric acid (SSA) [39], silica supported $NaHSO_4$/amberlyst-15[40] and Lewis acids, lithium perchlorate [41], cupric fluoroborate [42] and silicotungustic acid [43]. Recently, benzoic acid inwater [44], sodium dodecylsulfate (SDS) [45] as surfactant in water, oxalic acid combination with N-acetyl-N, N, Ntrimethylammoniumbromide (CTAB) [46] as surfactant in water, metal triflate in ionic liquid [47], Fe (III) saltsin ionic liquid [48] and ionic liquids have been reported as effective reagents for this transformation. Most of the reported methods suffer from various disadvantages such as prolonged

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Synthesis of a Novel5, 7-Dichloroto-2-(3, 4-Dimethoxyphenyl)-8-Hydroxy-4*h*-Chromen-4-One, its Characterization and DFT Study

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Abstract: ***Flavonoid Compound is one of the most important biologically active heterocyclic compounds. In view of this, a flavone; 6, 8-dichloro-2-(3, 4-dimethoxyphenyl)-4H-chromen-4-one (DDP) has been synthesized, characterized by 1H NMR, FT-IR and mass spectral analysis. It is studied by using density functional theory (DFT) at B3LYP/6311++G (d, p) basis set. The geometry of the DDP molecule has been optimized by using B3LYP/6-311++G (d, p) basis set and structural parameters on bond lengths and bond angles has been discussed. The FT-IR, ^{1}HNMR and mass spectra of the title compound has been carried out by experiment. Highest Occupied Molecular Orbital and Lowest Unoccupied Molecular Orbital analysis and various quantum chemical parameters are calculated and discussed for the better understanding of behavior of the this molecule.***

Keywords: Flavone, 1HNMR, FT-IR, (DFT) at B3LYP/6311++G(d,p) basis set and Chromen

1. Introduction

Chalcones are synthesized by different methods among these are, Claisen-Schmidt condensation [1], Suzuki coupling reaction [2], Friedal Crafts acylation using α, β unsaturated acid chloride in the presence of Lewis acid [3-5], Claisen-Schmidt condensation under ultra sound irradiation [6]. Naturally occurring α, β unsaturated compounds are synthesized in a single step by Heck reaction in which alkenes react with aryl halides in presence of metal complexes [7]. Dalvi et al. [8] have reported the synthesis of 1-(2-hydroxy-phenyl)-3-piperidine-1-yl-propenones by ultrasonic irradiation. The Claisen-Schmidt condensation is the basic reaction for the synthesis of α, β unsaturated compounds in which boronic acid containing aromatic ketones condense with aromatic aldehyde in presence of soluble alkaline hydroxide [9]. Chromones are synthesized by oxidative cyclisation of α, β unsaturated compounds. The reagents are SeO_2 in amyl alcohol, sodium hypobromite, and catalytic iodine in DMSO and washed it with copper chloride.

Doshi et al. carried out [10] synthesis of chromones derivative by oxidative cyclisation of α, β unsaturated compounds using DMSO/I_2. α, β unsaturated compounds are oxidatively cyclized [11, 12] to flavanols by Algar-Flynn-Oyamada reaction. Ballesteros and co-workers reported [13] synthesis of chromones derivatives by oxidative cyclisation of α, β unsaturated compounds using SeO_2 in DMSO. Auwers synthesized [14] a series of organic reactions forming flavanol from a coumarone.2-acetoxyacetophenones in presence of base forms 1, 3-diketone which upon cyclisation results into flavones [15, 16]. Reactions of o-hydroxyaryl ketones with aromatic anhydrides form flavones or isoflavones [17-18].

The chemistry of α, β unsaturated compounds has generated intensive scientific studies throughout the world. Especially interest has been focused on the synthesis and biodynamic activities of α, β unsaturated compounds. The name "Chalcones"was given by Kostanecki and Tambor [19]. These compounds are also known as benzalacetophenone or benzylidene acetophenone. In α, β unsaturated compounds, two aromatic rings are joined by an aliphatic three carbon chain. α, β unsaturated compounds bears a very good synthon so that variety of novel heterocycles with good pharmaceutical profile can be designed α, β unsaturated compounds are unsaturated ketone containing the reactive keto-ethylenic group –CO-CH=CH-. These are coloured compounds because of the presence of the chromophore-CO-CH=CH-, which depends in the presence of other auxochromes. Keeping in mind all these pharmalogical activity, synthetic utility as a synthon, we have synthesized the (2*E*)-1-(3, 5-dichloro-2-hydroxyphenyl)-3-(3, 4-dimethoxyphenyl) prop-2-en-1-one and from this we have synthesized the DDP.

2. Reaction Scheme

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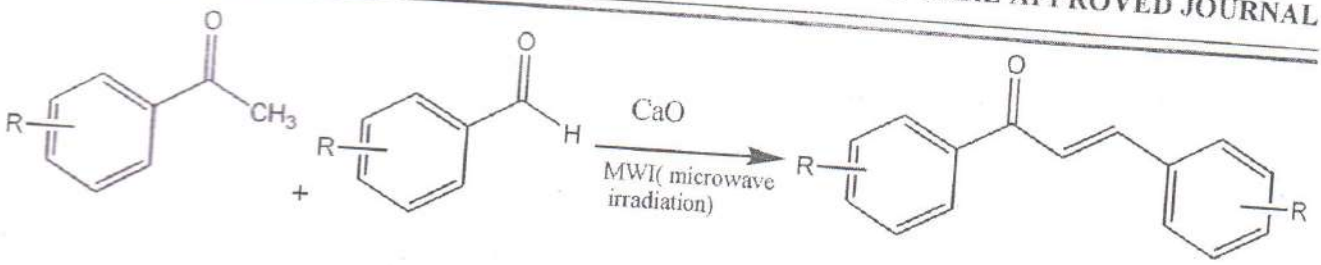

Fig. 2.

The reaction is carried out by domestic microwave (600 W, 2450 MHz). Substituted benzaldehyde (0.01 mol) and substituted acetophenone (0.01 mol), and anhydrous potassium carbonate (K_2CO3), were the mixture to from thick paste. The paste was air dried and the residual mass was subjected to microwave irradiation for 3 to 5 minutes. Another time of reaction the contents were dissolved in rectified spirit. When the inorganic materials was filtered off and filter another time concentration in vacuum was left overnight to get analytical sample of the chalcones in 80-90% yields, Fig. (3).

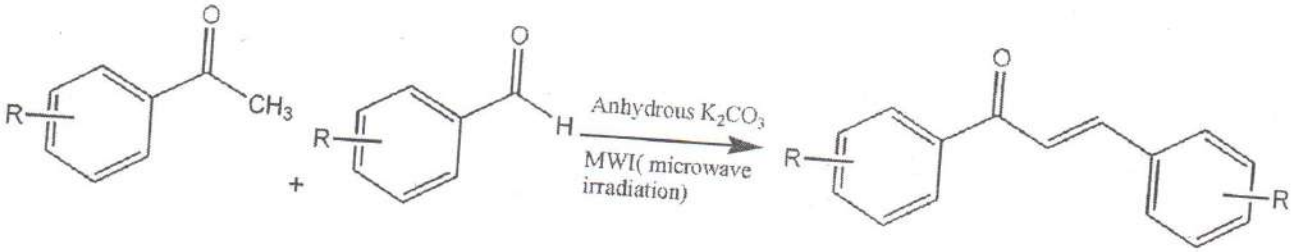

Fig.3.

The solution of acetophenone (0.01 mole) and Aromatic aldehyde (0.01 mole) in rectified spirit (5 ml) taken in a 100 ml conical flask, then 5 to 7 gram of inorganic catalyst was added. Then the reaction mixture was mixed and the solvent material was dried. In an air and irradiated inside the microwave oven. Then the progress the reaction was monitored by TLC. Another time the completion of the reaction the product was cooled, then mixture was purified and recrystallized.

When the 2 gram of neutral alumina (1 mmol) & ammonium chloride (0.5 mmol), the mix was mixed thoroughly with the help of mortar board and the mixture was taken in 10 ml measuring cup. The solid mix was irradiated under a oven (480 W, 3 min) After completion and reaction monitored by TLC, then reaction mixture cooled at room temp, poured in rectified spirit, an d filtered. Another time disappearance of the solvents corresponding condensation products were recovered in crystalline forms, Fig. (4).

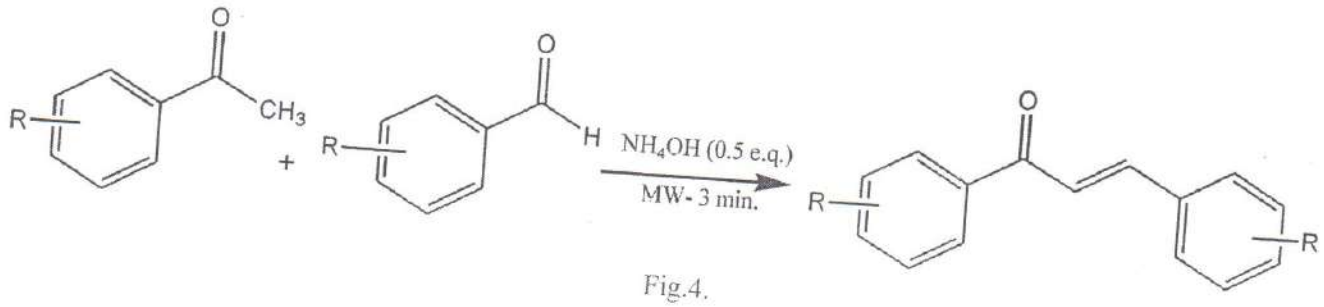

Fig.4.

Equimolar quantities of substituted acetophenone (2 mmol) and substituted aldehyde (2 mmol) and sulfate Titania (0.15 gram) were transfer to the mixture in a 50 ml beaker and closed with the lid. This mixture was subjected to 2-4 min at 650 W for microwave irradiation, and then the another time of reaction, was added to 20 ml dichloromethane followed by simple filtration. Then filtrate was concentrated and the obtained solid was purified by recrystallization, Fig. (5).

5·6+3·5

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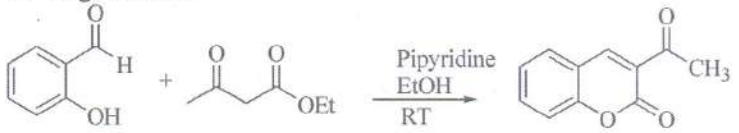

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A brief review on Triazole and its Pharmacological Application

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[1,2,3]PG Dept. of Chemistry, MGVs Maharaja Sayajirao Gayakwad College Malegaon Camp Malegaon Dist. Nashik MS-423105, India

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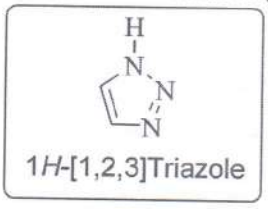
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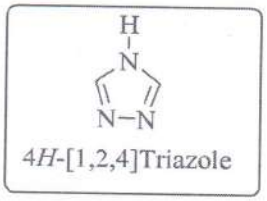
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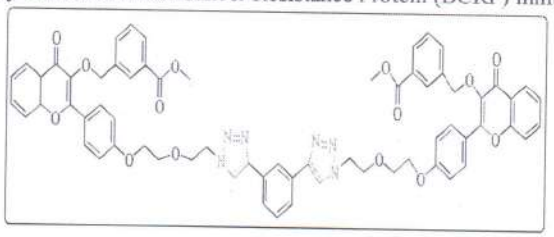

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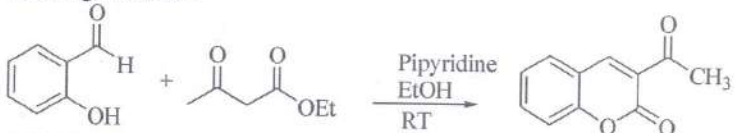

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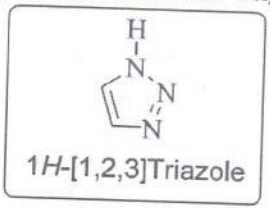
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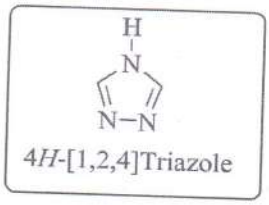
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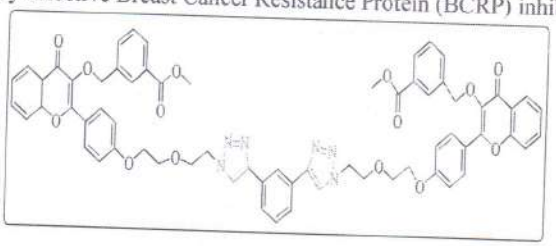

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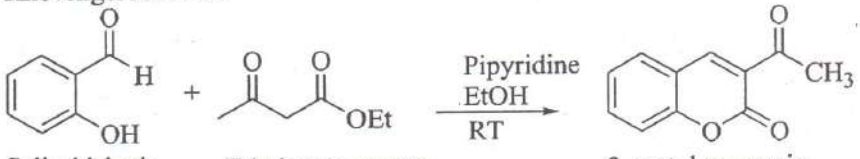
II. SYNTHESIS

Savita Patil *et al*[31] reported the synthesis of 3-Acetylcoumarin P was prepared from salicylaldehyde and ethyl acetoacetate in piperidine with present or absent of Ethanol for 2 to 6 hours at room temperature through Knovengel reaction.



Salisaldehyde Ethylaceto acetate 3-acetyl coumarin

Shubhangi S.Soman et al [41] have synthesized 3-acetyl-7 hydroxy coumarin from 2,4-dihydroxy benzaldehyde and ethyl aceto acetate in catalytic amount of piperidine in ethanol with good yield.

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Combined Experimental and Computational Exploration of 4-(4-Bromophenyl)-6-(3,4-dimethoxyphenyl)-5,6-dihydropyrimidin-2(1H)-one

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ABSTRACT

This work deals with the synthesis of 4-(4-bromophenyl)-6-(3,4-dimethoxyphenyl)-5,6-dihydropyrimidin-2(1H)-one by condensation of 1-(4-bromophenyl)-3-(3,4-dimethoxyphenyl)prop-2-en-1-one with urea. The structure of the synthesized compound was established by FT-IR, ^{1}H NMR, ^{13}C NMR and HRMS spectral techniques. For the synthesized compound the density functional theory (DFT) calculations at the B3LYP level were performed using Gaussian 03(W) package. The optimized geometrical parameters, frontier molecular energies, electronic parameters and global chemical reactivity descriptors have been calculated by the DFT/B3LYP/6-311++G(d,p) level. The structure was characterized as a minimum in the potential energy surface using DFT. The molecular electrostatic potential (MEP) and thermodynamic properties were also investigated using the same level of theory. In addition, the vibrational wavenumbers of the title compound were calculated and the scaled values were compared with the experimental FT-IR spectrum. The result shows a good correlation between computed and experimental frequencies. The effect of different solvents on electronic parameters and global chemical reactivity descriptors were also examined. In solvents, no significant change was observed on the energy gap and global reactivity descriptors of the title molecule.

KEYWORDS: FT-IR, NMR, DFT, B3LYP, MEP.

INTRODUCTION

Heterocyclic compounds are abundant in nature and are important for survival because structural subunits of heterocycles can be found in many natural products including vitamins, proteins, and antibiotics. In synthetic organic chemistry, a feasible approach for the synthesis of such molecules is of great significance. Pyrimidine is a well-known heterocyclic compound possessing two nitrogen atoms in positions 1 and 3 of a six-member ring. Pyrimidine derivatives have a significant therapeutic noticeability as compared to other heterocycles and has far genetic and therapeutic implications. Pyrimidine derivatives have a wide spectrum of biological and pharmacological properties which include antimicrobial [1,2], antiviral [3], antihypertensive [4], anticancer [5-7], anti-inflammatory [8-10], antitubercular [11,12], and antihypertensive [13,14] activities. Due to their intriguing biological activity and medicinal potential, these compounds have received a lot of attention recently.

In recent years DFT-based theoretical computations have been used to determine several structural parameters of synthetically and pharmacologically significant organic compounds. The bond lengths, bond angles, dihedral angles, UV-visible spectra, IR and Raman frequencies, FMO energies, molecular electrostatic potential, and other properties of molecules can be predicted using DFT calculations [15-28].

In the current investigation, we report the synthesis as well as various structural and quantum chemical properties of the title compound i.e., 4-(4-bromophenyl)-6-(3,4-dimethoxyphenyl)-5,6-dihydropyrimidin-2(1H)-one.

EXPERIMENTAL

All the chemicals needed for synthesis were obtained from a commercial source (AR grade with purity >99%) and used without further purification. Melting points were determined in an open capillary tube and were uncorrected. FT-IR spectra were recorded on Shimadzu FT-IR spectrometer using potassium bromide pellets. ^{1}H NMR and ^{13}C NMR spectral analysis was carried on Bruker Avance II 500 MHz spectrometer using $CDCl_3$ as solvent and TMS as internal standard. The reaction was monitored by thin layer chromatography (TLC, Merck) using aluminium sheets coated with silica gel using n-hexane and ethyl acetate as an eluent.

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PEG-400 mediated synthesis, computational, antibacterial and antifungal studies of fluorinated pyrazolines

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ABSTRACT

The present study explores a detailed comprehensive study on the computational, antibacterial and antifungal studies of pyrazoline derivatives. Four chalcones and corresponding 5-aryl-3-(4-fluorophenyl)-1-phenyl-4,5-dihydro-1*H*-pyrazoles were synthesized in PEG-400 and the structure of the pyrazolines were affirmed by IR, ^{1}H NMR, and ^{13}C NMR spectral techniques. The PEG-400 mediated synthesis of pyrazoline derivatives is effective, eco-friendly, and straightforward. The molecular structure, optimized geometrical parameters, UV and vibrational assignments were established by the density functional theory (DFT); the Becke-3-Lee-Yang-Parr (B3LYP) functional with 6-311++G(d,p) basis set. The absorption energies, excitation energy, oscillator strength, and transitions of four pyrazolines were computed using time-dependent density functional theory (TD-DFT) at B3LYP/6-311++G(d,p) level of theory for B3LYP/6-311++G(d,p) optimized geometries. The FMO study affirms that the molecule FPMP has the lowest bandgap with maximum charge transfer. A good correlation between theoretical and experimental UV and vibrational findings was obtained. Various global descriptors like were electronegativity, absolute hardness, global softness, global electrophilicity, chemical potential, and the maximum number of electrons transferred (Nmax) were calculated. The phenyl ring attached to nitrogen is likely to react with electrophiles, as shown in a molecular electrostatic potential surface analysis. The antibacterial screening was performed against two Gram-positive bacterial strains namely *S. aureus* and *B. subtilis* and two Gram-negative bacterial strains namely *E. coli* and *P. vulgaris*. On the other hand, the antifungal evaluation of the synthesized pyrazoline derivatives was carried out against two fungal strains namely *A. niger* and *C. albicans*.

1. Introduction

Pyrazolines are nitrogen-containing five-membered heterocyclic compounds that are notable and important. Pyrazoline is an essential synthon in medicinal chemistry, and it has been influential in the synthesis of heterocyclic compounds. Many pyrazoline scaffolds have been reported to have a wide range of biological properties, which has sparked a lot of interest in recent years [1,2]. They serve as a structural basis for the development of a variety of biologically active compounds. A reaction of chalcones with hydrazine/hydrazine derivatives is one of the simplest ways to synthesize pyrazolines [3,4]. Chalcones and related compounds exhibit wide spectrum of biological activities [5–8]. The outstanding pharmacological profile of pyrazole hybrids includes anticancer [9], antimicrobial [10,11], anticonvulsant [12], antimycobacterial [13], analgesic [14], anti-inflammatory [15], antidepressant [16], and antiamoebic activities [17]. The chalcones and pyrazoline derivatives have been investigated in the past for the exploration like photophysical characteristics, selective fluorescent chemosensor applications, optical properties, DFT study, etc. [18–24]. Some notable examples of pyrazolines as pharmacological agents are depicted in Fig. 1. The pyrazoline derivative 1 and 5 are reported to show excellent anti-inflammatory activity in disease treatments. Compound 2 has been linked to a very good analgesic property. On the other hand, pyrazolines 4 and 5 are fantastic anticonvulsant and antidepressant candidates respectively.

DFT calculations are reliable and useful for determining the structural

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15. Need to Rethink the Policy on Eco-Friendly Nature of Electric Vehicles

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Abstract

In recent years, the number of electric vehicles on Maharashtra's and India's highways has rapidly increased. It helps to minimize global warming and climate change by reducing pollution. However, this is only possible if the energy used to power these vehicles originate from renewable sources like solar, wind, geothermal, or water. Otherwise, there is a chance that these things will persist on paper, causing greater environmental damage. So, owing to the unavailability of significant benefits, governments should reconsider their e-vehicle policies.

Keywords: Electric vehicles, battery, fossil fuels, global warming, climate change.

Introduction

Many cities in Maharashtra have a large number of electric vehicles on the road. Two-wheelers and four-wheelers with green number plates are not uncommon on the roadways [1]. In the current circumstances, there are two reasons to use electric vehicles. One is the massive hike in petrol and diesel prices, in such situations, electric vehicles are cost-effective [2]. Their maintenance is also not remarkable. The second reason is that these vehicles are labelled as "eco-friendly". These vehicles are used by a large number of people who are worried about the environment. At the same time, another significant aspect of these vehicles is that their use will contribute to the reduction of global warming [3]. These electric vehicles, unlike traditional vehicles, will not emit carbon dioxide. As a result, these will be truly "green vehicles," allowing us to avoid the problem of global warming and climate change [1, 4].

The rationale for moving towards electric vehicles is very straightforward and clear, including factors such as controlling rising air pollution and energy security challenges [5]. Although there are still many hurdles in the way of the widespread adoption of electric vehicles,

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दलित साहित्याचे देशीपण

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दलित साहित्याचे वेगळेपण :

साहित्याचे वेगवेगळे विभाग करतांना आपल्याला दलित साहित्य हा एक वेगळाच विभाग करावा लागतो. १९२० च्या दशकात डॉ.बाबासाहेब आंबेडकर यांनी वैचारीक दलित साहित्य निर्माण करण्यास प्रारंभ करुन दलित साहित्याचे दालन उघडले. त्यानंतर अव्याहतपणे कथा, कविता, नाटक या सर्व प्रांतात दलित साहित्यिकांनी मोठी कामगीरी बजावलेली दिसते. विपुल संख्येने पुस्तके प्रसिद्ध झालेली दिसतात आणि त्यांच्या जीवनविषयक जाणिवा अधिकाधिक तीव्र झालेल्याही दिसतात. या साहित्याचे वेगळेपण बघतांना खालील पाच मुद्यांचा विचार करावा लागतो.

१) व्यक्तिगत पातळीवरील व्यक्तिच्या वेदना व दु:ख :

दलित साहित्याचे वेगळेपण सांगणारे सर्वात महत्त्वाचे मुख्य वैशिष्ट्य म्हणजे यातील बहुतांशी साहित्य व्यक्तिगत अनुभवांवर आधारीत आहे. दलित समाजाला भोगावी लागलेली दु:ख आणि वेदना याचे चित्रण या साहित्यामध्ये मोठ्या प्रमाणावर केलेले दिसते. इतर समाजाबरोबर वावरतांना मिळालेली हिनतेची वागणूक, जगण्यासाठी करावा लागलेला प्रचंड संघर्ष आणि त्यातून आलेली न्यूनगंडाची भावना या गोष्टी दलित साहित्यात मांडलेल्या दिसतात.

२) विद्रोहाची भावना आणि हक्काची जाणीव :

दलित साहित्याचे दुसरे वैशिष्ट्य म्हणजे वर्षानुवर्षे करीत आलेल्या संघर्षातून मनामध्ये निर्माण झालेली विद्रोहाची भावना आणि त्यापाठीशी आलेली हक्काची जाणीव याचे चित्रण होय. खूप मोठ्या कालावधीनंतर मनात साठवलेल्या भावनांचे उद्दिपन विद्रोहाचे विचार मांडून व्यक्त केलेले दिसते. त्या सोबतच आम्ही देखील आमच्या मनाप्रमाणे जगू ही हक्काची भावना जागृत झालेली दिसते. आपले साहित्य आपले समाजबांधव वाचतील व त्यांनाही लढण्याची प्रेरणा मिळेल असा एक दृष्टीकोन आणि इतर समाजातील लोकांनाही आता दलित समाज संघर्षासाठी सज्ज झाला आहे याची कल्पना येईल हा दुसरा दृष्टीकोन या साहित्यनिर्मिती पाठीशी आहे.

३) सामाजिक आशय :

दलित साहित्यामध्ये दु:ख, वेदना, दलितांचे प्रश्न, जगण्याच्या समस्या, शिक्षणाच्या गैरसोयी यांचे वर्णन आलेले असल्यामुळे या संपूर्ण साहित्याला सामाजिक साहित्याचे मूल्य प्राप्त झाले आहे. दलित समाजाच्या भवितव्याचा उहापोह ह्या संपूर्ण साहित्यात झालेला दिसतो.
'शिका, संघटीत व्हा आणि लढा' या बाबासाहेबांच्या मूलमंत्राचा उच्चार ठिकठिकाणी दलित साहित्यिक ज्यावेळी करतात त्यावेळी त्या पाठीशी सामाजिक आशयाची भावना परवडपणे असते.

४) प्रस्थापित मुद्यांना आव्हान :

वर्षानुवर्ष चालत आलेल्या चालीरिती, रुढी, परंपरा यामुळे स्वत:च्या हक्कांचे जे दमन झाले आहे त्या भावनेतून दलित साहित्यात सातत्याने प्रस्तापित मूल्यांना आव्हान दिलेले दिसते. ''माझे आहे ते मला मिळालेच पाहिजे'' ही मागणी करणे म्हणजेच प्रस्थापित मूल्यांच्या विरुद्ध संघर्षाला उभे राहणे होय.

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ग्रामीण साहित्यात प्रवाह निर्माण होण्याची कारण परंपरा

प्रा.डॉ.अरूण पाटील
मराठी विभाग प्रमुख
महाराजा सयाजीराव गायकवाड महाविद्यालय, मालेगोंव कॅम्प जि. नाशिक

१९४७ साली भारत स्वतंत्र झाला. स्वातंत्र्यापूर्वीच्या समस्यांनी रुपांतर केले. इंग्रजांशी लढण्याचे कारण उरले नाही. साहित्याचा मार्ग काहीसा बदलला. ग्रामीण भाग सुधारणाकडे वाटचाल करु लागला. काही दशके उलटली आणि १ मे १९६० रोजी संयुक्त महाराष्ट्राची स्थापना झाली. महाराष्ट्र राज्याची निर्मिती ही एक अनन्यसाधारण घटना बनली. स्वतंत्र महाराष्ट्राचे पहिले मुख्यमंत्री म्हणून 'यशवंतराव चव्हाण' यांची निवड करण्यात आली. या राजकीय घडामोडीनंतर यशवंतराव चव्हाण यांच्या नेतृत्वाखाली अनेक सामाजिक, शैक्षणिक, सांस्कृतिक घडामोडी झाल्या. त्यांचे स्पष्ट आणि दुरगामी परिणाम साहित्यावर खास करुन 'ग्रामीण साहित्यावर' झाले. काळाची पाऊले ओलांडून स्वातंत्र्यानंतर पंचवार्षिक योजनेची स्थापना झाली. त्याचेही पडसाद साहित्यावर उमटले. शिक्षणाची गंगा वाडी, वस्त्यांवर आली. खेड्यापाड्यापर्यंत पोचली. यशवंतराव चव्हाण यांच्या दूरदृष्टीने महाराष्ट्र विकासाकडे जोमाने पाऊल टाकू लागला. शैक्षणिकदृष्ट्या सुदृढ होऊ लागला. बहुजन समाजाची शैक्षणिक भूक वाढू लागली. सर्वसामान्यांना देखील वैचारिक भान येऊ लागले. या साऱ्या गोष्टी देखील साहित्यावर परिणाम करणाऱ्या ठरल्या. एव्हाना ग्रामीण साहित्यिकांची दुसरी पिढी आणि तिसरी पिढी देखील कार्यरत झाली. मळलेली वाट सोडून या नव्या पिढ्यांनी आपले साहित्य वेगळ्या पद्धतीने आणि वर्तमानाला अनुसरुन लिहिण्याचे महत्त्वाचे कार्य केलेले दिसते.

या संदर्भात अभ्यासक वासुदेव मुलाटे म्हणतात, ''स्वातंत्र्योत्तर काळात एकूण साहित्यामध्येच काही परिवर्तने आली. साहित्याकडे बघण्याचा दृष्टीकोन बदलला. मराठी साहित्याच्या संदर्भात जरी बघायचे झाले तरी ही बाब लक्षात येण्यासारखी आहे. विशेषत: स्वातंत्र्यानंतरच्या १५-२० वर्षांच्या काळात मराठी साहित्यात काही नवीन प्रवाह निर्माण झाले आणि हे सर्व एकाएकी घडले नाही. या नवीन प्रवाहांच्या पाठीमागे काही एक वैचारिक बैठक आहे. ही वैचारिक बैठक त्या-त्या सामाजिक चळवळीतून त्यांना प्राप्त झालेली आहे.''[१]

साहित्याचा हा प्रवाह कालानुरुप पुढे सरकत असताना विविध प्रकारची स्थित्यंतरे झालेली आपणास दिसतात. समाज घडत राहतो. ज्या विविध क्षेत्रात आपल्याला स्थित्यंतरे झाली त्याचा आढावा पुढीलप्रमाणे-

१) राजकीय स्थित्यंतर -

स्वतंत्र महाराष्ट्राची स्थापना होण्यापूर्वीपासूनच राजकीय स्थित्यंतराची अवस्था सुरु झालेली आपल्याला दिसते. १९४८ साली महात्मा गांधी यांची हत्या झाल्यानंतर ब्राह्मण वर्गाविरुद्ध या घटनेचे जोरदार पडसाद उमटले. उच्चवर्णीयाची मक्तेदारी संपविण्याचे काम सर्वसामान्यांनी हातात घेतले. 'ब्राह्मण समाज' राजकारणापासून दूर गेला. राजकारण केल्यास सामाजिक समस्या सुटू शकतील असा विश्वास बहुजन समाजाला वाटू लागला. त्यातून राजकारणाची सूत्रे बहुजन समाजाच्या हाती दिली. गाव पातळीवरुन शहरापर्यंत बहुजन समाजाने आगेकूच केली.

१९६० एकोणीसशे साठमध्ये मुख्यमंत्री यशवंतराव चव्हाण यांचा दूरदृष्टीपणा या साऱ्या घडामोडीमध्ये जाणवत राहिला. हळूहळू राजकारण बदलत गेले. राखीव जागांचे प्रश्न निर्माण होऊन मागील ७० वर्षामध्ये राजकारणाने खूप मोठे स्थित्यंतर स्वीकारले.

२)औद्योगिक स्थित्यंतर :-

१९५१ पासून भारतीय आर्थिक नियोजनास प्रारंभ झाला. कृषीप्रधान देश म्हणून भारताकडे बघितले जात असल्याने पहिली पंचवार्षिक योजना शेती विकासास प्राधान्य देणारी होती. त्यामुळे कृषी क्षेत्रात हरित क्रांती झाली. शेतीपुरक व्यवसायाचा विकास झाला.

दुसऱ्या पंचवार्षिक योजनेत औद्योगिक विकासास प्राधान्य देण्यात आले. या कालखंडात महाराष्ट्रात साखर कारखान्यांची निर्मिती मोठ्या प्रमाणावर झाली. १९६० पर्यंत महाराष्ट्राला १४ साखर कारखाने होते. त्याची संख्या १९७० पर्यंत ३० एवढी झाली. साखर कारखाने हे ग्रमीण भागात अनेक सुधारणा झाल्या. लोकांच्या हाती पैसे

Observance and Violation of Cooperative Principle in *The Sunset Club*

Rohidas Nitonde & Chandrakant R. Patil

Abstract:

Cooperative Principle in communication, as advocated by H P Grice, involves four maxims viz. quantity, quality, relation and manner. These maxims are utilized by the characters in a novel in conversations that need to be studied carefully from the perspective of pragmatics. The reader arrives at convincing interpretation considering the context, speech situation, speech event, and the actual utterances having locutionary, illocutionary and perlocutionary dimensions. In the novel *The Sunset Club* by Khushwant Singh, one comes across varied and typical conversations of the characters in which certain maxims are either observed or violated for specific purposes. The three main characters of the novel are Boota, a Sikh; Baig, a Muslim; and Sharma, a Hindu. When they form the Sunset Club, they are in the evening of their lives. The characters either observe or violate certain maxims to fulfill their communicative goals. The observance and violation of certain maxim is an inevitable part of the Cooperative Principle. It is not true that the violation of any maxim amounts to arrogance or impoliteness of the interlocutors. The present article is devoted to the study of observance and violation of the Cooperative Principle.

Keywords: Cooperative Principle, Maxims, Quantity, Quality, Relation, Manner, Observance, Violation, Locutionary, Illocutionary, Perlocutionary, Interlocutors, Intentionality, Communicative Goals

Introduction

The present article offers an analysis of interesting conversations from Khushwant Singh's last novel, *The Sunset Club* (2010), in which romantic experiences of the three retired old friends residing in Delhi's posh localities are depicted. Here, an attempt is being made to elucidate the selected pieces of conversations of the characters involving either the observance or violation of certain maxims of the Cooperative Principle depending on the context. It is the contextual knowledge of the talk exchanges of the characters that play a pivotal role in interpreting the novel from pragmatics. The strategy of code-mixing and code-switching adopted by the novelist plays a significant role in the observance and violation of certain maxims. The deictic expressions are inseparable parts of the maxims utilized by the characters.

Critical Review of the novel 'The Sunset Club.'

In the 'Apologia' of the novel *The Sunset Club,* it has been acknowledged by Khushwant Singh himself, that he started writing this novel at the age of ninety-five, and he was not sure

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Pragmatics: A New Trend to Study a Novel 'Train to Pakistan'

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Abstract:
It is understood from the history of developmental stages of language that pragmatics as a separate branch of linguistics came in limelight in 1930s. Assertive Speech Acts, Cooperative Principle and Politeness principle are major functions in the communication. Particularly, H. P. Grice highlighted four maxims viz. quantity, quality, relation and manner in terms of Cooperative principle. These maxims are utilized by the characters in a novel in the form of conversations which need to be studied carefully from the perspective of pragmatics so that the reader arrives at convincing interpretation considering the context, speech situation, speech event and the actual utterances having locutionary, illocutionary and perlocutionary dimensions. In the novel Tran to Pakistan by Khushwant Singh, one comes across varied and typical conversations of the characters in which certain maxims are either observed or violated for specific purposes. Jugga, Nooran, Hukum Chand, Iqbal Singh and Malli are the main characters of the novel. The characters either observe or violate certain maxims to fulfill their communicative goals. The observance and violation of certain maxim is an inevitable part of the Cooperative Principle. It is not true that the violation of any maxim amounts arrogance or impoliteness of the interlocutors. The present article is devoted to the study according to new trends in Pragmatics dealt with observance and violation of the Cooperative Principle.

Key Words: *Assertive Speech Acts, Cooperative Principle, maxims, quantity, quality, relation, manner, observance, violation, locutionary, illocutionary, perlocutionary, interlocutors, intentionality, communicative goals etc.*

Introduction: Theory of Co-operative Principle

During 1950s and 1960s, H. P. Grice came on the scene of pragmatics who threw light on the element of 'meaning' in ongoing conversations. One of Grice's influential contributions to the study of human communication and language is his theory of meaning. He wrote a very mind blowing article on 'meaning' in the year 1948 which proved to be a mile stone for his further discovery of Cooperative Principle and its four maxims such as quantity maxim, quality maxim, manner maxim and relation maxim. He held that the conversational partners should contribute to the ongoing conversation as is required for current purpose of communication neither more nor less. He distinguished between natural meaning and non-natural meaning.

The present article offers an analysis of interesting conversations from Khushwant Singh's well-known novel Train to Pakistan (1956) in which romantic experiences as well as harsh and horrific events are depicted. Khushwant Singh also talking in the similar manner unlike other partition novels, the major focus of the novel is not the killings and destruction. It is the feelings of love and compassion that we find in the novel Train to Pakistan. Here, an attempt is being made to elucidate the selected pieces of conversations of the characters involving either the observance or violation of certain maxims of the Cooperative Principle depending on the context. It is the contextual knowledge of the talk exchanges of the characters that play a pivotal role in interpreting the novel from the perspective of pragmatics. The strategy of code mixing and code switching adopted by the novelist plays a significant role in the observance and violation of certain maxims. The deictic expressions are inseparable parts of the maxims utilized by the characters.

Critical Review of the novel 'Train to Pakistan'

Khushwant Singh, as a prolific novelist has freely narrated the true realities and incidents of the time of Partition without any partiality, emotional attachment and the village Mano Majra was the center of all happenings and totally silent. The important thing is the people of Mano Majra are very happy and sound. They don't have any jealous or hatred towards anyone. Everyone in the village was busy in their work and the priests and Mullah's were also busy in the praying. In addition to good brotherhood among Hindu, Muslims and Punjabi Sikhs people, eminent critics Rao and Rani (2004) state that:

> Train to Pakistan is the touching tale of a village, Mano Majra, struck down by the hate and the violence that came with the division of the subcontinent when a train-load of massacred men, women and children arrive in the village. It reveals with pitiless precision a picture of the bestial horrors enacted on the Indo-Pakistan border during the days of 1947. The predominant features of the novel are its stark realism, its absolute fidelity to the truth, and above all, its trenchant exposure of the partition horrors. (Rao and Rani 32-33)

Analysis from the Perspective of Pragmatics

Pragmatics is a new branch of linguistics which mainly deals with the human utterances influenced by the respective societies in the world and is very useful to recognize the intended meaning of speaker as understood by the hearer in the given speech situation and speech event. Since a fictional writer makes use of dialogues in his writing, pragmatics becomes a handy tool to interpret intended meaning. In this article, Khushwant Singh's novel, viz. Train to Pakistan (1956) is analyzed against the background of the theory of speech acts, cooperative principle and politeness principles. The analysis of selected

Racism and Cast Discrimination in Afro-American Literature

- Dr. Chandrakant Ramdas Patil, Malegaon, Nashik

Abstract :

In America, racism and cast discrimination spread around the country especially in the South. Black people were treated rudely by white Americans. They did not have full rights as the white citizens. Due to these facts, many black writers responded with a set of literary works and used their skills in writing to reflect on their life. Thus, they have reached an artistic level and produced creative works. African American literature involves poetry and slave narratives. The Civil Rights and Black Arts Movements played great roles in the development of African American writing. Nowadays, African American literature constitutes a basis in the literature of the United States. This paper is an attempt to give a clear view to the reader on how African American literature developed and changed throughout time.

Key wards : Cast, Racism, Black people's rights, Discriminations, Black Movement.

Introduction :

African American literature has become an inevitable part of American literature and culture. It is only with the significant representation of African American literature that American society stands to be cleansed from the problem of racial discrimination. African American literature was written by Americans of African descent. They began writings in the pre-Revolutionary War period. African American writers have engaged in a creative, if often contentious, dialogue with American letters. African American literature has examined the problem of racial discrimination in all its philosophical, existential and epistemological aspects. It has traveled from mid 17th century with

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EXPLORATION OF PHYTOVETRINARY MEDICINES FROMMALEGAON OF NASHIK DISTRICT

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Abstract: The present investigation highlights some commonly used phytoveterinary medicines for animal's ailments. This investigation carried out during January to September 2021.The data of this investigation is collected from rural and tribal people of Malegoan Taluka of Nashik District .In this study ailments commonly found in different categories of livestock and their treatment with Phytoveterinary medicines belongs to 23 species 23 genera &21familiesrecorded.In this article the botanical name, family, part used and action of medicine is mentioned

INTRODUCTION

Phytoveterinary medicinal practices are more common in developing countries. India has a rich diversified flora, India's economy is agricultural based.Majority of population is depend upon agriculture andlivestock. Phytoveterinary medicines is developed by farmers & local livestock holders in the field ratherthan in scientific laboratories.Rural public rely on traditional phytoveterinarymedicines due to lack of health practices facilities in their areas.This traditional knowledge is very much important for livestock health & productivity.This knowledge is usually transferred from one generation to next by words of mouth rather than writing.This traditionalknowledge is due to synthetic drugs,these drugs are toxic and costly .In contrast to this herbal medicinal plants grow naturally in different states of India.These plants are known tocure many ailments in animals, therefore the study of these phytoveterinary medicines is very important before it extinct for future generation

MATERIAL AND METHODS

Study Area-Malegaon is a Taluka of Nashik district of Mahararastra state. Malegaon is at the confluence of Girna and Mosam rivers, at an elevation of 438 meters (1437 feet) at 18^0 25 N $77^0$32'E /18.42^0 N 77.53^0E.

During the study, trips were arranged to the various rural & tribal areas of Malegoan Taluka. Data was collected through personal interviews with rural people, tribal people andVillagers. Collected data identified with the help of flora& standard literature.Phytoveterinary medicinal plants are arranged in alphabetical order according to their botanical names, vernacular names (Marathi), family & part used and disease cured.

RESULT AND DISCUSSION

In many poor rural areas Phytoveterinary medicines can play an important role in animal production, livehood development and often become the only available means for farmers to treat ill animals. These medicines provide valuable alternatives & complement to western stage veterinary medicines.

The present investigation revealed that the rural & tribal people of Malegaon use several Phytoveterinary practices for curing animal's ailments. A total 23 Phytoveterinary plant species of different plant habit (i.e.herbs, shrubs, trees& climbers) belonging to 23 genera and 21 families are being used for treating animal's ailments commonly found in different types of livestock.

All these Phytoveterinary plant species are collected by local communities from surrounding areas.Forest are being used as remedies for various animal ailments.

They utilize numerous plants and their various parts such as roots, leaves, stems for various Phytoveterinary practices. It has been recorded that leaf is most commonly used part of plant,thenstem, bark, fruit,roots. *Tinospora cordifolia* is used to increase flow of milk in cattle and goat.

Butea Monospermais given in haematuria. Paste of stem bark of *Termalia arjuna* is applied over bone fracture.Fruits *Madhuca indica* crushed with water and given to animals against diphtheria.

Root powder of *Clitoria ternatea* is applied locally to scorpion sting.Patil U.S. et al.,(2015)

Reported 25 species belonging to 25 genera in Betul district Madhya Pradesh, they collected data of ethno medicines from Gond and Korku tribal peoples. Similar information collected by Duraisamy R. et al.,(2011) In Tiruvarur district,Tamilnadu on studies they were collected forty medicinal plants used to cure ailments of livestock common diseases like hoof root, sourneck,wound etc.

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Hastividyarnava sarasamgraha in the perspective of plant invasion in India

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Abstract

Tracing man-plant relationships in the context of animals particularly gleaned from ancient written scripts has been largely overlooked. This negligence is more severe when the scripts are written in local languages. The present is an attempt to investigate 'Hastividyarnava Sarasamgraha' written in old Assamese (Kamrupi) vocabularies in Assamese characters by Barkaith in 1734 (or Saka 1656). The script exclusively contained medicament extended for healthcare of elephants. The present authors particularly paid attention to plant invasion tracing biogeographical regions of the 19 exotic plant species belonging to 18 genera 17 angiospermic families. The importance of tapping the literary source in ethnomedicinal investigation coupled with a focus on plant invasion in India is clearly spelt out.

Keywords: hastividyarnava, exotic plants, plant invasion, India

Introduction

Since the beginning of life on Blue Planet, mankind and animals are associated with the plants obviously. Primitive mankind obviously utilized wild sources from vegetable kingdom. After food, medicine is the first discovery for man's healthcare. However, veterinary medicines are searched out only after domestication of some animals during his sedentary life-style and agricultural activity. Use of plants as medicine for animals is man's endeavour and love for them. Codified knowledge on uses, particularly medicine, we usually trace back to Vedic period (Patil and Patil, 2020) [26, 29]. The ancient literature in India have now proved to be very informative sources of use-reports. India is bestowed with richness in biodiversity and ethnicity. Medicinal treatises have been put on record in historic time e.g. Hortus Indicus Malabaricus (Van Rheede, 1678-1693) [38], Yog Chintamani (Suri, 1981) [36] Madhava Chikitsa (Krishnamurthy, 2012), Amarkosa (Amarsimha, Sardesai and Padhy, 1940) [34]. North-Eastern Indians were not also aloof from this trend. They have developed their own traditional curative system in verbal form particularly for domestic animals. One such invaluable treatise is 'Hastividyarnava' written during Tai Ahom regime in Assam (1228-1818) AD) by Barkath Sukumara. The said manuscript is housed in Department of Historical and Antiquarian Studies, Guwahati, Assam (India). It contains 195 folios (each of 58x16 cm size) made of bark pertaining to *Aquillaria malaccensis* Lam., locally called 'Sashi' (Choudhari, 1976). It is originally written in old Assamese (Kamrupi) vocubularies in Assamese characters. Subsequently, it has been translated into English by Choudhury (1976) [7], which is accessible easily for readers. The present author studied ancient sources in the perspective of plant invasion in India (Patil, 2019, 2020a, b) [23, 27, 28]. The aforesaid treatise *viz.*, 'Hastividyarnava' is investigated on similar line to disclose alien floral elements invaded in India by comparing relevant floristic literature.

Methodology

The manuscript contains Assamese plant names. These are equated with the recent botanical names consulting various Indian treatises and dictionaries (Anonymous, 1948-1976; Jain, 1991; Kirtikar and Basu, 1981; Watt, 1889-1893) [1, 11, 13, 39]. Their alien status is verified by using relevant taxonomic literature as mentioned against each species in Table-I, besides botanical name, family, habit, status regarding wild or cultigen, etc. These are discussed in the perspective of plant invasion in India.

Table 1: Exotic Species Gleaned From Hastividyarnava

Sr. No. (1)	Plant Species & Family (2)	Native Name in Assam (3)	Habit (4)	Status Wild (W)/ Cultivated (C) (5)	Plant parts used Disease Treated (6)	Nativity (7)
1.	*Allium cepa* L. Liliaceae	Pyaj	Herb	C	Bulbs Appetizer	West Asia: Patil, 2003; Yadav & Sardesai, 2002. Western Temperate Asia: De Candolle; 1959. Persia: Bailey, 1928
2.	*Allium sativum* L. Liliaceae	Naharu	Herb	C	Cloves Round Worms	Europe: Bailey, 1949; Patil, 2003.
3.	*Alocasia marcrorhiza* (L.) Don Araceae	Man Kachu	Shrub	C	Tubers Gout	Tropical Asia: Gaikwad & Garad, 2015.
4.	*Aloe barbadensis* Mill. Liliaceae	Chal-Kuwari	Herb	C	Roots Boils, itches and ringworms	Cape Verde Islands: Backer & Brink, 1968. Mediterranean Region: Bailey, 1949.
5.	*Amaranthus spinosus* L.	Hati-Khutaria	Herb	W	Shoots To control temperament	Tropical America: Patil, 1995; Chandra Sekar, 2012.

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Review on ethnobotanical utilities of plants against various skin diseases in Nashik district, Maharashtra, India

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Abstract
This article includes and evaluates the ethnobotanical data currently available on medicinal plants traditionally used against different skin disease by the peoples of Nashik district of Maharashtra, India. About 26 ethnobotanical studies on traditional medicinal plants sources from Nashik were reviewed. The traditional knowledge related to various treatments of skin diseases has provided leads to develop active molecules. According to the sources, 102 medicinal plants species for various skin diseases were recorded. Different parts of plant i.e. root, leaf, stem, fruit, bark, flower etc. were used to prepare different types of recipe i.e. paste, oil, powder, pellets, fumes, extract, juice etc. prepared against the skin ailments. Crushing was the frequently used method of preparation.

Keywords: ethnobotanical utilities, ethnobotanical data, medicinal plants

Introduction
Harshberger (1885) [1] used the 'Ethnobotany' for the first time. Since then the definition of this term has evolved and elaborated by the contemporary eminents in natural sciences. The science of ethnobotany, as in the present wider context, denotes the entire realm of useful traditional relationship between man and plants. It thus emphasizes total relationship of man and plants, inclusive of pet animals. Intimate relationship and familiarity with bio resources has become an integral part of our traditions. Man, since time immemorial, thought the plants as his partners in collective management of the plant wealth. The convention on biological diversity realized the significance of traditional knowledge. This has helped further to make aware about our cultural practices, life-cycles, and economic measures and customary/ traditional uses. This, in turn, enforced the biologists to look at plants and animals as sources of genes and chemicals for his benefit.
The traditional knowledge related to various treatments of diseases has provided leads to develop active molecules. These are being developed by the technology-rich nations. The informal knowledge of traditional societies which contribute directly or indirectly to many inventions or production of patentable products, was unrecognized in past.

About Nashik district
Nasik is a northwestern district of state of Maharashtra. The ranges of Western Ghats extend in the district. The forests in the region vary from evergreen to dry deciduous types. It is a preaominantly tribal district. Bhils, Katkaris, Kunabi-Kokana, Thakur, Warli and Mahadeo Koli constitute major segment of tribal population. They have their own socio-cultural traditions and way of life. The forests, forest products and traditional crop plants are the main source of their livelihood. (Geography, soil, climate, people etc)

Ethnobotanical studies in Nashik
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Variouse skin diseases in the district
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Review on ethnobotanical utilities of plants against various skin diseases in Nashik district, Maharashtra, India

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Abstract

This article includes and evaluates the ethnobotanical data currently available on medicinal plants traditionally used against different skin disease by the peoples of Nashik district of Maharashtra, India. About 26 ethnobotanical studies on traditional medicinal plants sources from Nashik were reviewed. The traditional knowledge related to various treatments of skin diseases has provided leads to develop active molecules. According to the sources, 102 medicinal plants species for various skin diseases were recorded. Different parts of plant i.e. root, leaf, stem, fruit, bark, flower etc. were used to prepare different types of recipe i.e. paste, oil, powder, pellets, fumes, extract, juice etc. prepared against the skin ailments. Crushing was the frequently used method of preparation.

Keywords: ethnobotanical utilities, ethnobotanical data, medicinal plants

Introduction

Harshberger (1885) [1] used the 'Ethnobotany' for the first time. Since then the definition of this term has evolved and elaborated by the contemporary eminents in natural sciences. The science of ethnobotany, as in the present wider context, denotes the entire realm of useful traditional relationship between man and plants. It thus emphasizes total relationship of man and plants, inclusive of pet animals. Intimate relationship and familiarity with bio resources has become an integral part of our traditions. Man, since time immemorial, thought the plants as his partners in collective management of the plant wealth. The convention on biological diversity realized the significance of traditional knowledge. This has helped further to make aware about our cultural practices, life-cycles, and economic measures and customary/ traditional uses. This, in turn, enforced the biologists to look at plants and animals as sources of genes and chemicals for his benefit.

The traditional knowledge related to various treatments of diseases has provided leads to develop active molecules. These are being developed by the technology-rich nations. The informal knowledge of traditional societies which contribute directly or indirectly to many inventions or production of patentable products, was unrecognized in past.

About Nashik district

Nasik is a northwestern district of state of Maharashtra. The ranges of Western Ghats extend in the district. The forests in the region vary from evergreen to dry deciduous types. It is a preaominantly tribal district. Bhils, Katkaris, Kunabi-Kokana, Thakur, Warli and Mahadeo Koli constitute major segment of tribal population. They have their own socio-cultural traditions and way of life. The forests, forest products and traditional crop plants are the main source of their livelihood. (Geography, soil, climate, people etc)

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Environmental Management : Approaches, Aspects and Types

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Abstract
Environmental Management offers research and opinions on use and conservation of natural resources, protection of habitats and control of hazards, spanning the field of environmental management without regard to traditional disciplinary boundaries. The journal aims to improve communication, making ideas and results from any field available to practitioners from other backgrounds. Contributions are drawn from biology, botany, chemistry, climatology, ecology, ecological economics, environmental engineering, fisheries, environmental law, forest sciences, geosciences, information science, public affairs, public health, toxicology, zoology and more.

- **Introduction**

The environmental equilibrium of our planet has been upset through a mechanical transformation, weighty industrialization, development in transportation, spontaneous urbanization and obviously double-dealing of assets. Biological system strength is in peril as the connection between individuals and the climate has disintegrated. Yet again the relationship can become amicable assuming individuals begin empowering exercises like preservation, recovery, and insurance of nature. Natural administration is worried about marine, land and barometrical circumstances and pursues issues like deforestation and a worldwide temperature alteration. It takes a gander at the carbon impression and attempts to track down ways of decreasing the irreversible harm individuals are abandoning. Ecological administration is portrayed as an interaction to limit squander and expand consistence. Made to resolve the natural issues by implication affect the globe and is influencing it unfavourably. It bargains in tracking down suitable arrangement s to natural emergencies and forestalling biological catastrophes. Natural administration likewise explores possible wellsprings of environmentally friendly power with the goal that non-renewable energy source doesn't become exhausted.

- **Ways to Deal with Environmental Management: Aspects and Types**

1. Aspects and Approaches to ecological administration

(A) Source of insight and mindfulness - Ecological insight has normally been characterized as familiarity with, or sentiments about, the climate and as the demonstration of catching the climate by the faculties. Ecological insights incorporate view of the climate and the presence of air contaminations. Ordinary reports incorporate view of scents as reaction to odorants in the air (N. olfactory) and disturbance (N. trigeminus and the compound sense) in mucous layers of nose and eyes and in facial skin. Ecological mindfulness implies monitoring the indigenous habitat and settling on decisions that benefit the earth, as opposed to hurt it. A portion of the ways of rehearsing ecological mindfulness include: utilizing safe and non-poisonous structure supplies, moderating energy and water, reusing, activism, and others.

(B) Level of insight - Ecological discernments can be antagonistic or non-unfavourable. Antagonistic insights are undesirable changes of life quality and consequently full-esteem wellbeing impacts. In any case, some degree of insight is expected to permit people to follow changes in the situation with their current circumstance. It follows that these discernments have a portion reaction (D-R) connection of U-structure; that is, in rule settings, the predominance target is nonzero.

(C) Role of insight in ecological preparation - Data about individuals' view of the climate can illuminate ecological arrangement producers, organizers, architects, and supervisors about open natural qualities and concerns, and about individuals' likely reactions to ecological circumstances.

नाशिक जिल्ह्यातील ग्रामीण व नागरी लोकसंख्या बदलाचा चिकित्सक अभ्यास (सन १९७१ -२०११)

डॉ. अनिल डी. पवार

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प्रस्तावना:-

जगातील कोणत्याही देशाच्या आर्थिक विकासासाठी तेथील लोकसंख्या हा घटक अत्यंत महत्वाचा आहे. कारण लोकसंख्या हि देशाची संपत्ती व शक्ती असते. उपलब्ध साधनसंपत्ती व लोकसंख्या यांचा नियोजनबद्ध मेळ घालूनच प्रदेश किवा देश आर्थिक विकासाबरोबर सर्वांगीण विकास साधण्याचा प्रयत्न करीत असते. कोणत्याही देशाची आर्थिक प्रगती हि उत्पादनासाठी लागणारे नैसगिक उत्पादक घटक व ते वापरले जाण्यासाठी लागणारी लोकसंख्या यावर अवलंबून असते.

जिल्ह्यातील प्रगतीचा आलेख विविध क्षेत्रात उंचावत असून मुंबई, पुणे, नागपूरनंतर नाशिक शहराचा विस्तार व विकास होत आहे.तरी ग्रामीण भागाच्या तुलनेने नागरी लोकसंख्येचे प्रमाण वेगाने वाढतांना दिसून येते.°

अभ्यास क्षेत्राची ओळख

नाशिक जिल्हा महाराष्ट्राच्या उत्तरभागी १९°३३´ ते २०°५३´ उत्तर अक्षांश व ७३°१६´ ते ७५°१६´ पूर्व रेखांश या भौगोलिक पट्ट्यात वसलेला आहे. जिल्ह्याचे एकूण क्षेत्र १५५३० चौ.कि.मी. असून राज्याच्या एकूण क्षेत्रफळाच्या ५.०४ टक्के क्षेत्र नाशिक जिल्ह्याने व्यापलेले आहे. १९९९ पासून देवळा व त्र्यंबक या दोन तालुक्यांचा नव्याने समावेश झाल्याने १५ तालुक्यांनी मिळून जिल्हा बनलेला आहे. २०११ नुसार लोकसंख्या ६७,८८,१३८ इतकी तर साक्षरतेचे प्रमाण ८२.३१ टक्यांपर्यत पोहोचले असून साक्षरतेमुळे पुरुषांच्या बरोबरीने स्त्रीयादेखील विविध क्षेत्रात सहभाग नोंदवीत आहेत.

जिल्ह्यातील सुरगाणा, पेठ, इगतपुरी येथील पावसाची स्थिती कोकणासारखी निफाड, सिन्नर, दिंडोरी, बागलाण मधील वातावरण प. महाराष्ट्रासारखे तर येवला, नांदगाव, चांदवड ची स्थिती विदर्भातील वातावरणाशी जुळणारी असल्याने जिल्ह्याची ओळख " मिनी महाराष्ट्र" म्हणून केली जाते.

संशोधनपद्धती:-

प्रस्तुत संशोधन लेखात नाशिक जिल्ह्यातील ग्रामीण व नागरी लोकसंख्येच्या बदलांसंदर्भात विश्लेषण करण्यात आलेले आहे. त्यासाठी दुय्यम आधारसामग्रीचा वापर करण्यात आलेला आहे. या दुय्यम आधार सामग्रीत जनगणना अहवाल, नाशिक जिल्हा आर्थिक व सामाजिक समालोचन, संशोधन विषयाशी निगडित विविध पुस्तकातील लेख, व शासकीय संकेत स्थळांचा वापर केलेला आहे. संकलित केलेल्या माहितीच्यास्पष्टीकरणासाठी निबंधात्मक विश्लेषण पद्धतीचा उपयोग केलेला आहे. तसेचनिष्कर्षाप्रत पोहोचण्यासाठी संख्याशास्त्रीय तंत्राचा देखील वापर करण्यात आलेला आहे.

संशोधनाची उद्दिष्टे :-

१) नाशिक जिल्ह्यातील लोकसंख्या साधनसंप्पतीचा आढावा घेणे.

२) ग्रामीण व नागरी लोकसंख्या बदलांचा अभ्यास करणे .

जनगणनानिहाय ग्रामीण, नागरी लोकसंख्या व शेकडा वाढ (१९५१-२०२१)

वर्ष	एकूण लोक.	ग्रामीण लोक.	शेकडा वाढ	नागरी लोक.	शेकडा वाढ
१९५१	१४२९९१६	१०५९९६६	-	३६९९५०	-
१९६१	१८५५२४६	१३८०२६६	३०.२२	४७४९८२	२८.३९
१९७१	२३६९२२१	१६९०७४९	२२.४९	६७८४७२	४२.८४
१९८१	२९९१७३९	२०६३५९४	२२.०५	९२८१४५	३६.८०

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Dyes from plants: North east region from Nashik district, Maharashtra

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Abstract
Total 26 plant species belonging to 18 families discussed in this article. Out of 26 plants 7 herbs, 9 shrubs, 3 climbers and 7 trees are documented which are used by the tribals of the region for festivals, ceremonies and cultural practices. The dyes and colours are used at the time of festivals like Holi, Rangpanchami, Nagpanchami, Navratri, Dussera, Diwali, etc. which are surviving our traditional heritage. The tribals also using these dyes for painting their homes, clothes, wooden furniture, and utensils.

Keywords: festivals, holi, tribal

Introduction

The plants are the ultimate source of each and every thing of human being. Man is totally depending on plants from the ancient days. The role of plant in everyday life is vital. When the human civilization began that time man was only in search of food and he got the methods of cultivation and utilization. As days passed, needs grown and human tried to use the plants for different purposes. When human lived in society he started the celebrations, festivals, ceremonies in the name of the God and Goddess. They made the calendar as per their culture, tradition and religion. When humans came to know regarding the colorful roots, stems, leaves, flowers, fruits, seeds etc. he developed colours for paints on doors, cloths and for few other purposes. When he started to celebrate festivals he made colours by using plants with different plant parts. Currently the tribals are using the methods of colour making for Holi, Rangpanchami, Nagpanchami, Navratri, Dussera, Diwali, etc. and survive our traditional heritage. The tribals also using these dyes for painting their homes, clothes, wooden furniture, and utensils.

Colours are thrown at the time of Holi and Ranghpanchami. Now they are using for cosmetics, drugs, food products. They sold the products too. The organic colours they are using are eco-friendly and healthy with low cost and easy to made at home.

Methodology

The information regarding the dye yielding plants is gathered from the tribals of the region. Their festivals were joined and tried to understand their traditional importance, purpose and methodology. The plants and their parts were documented with preparation methodology. The plants were identified by using Flora of Nashik district by P. Lakshminarasimhan and B. D. Sharma. The plants are arranged according to alphabetically.

Table: Dye yielding plants

Table 1

Sr. No.	Name of the plant	Habit	Plant Part Used	Uses with preparation methodology
1	*Acacia catechu* (L.f.)Willd. Family – Mimosaceae	Tree	Wood, Bark	1. The wood is soaked overnight in water, boiled on Chulha and the Red extract is used as Katha for pan. 2. The extract is used for painting on door and clothes.
2	*Basella alba* L. Family – Basellaceae	Climber	Fruits	1. The seeds are soak in water, crushed and used as dye and colour for painting. 2. Colour used in foods.
3	*Bixa orellana* Linn. Family - Bixaceae	Shrub	Seeds	1. Seeds are very rich in orange colour. The seeds are crushed in water and used as dye for colouration of clothes, homes and utensils. 2. Colour used for Holi and Rangpanchami festival. 3. Paintings are sketch on walls at the time of Nagpanchami, Dussera and Diwali. 3. Colour applied on musical instruments.
4	*Bombax ceiba* L. Family – Malvaceae	Tree	Flowers	1. The flowers kept overnight in water, boiled and the extract used for decorative purpose of utensils, wall painting, clothing and art and crafts.
5	*Butea monosperma* (Lam.) Kuntze. Family – Fabaceae	Tree	Flowers	1. The flowers crushed and kept in water for few hours. Colour use for Holi and Rangpanchami. 2. Colour added in food preservatives.
6	*Bougainvillea glabra* Choisy Family – Nyctagenaceae	Shrub	Flowers	1. The flowers are crushed and soak in lukewarm water and used as colour for Holi, Ranghpanchami and to paint utensils as decorative purposes.
7	*Calatropis procera* (Aiton) W.T.Aiton Family – Apocynaceae	Shrub	Latex	1. Latex is used for wall paintings at the time of Nagpanchmi.

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Study of Molecular Interactions present in Binary Liquid Mixtures of Di-ethyl ether, Isopropyl Ether and n-Di-butyl Ether with 2-Pentanol at Different Temperatures

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ABSTRACT

The aim of present work is to concentrate on the interpretations of viscosity, density and ultrasonic velocity and their deviation of binary liquid mixtures of Di-ethyl ether, Isopropyl Ether and Di-butyl Ether with 2 Pentanol at temperature 298.15K and 303.15K.The composition of liquid mixtures is taken in terms of mole fraction from 0.1 to 1.0. From these data, excess molar volume, deviation in viscosity and isentropic compressibility have been calculated. These calculated values have been used in Redlich-Kister equation to get the coefficients and standard errors. These parameters for the given liquid mixtures have been used to study the molecular interactions.

KEYWORDS: Excess molar volume, Deviation in viscosity, Molecular interactions, Isentropic compressibility and Mole fraction.

INTRODUCTION

Ethers find an extensive applications in various fields. Di-isopropyl ether, being a crucial additives of fuel, many researchers have directed their attention to the ethers. [1-4] They are non-toxic and non-polluting chemicals and widely used octane enhancing additives in gasoline production process to improve combustion and reducing emissions and contaminant agents of automobile catalysts and alternative oxygenated stabilizers in unleaded gasoline.[5-6] Wypych et al.[7] disclosed that Di-n-butyl ether (DBE) is an important solvent and an excellent extracting agent for the use with aqueous system due to its very low solubility in water. Calculations of density, viscosity and ultrasonic velocity find an extensive applications in making characterization the thermodynamic and physico- chemical aspects of binary liquid mixtures. The molecular size and shape play a crucial role in determining the thermodynamic behaviour of the mixture. Focus on thermodynamic and transport properties of binary liquid mixtures give an important information on the kind of interactions in the constituent binaries. Literature provides an extensive data on density, viscosity and ultrasonic velocities of liquid mixtures but a collective study of density, viscosity and IR is quite scarce. The effect of molecular size, shape, chain length and chain branching of ethers on solute-solvent interactions has been predicted.

EXPERIMENTAL

The solvent used was 2-Pentanol and imported from Sigma Germany having purity 99%.The solutes are Di-isopropyl Ether (Qualigens) and Di-n-Butyl Ether (Acros Organics)having purity 99% were used after first distillation.

Experimental values of density, viscosity and ultrasonic velocities of pure liquids are compared at 308.15K, 313.15K, and these values are showing good agreement with literature values published in journals.[8-16] Specially designed stoppered bottles were used to prepare mixtures in terms of mole fractions. All the mixtures were used on same day for the measurements of above said parameters. Electronic balance of Adair Dutt with an accuracy of 0.0001 mg. was used to prepare the mixtures. Digital densitometer model number DMA 35-84138 manufactured by Anton Par with an accuracy of 0.001 gm/cm^3, reproducility of 0.0007 gm/cm^3 having capacity 2 ml, was used to measure the densities of pure liquids and their binary mixtures. Digital viscometer model number LVDVII+Pro manufactured by Brookfield Engineering Laboratories, Middleboro INC [USA], calibrated with tripled distilled water with an accuracy ± 1% of full scale of range and viscosity repeatability ± 2% was used to measure the viscosities of pure liquid and their binary liquid mixtures. Variable path single crystal interferometer from Mittal Enterprises F-05(SI No.1415071) model, New Delhi having frequency 2

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Review Article

MEDICINAL PROPERTIES OF SCHIFF BASES AND METAL COMPLEXES: A REVIEW

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Schiff bases, Metal Coplexes, Multifunctions, Bioactivities.

ABSTRACT

Metal complexes play an essential role in chemical and medicalsciences for their importance and variety of actions. Schiff bases were multifunctional pharmacophores able to form chelating complexes with several metals in different oxidation states. Complexes with Schiff bases are widely described in the literature for their multiple actions and numerous advantages, such as low cost and easy synthesis. They show multifunctional bio-activities, such as antimicrobial, antioxidant, antimalarial, anti-inflammatory and antitumor, anticancer, DNA binding etc. Schiff bases may also form complexes with many Inner-transition elements acting as catalysts (e.g., in various synthetic processes) and antitumor agents. This review offers to extends preparation and the uses of Schiff bases as antitumorals, highlighting the importance, in the field of the anticancer agents, of these tools as ligands of metal complexes.

INTRODUCTION

Schiff bases ($R_1R_2C=NR_3$) are interesting organic compounds containing an azomethine (-CH=N-) or an imine (-C=N-) group generally formed by the condensation of active carbonyl groups and amino compounds, in which the nitrogen atom is bonded to an aryl or alkyl group. These compounds form highly stable complexes with transition metal ions and Inner transition metal ions. Metal complexes in which the metal is coordinated to different ligands, able to stabilize the metal and modify its chemical and medicinal properties, have gained considerable importance in Pharmaceutical chemistry as antibacterial agents [1-5], antifungal agents [6-10], antimicrobial agents [11-15], antioxidant activity [16-20], anticancer [21-25], DNA binding agents [26-30]. Complexes containing the transition metals copper, zinc, cadmium, platinum, palladium, gold and silver have attracted much attention due to their various biological activities.

Antibacterial

(Shoaib, 2013) were synthesized many metal complexes of Cu(II), Co(II), Ni(II), Mn(II), Zn(II) are tested for antibacterial activity versus Staphylococcus aureus strain were screened. Both ligands exhibited a potent effect, although the Mn complex of HL1 and the Ni complex of HL2 exhibited high efficacy against the reference medication [1]. (Gulcan, 2011) synthesized many metal complexes of Cu(II), Ni(II), Co(II), Pd(II) and Pt(II) and all shows Antibacterial property towards Staphylococcus aureus ATCC 4230 was determined using Ampicillin trihydrate as a comparative medication. All of them inhibits the growth of bacteria but the antibacterial activity of Co(II) and Cu(II)exhibit antibacterial activity that is both efficient and selective against gram-positive and negative bacteria [2].Several metal complexes of Zn(II), Cd(II), and Hg(II) derived by(C & Sekhar, 2018) and evaluated for antibacterial activity towards bacterial bacillus megaterium (Gram-positive) and Klebsiella pneumoniae, respectively (Gram-negative). Researchers can conclude that the complexes are more effective than the ligands alone using this data. Hg complexes of all the chemicals investigated exert a higher action on the bacteria than any of the other compounds[3]. (Abdulghani & Hussain, 2015)were synthesized many metal complexes of Pt(II), Pd(II), Cu(II), Ni(II) and their antibacterial activity were carried out versus E.coli Staphylococcus aureus, Pseudomonas arginosa and Streptococcus pneumonia. All metal complexes show selective activity against one or two bacteria but Pt complex [Pt (Ln)Cl_3](H_2O. 0.5 OH) was active against all contains highest activity against Streptococcuspneumonia and Pseudomonas aeruginosa [4].(Sumrra *et al.*, 2020)derived many metal complexes of Co(II), Ni(II), Cu(II) and Zn(II), all were checked for antibacterial activity versus E.coli, Streptococcus farelis, Pseudomonas aeruginosa, Khensiella pneumonia, Staphylococcus aureus and Bacillus subtilis. While all complexes were microcrystalline and all but Zn(II) complexes exhibited a strong color, only the MIC compounds significant antibacterial properties were chosen for MIC investigations[5].

Antifungal

(Tyagi & Chandra, 2012)synthesised many Schiff bases and their metal complexes of metal Pd(II), Pt(II), Rh(II), Ir(II) and tested their antifungal activity against Aspergilusniger, Aspergilusfumigares, and Fusarium odum. They found that

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Order-Independent Algorithm for Complex Polynomial Asymptotic Stability

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Abstract:

The Extended Routh Array (ERA) resolves complex polynomial asymptotic stability. The Routh Array is a natural extension of the ERA, which only applies to real polynomials. The ERA is an excellent theoretical approach for stability assessment; however, it has some drawbacks. Unfortunately, as the order of the polynomial increases, so does the size of the calculations, as illustrated below. In this paper, we present an alternative technique that is essentially equal to the ERA, but has the added benefit of being simpler, more efficient, and straightforward to apply even to polynomials of enormous order. Only one single and simple algebraic operation is required in all steps of the new algorithm's creation, making it a polynomial order-independent algorithm.

***Keywords**: Hurwitz Polynomials, Asymptotic Stability, Routh Array, Extended Routh Array*

1. Introduction:

One of the fundamental issues in the study of dynamic system stability is establishing the conditions under which all the roots of a particular polynomial reside on the left-half plane. Hurwitz polynomials, also known as asymptotically stable polynomials, appear in a range of applications, including control systems, circuit analysis, numerical calculations, systems theory, and digital signal processing. See (Gutman, 1979), (Krein & Neimark, 1981), and (Gutman, 1979) for some examples (Zahreddine, 1992).The majority of known Hurwitz stability testing methods are limited to the real scenario. See (Howland, 1971), (Lipatov & Sokolov, 1979), and (Lipatov & Sokolov, 1979) for a variety of references in this context (Zahreddine, 1999). Because signal analysis and detection in modern communication and information theory involves both complex signals and complex envelopes, it is becoming increasingly important to address the theory of stability when working with systems with complex coefficients. The Extended Routh Array (ERA), which is the more complicated equivalent of the Routh Array for real systems, was created with this in mind (Zahreddine, 1993). The ERA determines if complex polynomials are Hurwitz stable.

We proposed the concept of wide sense stability and demonstrated how the ERA can handle the emergence of vanishing leading array components in (Zahreddine, 1994). (Singularities).For more information, see (Barnett, 1995), (Zahreddine, 2003), (Zahreddine, 2018), and (Barnett, 1995). (Zahreddine, 2019).The problem of a polynomial's root distribution in some sub-regions of the complex plane, such as sectors, ellipses, and parabolas, has also been studied (Gutman, 1979). (Zahreddine, 1996).The majority of stability requirements are derived using complex techniques like index theory, Sturm chains, Rouche's theorem, Lyaponov equations, or extended

5-6+3·5=9·1

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Estimation of Total Phenolic and Flavonoid Contents, Phytochemical Screening and *in vitro* Antioxidant Activity of Drakshasav A Herbal Drug

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ABSTRACT

The current study's goals were to investigate the herbal drug's antioxidant activity, total phenolic and total flavonoid content, stability, antibacterial activity, and phytochemical screening. In today's medical practise, there is a growing knowledge and acceptance of the use of herbal medications. In recent years, more people around the world have turned to natural drugs. Herbal drug technology is used to create medicines from botanical resources. The standardisation of herbal drugs is a key step in determining constituent antioxidant activity, total phenolic and total flavonoid content, and phytochemical screening. We purchased a herbal medicine called "Drakshasav" from Nashik's local markets for the study (Maharashtra). In vitro antioxidant activity was measured using free radical scavenging activity against 1,1-diphenyl-2-picrylhydrazine (DPPH). Using gallic acid and quercitin as standards, the total phenolic and flavonoid content was measured spectrophotometrically. For two years, at four-month intervals, the selected herbal medication was examined for antioxidant activity as well as total phenolic and total flavonoids content. For antioxidant activity, different concentration solutions in water were made (5 percent, 2.5 percent, 1.25 percent, 0.625 percent, 0.3125 percent, and 0.15625 percent). It has increased antioxidant activity at increasing concentrations, and its antioxidant potential fluctuates with time. Using gallic acid and quercitin as standards, the total phenolic and flavonoid content was measured spectrophotometrically.

KEYWORDS: Antioxidant, Phenolic, Flavonoids, DPPH.

INTRODUCTION

Antioxidants are known to counteract the effects of free radicals, which can set off a series of events that can lead to oxidative stress and cellular damage. These free radicals are produced by cellular metabolism, and they have a deleterious impact on health, including cancer, hypertension, heart disease, and diabetes [1]. Herbal medications contain a variety of antioxidants, including phenolics, flavonoids, tannins, vitamins, quinines, coumarins, lignans, and ligins [2,3]. Flavonoids are antioxidant, anti-inflammatory, antibacterial, and antiviral chemicals [4]. Polyphenols, which aromatic compounds with hydroxyl groups directly connected to benzene, are a type of natural molecule that has a number of properties, including significant antioxidant, anti-inflammatory, antibacterial, and anti-aging properties [5].

Active substances derived from herbal medicinal sources have recently risen to the top of scientists' study agendas across the globe. Herbal medications are widely utilised in the treatment of various ailments. Herbal medicines are rich in antioxidants and bioactive compounds.

Nature's phenolic and flavonoid chemicals have an aromatic ring with at least one hydroxyl group [6]. Phenolic substances may contribute directly to antioxidant activity by increasing the production of endogenous oxidant molecules in the cell [7,8]. The capacity of phenolic compounds to suppress free radicals, breakdown peroxides, and prevent oxidative illnesses has been demonstrated in several studies [9].

In poor nations, non-conventional medicine is used by around 80% of the population for primary healthcare [10]. More people in underdeveloped nations rely on herbal and traditional medicine for treatment of diseases, owing to the paucity of contemporary health services and the relatively low cost of traditional medicines [11,12]. Flavonoids and other phenolic compounds are natural phytochemicals found in herbal remedies, which have led to their medicinal use in the treatment of many disorders [13,14]. Phenolic substances have a variety of biochemical and pharmacological properties, and their interactions with important enzymes, signalling cascades involving cytokines and transcription factors, and antioxidant systems may give health advantages [15–17].

Antioxidant effects of phenolic substances, particularly flavonoids, have been studied and proved to be useful [16,18]. Such bioactive substances may have antioxidant effects by scavenging free radicals, decreasing -tocopherol radicals, activating antioxidant enzymes, chelating metal catalysts, triggering apoptosis, and reducing oxidative stress [19,20]. In humans, oxidative stress can induce tissue destruction and contribute to

5-6+10-5=10-1

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Phytochemical Screening and In-Vitro Antioxidant Activity of An Herbal Drug 'Ashwagandharishta', Estimation of Total Phenolic and Flavonoid Contents

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ABSTRACT

Because of their ability to neutralise free radicals, phenolic compounds have a variety of biological effects, including anti-inflammatory, antibacterial, and antioxidant characteristics. Antioxidants are essential nutrients that protect the body from the harmful effects of oxidative stress caused by free radicals. A wide range of free radical scavenging antioxidants can be found in a variety of foods. The study's goal was to find out how much total phenolic content, total flavonoids content, antioxidant activity, and phytochemical screening of herbal drugs. Flavonoids are a type of natural polyphenolic chemicals that humans are unable to produce. These compounds have a variety of biological characteristics and act as antioxidants in biological systems. The Folin-Ciocalteau method was used to determine the total phenolic content. Antioxidant properties were determined using 1,1-diphenyl-2- picrylhydrazyl (DPPH). The total phenolic and flavonoid content was determined spectrophotometrically using gallic acid and quercitin as standards. The Herbal drug for the study is purchased from the local markets of Nashik (Maharashtra). 5 percent, 2.5 percent, 1.25 percent, 0.625 percent, 0.3125 percent, and 0.15625 percent concentration samples in water of the herbal medication were prepared for the assessment of antioxidant potential by DPPH assay. As the concentration % rises, so does the antioxidant activity, as well as the overall phenolic and falvonoid content increases. The antioxidant activity is due to the existence of total phenolic and flavonoid content. Conventional methods were used to determine the presence of specific phytochemicals.

Keywords : Antioxidant, Phenolic, Flavonoids, DPPH.

I. INTRODUCTION

For millennia, medicinal plants have been used as a source of pharmacological ingredients for the prevention and treatment of diseases and afflictions. According to the World Health Organization, more than 80% of the population in poor nations uses herbal

اردو میں سفرنامہ کی مختصر تاریخ: ایک جائزہ

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تاریخی اعتبار سے اٹھارویں صدی اردو ادب کیلئے نہایت اہم شمار کی جاتی ہے۔ اس دور میں اردو ادب میں بہت ساری تبدیلیاں رونما ہوئیں۔ انگریز جب ہندوستان پر اپنی گرفت مضبوط کر رہے تھے۔ تو لسانی طور پر انہیں یہاں دشواری کا سامنا کرنا پڑ رہا تھا۔ دیگر چیزوں کے علاوہ انہوں نے یہاں کی زبانوں کو بھی کھنگالنا شروع کیا۔ چونکہ کامیاب حکومت چلانے کیلئے علاقائی زبان کا جاننا بھی ضروری ہوتا ہے۔ اس لئے انگریزوں نے اپنے مفادات کو سامنے رکھ کر ہندوستانی زبان کو ترویج و ترقی دینا ضروری سمجھا۔ چونکہ ہندوستانی قوم ایک معصوم قوم تھی۔ وہ انگریزوں کی چالاکیوں کو سمجھ نہ سکے۔ اس طرح بہت جلد انگریزوں نے ہندوستانیوں کا دل جیت لیا۔ اور ہندوستان کو اپنی نو آبادیات میں شامل کرنا شروع کر دیا۔ چونکہ مغلوں کے زمانے میں سرکاری زبان فارسی تھی اس لئے اردو عموزبان پر بھی فارسی زبان کا غلبہ زیادہ تھا۔ اسطرح انگریزوں کے دور حکومت میں اردو زبان خود کفیل ہونا شروع ہوئی۔ دیگر زبانوں سے اردو میں تراجم کا رجحان بڑھا۔ دیگر صنفوں کی طرف فارسی زبان میں جو سفرنامے لکھے گئے تھے۔ آہستہ آہستہ اس کے ترجمے اردو زبان میں ہوئے۔ سفرنامہ کیا ہے؟ سفر کے دوران کسی شخص (مسافر) کو جن حالات و واقعات سے دوچار ہونا پڑتا ہے۔ ان درپیش آنے والے واقعات کی روداد کو صفحہ قرطاس پر منتقل کر کے پیش کرتا ہے۔

۱۸۵۷ء غدر کے بعد ہندوستان پر انگریزوں کا مکمل قبضہ ہوا۔ جس سے زندگی کا ہر شعبہ متاثر ہوا۔ اردو زبان میں بھی تبدیلیاں رونما ہوئیں۔ شاعری کا مزاج بدلا۔ داستانوں کو زوال اور ناول کو عروج حاصل ہوا۔ لوگوں نے خیالی دنیا سے نکل کر اصل زندگی میں قدم رکھنا شروع کیا۔ دیگر صنفوں کی طرح سفرنامے کی ہیت میں بھی تبدیلی رونما ہوئی۔ یہاں تک کہ لوگوں نے اپنے طور طریقے کے ساتھ ساتھ رہن سہن میں بھی بہت ساری تبدیلیاں لائیں۔ ایک طبقہ ایسا بھی تھا جو مغربی تہذیب کو اپنانے میں فخر محسوس کرتا تھا۔ مغربی تہذیب کے ساتھ وہاں کے علوم قصے کہانیاں بھی لوگوں میں گھر کرنے لگیں۔ جس سے مغربی ممالک کی سیاحت کا جذبہ بھی بڑھنا شروع ہوا۔ جب ادبی ذوق رکھنے والوں نے یورپ کا سفر اختیار کیا تو اس کی روداد سفرنامے کی شکل میں پیش کرنا

غالب: زمانے کی ناقدری سے اسیری تک

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کہا جاتا ہے کہ غالبؔ جب تک زندہ رہے ناقدریٔ روزگار کا ذکر اکثر و بیشتر کرتے رہے کیونکہ خونِ جگر سے سینچ کر اپنی شاعری کو پروان چڑھانے کے بعد جب صلہ میں داد کی بجائے زمانے کے استہزایہ انداز کا سامنا کرنا پڑا تو مایوسی نے انہیں اس طرح کہنے پر مجبور کیا۔

''نہ ستائش کی تمنا نہ صلے کی پرواہ نہ ہوئے گر مرے اشعار میں معنی نہ سہی''

ذہن کی جس بلند ترین سطح پر غالب پہنچ چکے تھے۔ شہرت کے قدم وہاں تک نہ پہنچ سکے۔ ان کے تخیل نے جس برق رفتاری کا اظہار کیا اس کا ساتھ ان کا سست رفتار ماحول نہ دے سکا۔ کیونکہ غالب اصل زمانے سے بہت پہلے پیدا ہو گئے تھے۔ لیکن یہ بھی اپنی جگہ مسلم ہے کہ بعد میں ان کے کلام سے زیادہ کسی اور کے کلام کی قدر نہ ہوئی۔ دیوانِ غالب سے زیادہ کوئی اور دیوان نہیں پڑھا گیا۔ نہ سمجھا گیا، نہ چھاپا گیا۔ ان کے کلام کی درجنوں شرحیں لکھی گئیں۔ ان کی زندگی کے تاریخ وروشن ہر گوشے کو منظر عام پر لایا گیا۔ اس سے اندازہ ہوتا ہے کہ اردو شاعری میں غالب کا مقام کیا ہے۔

کہا جاتا ہے کہ اتار چڑھاؤ زندگی کا ایک حصہ ہے انسان دنیا میں آیا ہے تو اسے خوشی کے ساتھ ساتھ پریشانیوں کا سامنا بھی کرنا پڑتا ہے۔ غالب جیسا نادر روزگار شاعر جسے مملکت شعر کا شاہ بے بدل تسلیم کیا گیا کبھی جیل کی سلاخوں کے پیچھے بھی گیا ہے یقین نہیں آتا مگر یہ حقیقت ہے کہ غالب کو ایک بار نہیں بلکہ دو بار جیل کا منہ دیکھنا پڑا۔ وہ بھی قمار بازی کے جرم میں۔ ایک بار اگست ۱۸۴۱ء اور دوسری بار مئی ۱۸۴۷ء میں۔ زیادہ تر تذکرہ نگاروں نے غالب کی ایک بار ہی اسیری کا ذکر کیا ہے۔ جو مئی ۱۸۴۷ء میں ہوئی۔ لیکن دہلی اردو اخبار کے مطالعہ سے پتہ چلتا ہے کہ غالب کو ۱۸۴۱ء میں بھی قید و بند کی صعوبت سے گذرنا پڑا تھا۔ ۱۵ اگست ۱۸۴۱ء کے دہلی اردو اخبار، میں یہ خبر شائع ہوئی۔ سنایا گیا ہے کہ ان دونوں تھانہ گذر قاسم جان میں مرزا نوشہ کے مکان سے اکثر جوئے قمار بار پکڑے گئے۔۔۔۔۔

''کہتے ہیں کہ بڑا قمار ہوتا تھا لیکن بہ سببِ رعب اور کثرتِ مرداں کے یا کسی طرح سے تھانہ دار دست اندازی نہیں ہو سکتا تھا۔ اب تھوڑے دن ہوئے یہ تھانیدار قوم سے سید اور بہت جری سنا جاتا تھا۔ مقرر ہوا ہے۔ یہ پہلے جمعدار تھا۔ جمعداری میں انھیں بہت گرفتاری مجرموں کی کرتا رہا۔ بہت بے طمع ہے۔ یہ مرزا نوشہ ایک شاعر نامی اور رئیس زادہ نواب شمس الدین خان مقتول

14. Economic Implications of Covid: 19

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Introduction

Coronavirus isn't just a worldwide pandemic and general wellbeing emergency; it has additionally seriously influenced the worldwide economy and monetary business sectors. Huge decreases in pay, an ascent in joblessness, and interruptions in the transportation, administration, and assembling businesses are among the results of the infection relief estimates that have been carried out in numerous nations. It has become evident that most governments on the planet thought little of the dangers of fast Coronavirus spread and were for the most part receptive in their emergency reaction. As infection flare-ups are not liable to vanish sooner rather than later, proactive global activities are needed to save lives as well as secure financial thriving.

Keywords: COVID 19, economic impact, GDP growth rate, sectoral impact, COVID relief measures.

COVID-19 and the Economy

On March 11, 2020, the World Health Organization (WHO) portrayed COVID-19 as a pandemic, highlighting more than 3 million cases and 207,973 passings in 213 nations and regions. The contamination has become a general wellbeing emergency as well as influenced the worldwide economy. Critical monetary effect has effectively happened across the globe because of decreased efficiency, death toll, business terminations, exchange interruption, and annihilation of the travel industry. Coronavirus might be that a "awaken" call for worldwide pioneers to strengthen participation on plague readiness and give the vital financing to global aggregate activity. There has been sufficient data on the normal financial and wellbeing expenses of irresistible illness flare-ups, however the world has neglected to enough put resources into preventive and readiness measures to moderate the dangers of huge pandemics.

With globalization, urbanization, and ecological change, irresistible sickness episodes and scourges have become worldwide dangers requiring an aggregate reaction. Albeit most of created nations, transcendently European and North American, have solid continuous observation and wellbeing frameworks to oversee irresistible infection spread, enhancements in

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"Transport and Thermodynamics Properties of Binary Mixtures of m-Xylene with Propan-1-ol, Butan-1-ol and Pentan-1-ol at Different Temperatures"

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Abstract : *The knowledge of thermodynamic mixing properties for binary mixtures of m-xylene with propan-1-ol, butan-1-ol and pentan-1-ol have been measured over the entire range of composition at (298.15,303.15, 308.15 and 313.15) K and at atmospheric pressure. From the experimental data, excess molar volumes (V^E) and deviations in viscosities ($\Delta\eta$) have been calculated. The excess molar volumes for m-xylene + propan-1-ol, butan-1-ol and pentan-1-ol system are sigmoids while deviations in viscosity are negative. The results have been interpreted in terms of molecular interactions. These are further fitted to the Redlich-Kister polynomial equation.*

Key Words: *Density, Viscosity , m-Xylene, Propan-1-ol, Butan-1- ol and Pentan-1-ol.*

1. INTRODUCTION :

Transport and Thermodynamic properties of binary liquid mixtures are frequently needed in chemical processes. Specific and non–specific interactions taking place between the components of mixtures. Alcohols are strongly self-associated molecules through Hydrogen–bonding and for binary solutions rich in alcohols. Xylenes are non-associated and potential electron donors. Molecular interactions between toluene, xylenes having $-CH_3$ as electron donating group, and alkanols have been reported.[1-5] Measured densities and viscosities of xylene (o-, m- and p-), normal and branched alkanols(C_1-C_{10}) and their binary mixtures with xylene in the liquid state were reported[6-11] over the whole range of composition at different temperatures and atmospheric pressure. In the present investigation, we report density and viscosity studies of binary mixtures of m-xylene with propan-1-ol, butan-1-ol and pentan-1-ol over entire range of composition at (298.15, 303.15, 308.15, and 313.15) K at atmospheric pressure. More work has been reported about excess, transport and thermodynamic properties of binary liquid mixtures.[12-17]

1.1 Experimental Section :

M-Xylene, propan-1-ol, butan-1-ol and pentan-1-ol (s. d. fine chemicals, Lancaster, Purity > 99) were purified by standard procedures[18]. The purity of the solvents, after purification, was ascertained by comparing their densities and viscosities with the corresponding literature values at (298.15, 303.15, 308.15 and 308.15) K. The observation of table 1 reveals that the literature values and our measured values match very well. Binary mixtures were prepared by mass in airtight stoppered glass bottles. The masses were recorded on an Adairdutt balance to an accuracy of + 1 x 10^{-4} g. Densities of pure liquids and their mixtures were determined by using a 15 cm^3 bicapillary pycnometer as described earlier.[19-20] The pycnometer was calibrated using conductivity water with 0.99705 g cm^{-3} as its density[21] at 298.15K.The dynamic viscosities were measured using an Ubbelohde suspended level viscometer,[22] calibrated with conductivity water. An electronic digital stop watch with readability of + 0.01 s was used for the flow time measurements. At least three repetitions of each data reproducible to + 0.05 s were obtained, and the results were averaged. Since all flow times were greater than 200 sec and capillary radius (0.5mm) was far less than its length (50 to 60) mm, the kinetic energy and end corrections, respectively , were found to be negligible. The viscosity,(η) of the liquids was calculated by ,

$$\frac{\eta}{\eta_w} = \frac{\rho t}{\rho_w t_w} \qquad ---(1)$$

Whereρ, ρ_w and t, t_w refer to the density and flow time of the experimental liquids and water, respectively. The uncertainties in dynamic viscosities are of the order of + 0.001 m Pa.s.

2. RESULT AND DISCUSSION :

Experimental values of densities (ρ), and viscosities (η) of mixtures at (298.15, 303.15, 308.15 and 313.15) K are listed as a function of mole fraction in Table 2,3 and 4. The density values have been used to calculate excess molar volumes (V^E) using the following equation.

$$V^E = (x_1M_1 + x_2M_2)/\rho_{12} - (x_1M_1/\rho_1) - (x_2M_2/\rho_2) \qquad --(2)$$

where ρ_{12} is the density of the mixture and x_1 , M_1, ρ_1, and x_2 , M_2 , ρ_2 are the mole fraction, the molecular weight, and the density of pure components 1 and 2 , respectively.

Studies of Thermodynamics and Transport Properties of Binary solutions of o-Xylene with 2-Alkanols (C_3-C_5) at Different Temperatures

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ABSTRACT

Densities and viscosities for the binary mixtures of o-xylene with propan-2-ol, butan-2-ol and pentan-2-ol have been measured at a number of mole fractions at different temperatures (298.15, 303.15, 308.15 and 313.15) K and at atmospheric pressure. From the experimental data, excess molar volumes (V^E) and deviations in viscosities ($\Delta\eta$) have been calculated. The excess molar volumes for o-xylene with propan-2-ol and butan-2-ol system are negative at lower mole fractions of o-xylene and positive at higher mole fractions. Binary mixtures of o-xylene with pentan-2-ol give positive V^E values at all temperatures while deviations in viscosity are negative. The results have been interpreted in terms of molecular interactions. These are further fitted to the Redlich-Kister type of equation.

KEYWORDS- Density, Viscosity, o-Xylene, Propan-2-ol, Butan-2-ol, Pentan-2-ol.

I. INTRODUCTION

Thermodynamic and Transport properties of binary liquid mixtures are frequently needed in chemical processes. Specific and non–specific interactions taking place between the components of mixtures. Alcohols are strongly self-associated molecules through Hydrogen–bonding and for binary solutions rich in alcohols. Xylenes are non-associated and potential electron donors. Molecular interactions between toluene, xylenes having $-CH_3$ as electron donating group, and alkanols have been reported [1]-[5]. Measured densities and viscosities of xylene (o-, m- and p-), normal and branched alkanols(C_1-C_{10}) and their binary mixtures with xylene in the liquid state were reported [6]-[11] over the whole range of composition at different temperatures and atmospheric pressure. In the present investigation, we report density and viscosity studies of binary mixtures of o-xylene with propan-2-ol, butan-2-ol and pentan-2-ol over entire range of composition at (298.15, 303.15, 308.15 and 313.15) K at atmospheric pressure. More work has been reported about excess, transport and thermodynamic properties of binary liquid mixtures [12]-[17].

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Densities and Ultrasonic Studies of Binary Mixtures of (ortho-,meta- and para-)Xylenes with Pentan-1-ol at Different Temperature (298.15, 303.15, 308.15 and 313k)

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ABSTRACT: Density and ultrasonic velocity for binary mixtures ofortho-, meta- and para –xylenes with pentan-1-ol have been measured over the entire range of composition at different temperatures (298.15, 303.15, 308.15 and 313.15K) and atmospheric pressure .From the experimental data ,the parameters isentropic compressibility (K_s),specific acoustic impedance (Z), intermolecular free length (L_f), relative association (R_A) and molar sound velocity (R)have been calculated. In the present binary liquid mixtures, it has been observed that the uitrasonic velocity increases and $L_f$decreases in all binary systems suggesting strong specific interactions between xylenes and pentan-1-ol molecules, the acoustic impedance (Z) increases with addition of xylene molecule, suggesting strong specific interaction between unlike molecules.The decrease of K_s with x_1 (Xylenes)supports the formation of donor-acceptor complexes between xylenes and 1- pentanol molecules.

KEYWORDS: Pentan-1-ol , Xylenes, Isentropic compressibility (K_s), Specific acoustic impedance (Z). Relative association (R_A), Intermolecular free length (L_f),Molar sound velocity (R).

I. INTRODUCTION

A thorough knowledge of thermodynamic and transport properties of multicomponent liquid mixtures is essential in many industrial applications such as design calculation, heat transfer, mass transfer,fluide flow.Ultrasonic velocity measurement through liquid mixtures of non electrolytes provides an excellent tool to investigate intra and intermolecular interactions between unlike and like molecules. Alcohols exist in the form of aggregates. When they are mixed with other non electrolyte molecules, the aggregates of alcohols dissociate and form intermolecular complexes with unlike molecules .In order to investigate depolymerisation of these alcohols in the presence of other non nonelectrolyte molecules, extensive studies of ultrasonic measurements through binary liquid mixtures with alcohols as one of the components have been reported.

The excess molar volumes for all binary mixtures of 1-propanol or 2- propanol + benzene, + toluene, + o-xylene, + m-xylene and + p-xylene have been measured over the entire range of composition[1] at 298.15K.The speed of sound was measured[2-4] for primary alcohols at different temperatures.Isentropic compressibilities for binary mixtures of alcohols with methylcyclohexane were reported by Naidu and Rao[5]. The results have been discussed in terms of depolymerisation of polymerized alcohols by methyl cyclohexane. Many attempts[6-10]were made to measure the ultrasonic behavior of binary mixtures of cycloalkanes with alcohols. Swamy et al.[11] measured Ultrasonic velocities of binary mixtures of toluene with n-propanol, iso-propanol,n-butanol,iso-propanol,n-pentanol,n-hexanol,n-heptanoland cyclohexanol over the whole range of composition at 303.15K.Isentropic compressibilities and the deviations from linear dependence of isentropic compressibility on volume fraction of toluene have been calculated.Ultrasonic behaviour of binary liquid mixtures of benzene, toluene, o-, m-, p-xylenes with triethyl amine was reported by Reddy et al.[12]Ultrasonic velocities in binary liquid mixtures of m-xylene, o-xylene, carbon tetrachloride and tolune in nitrobenzene were obtained by Jajoo et al.[13]More work has been reported about excess, sonochemical and thermodynamic properties of binary liquid mixtures.[14-21]

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Prof. Shah Ayaz Ahd.

کرشن چندر کی افسانہ نگاری اور فن اسلوب

ڈاکٹر شاہ ایاز احمد

اُردو میں افسانہ مغرب میں پیدا شدہ صنعتی تبدیلیوں کے زیر اثر وجود میں آیا۔ اُردو افسانہ کی خوش قسمتی یہ بھی رہی ہے کہ اسے ابتداء میں دو قد آور اور اہم افسانہ نگاروں کی سربراہی حاصل ہوگئی۔ اُن میں ایک تو پریم چند تھے جنہیں حقیقت نگاری پر لکھنے والوں کا باوا آدم کہا جاتا ہے اور دوسرے سجاد حیدر یلدرم جو رومانیت کا زیر اثر لکھنے والوں کے میر کارواں تھے۔ اردو افسانہ محو سفر رہا، نئے انقلابات آتے گئے۔ ترقی پسند تحریک کی روایت نے بعد کو دنیا ادب کو عظیم فنکاروں سے نوازا۔ منٹو، کرشن چندر، راجندر سنگھ بیدی، عصمت چغتائی اور قرۃ العین حیدر جیسے ادب نوازوں نے اپنی کہانیوں میں نئے نئے نظریے پیش کئے۔ اُسی طرح جیسے کوئی کیمیا گر جدید نتائج کے لئے تجربات کرتا ہو۔

کرشن چندر نے اپنی تحریروں میں سماجی سچائی کو کسی آئینے کی طرح دکھایا۔ کوئی اسلوب تکنیک یا وسیلۂ اظہار ہو جس کا استعمال کرشن چندر نے نہ کیا ہو۔ ڈاکٹر بیگ احساس کے الفاظ میں ''انہیں جدید افسانے کا پیش رو کہا جاسکتا ہے۔ خواہ بعض نقاد اسے تسلیم کریں یا نہ کریں لیکن حقیقت ہے کہ اُردو افسانوں میں کرشن چندر کے افسانے نے جتنا اثر چھوڑا ہے ان میں سوائے پریم چند کے اور کسی کا نام نہیں لیا جاسکتا۔ کرشن چندر ایک پورے عہد کا نام ہے۔'' ہمارا سماج پورا کنبہ ہے۔ کئی ذاتیں، تہذیبیں ایک ساتھ اثر انداز ہے۔ اُس وقت تک ادب خاص کر افسانہ نگاری نے سیاست کو اپنا موضوع نہ بنایا تھا۔ افسانہ نگار اخلاقی بیداری کی بات کرتے تھے لیکن سیاسی بیداری کا مسئلہ نہیں چھیڑتے تھے نہ ہی صاف لفظوں میں ظلم اور ظالم کی مخالفت کرتے تھے۔

پریم چند کا مشہور قول جو انہوں نے انجمن ترقی پسند مصنفین کے پہلے اجلاس کی صدارت کرتے ہوئے کہا تھا۔ ''ہماری کسوٹی پر وہ ادب کھرا اترے گا جس میں تفکر ہو۔ آزادی کا جذبہ ہو، تعمیر کی روح، زندگی کی حقیقتوں کی روشنی ہو جو ہم میں تڑپ، ہنگامہ اور بے چینی پیدا کردے۔ سلائے نہیں، کیونکہ اب زیادہ سونا موت کی علامت ہے۔''

ترقی پسند تحریک نے ادب برائے زندگی کا عظیم نظریہ پیش کیا۔ جس کے تحت سماج کے چھپے ہوئے گوشوں تک ادیبوں کی نگاہ پہنچی جہاں اس سے قبل توجہ نہیں دیا۔ اس تحریک نے ادب کو عام آدمی تک پہنچادیا۔ جب عوام کو ادب میں اپنے دکھ درد کی حقیقی تصویر دکھائی دی تو فطری طور پر ان کی دلچسپی بڑھی اور افسانہ لوگوں سے قریب تر ہوگیا۔

کرشن چندر بلاشبہ رواں دواں قلم کے مالک ہے۔ ادبی ذوق کی ابتداء کالج کے زمانہ سے ہوچکی تھی۔ اپنے ایک استاد پر مزاحیہ خاکہ ''پروفیسر بلیکی'' لکھا اور شائع کرایا۔ ان کا پہلا افسانہ ''یرقان'' کے نام سے لکھا جو ۱۹۳۶ء میں شائع ہوا۔ تعلیم مکمل کرنے کے بعد کرشن چندر نے افسانہ نگاری کی طرف پوری توجہ دی۔ اُن کا پہلا افسانوی مجموعہ ''طلسم خیال'' ۱۹۳۹ء میں شائع ہوا۔ ۱۹۴۰ء میں ''نئے زاویے'' کے نام سے ایک مجموعہ آیا جس میں افسانوں کے علاوہ مضامین اور کچھ شاعری بھی تھی۔ کرشن چندر کا پہلا ناول شکست ۱۹۴۳ء میں شائع ہوا۔

اسی دوران کرشن چندر نے فلمی سفر بھی کیا مگر ناکامی ہاتھ آئی۔ اس کے بعد پھر ادب دنیا کا رخ کیا۔ ''مہالکشمی کا پل''، ''دوسری موت''، ''بت جاگتے ہیں''، ''ڈھلوان کے نیچے''، ''پورے چاند کی رات''، ''علی آباد کے سرائے'' وغیرہ افسانے اسی دور میں تحریر کئے گئے۔ کرشن چندر نے اپنے مشاہدات اور تجربات کو موضوعات میں یوسمیٹا ہے کہ ہم اُن میں زندگی کی تابناکی، دکھ درد، احساسِ کمتری، احساس برتری، طمع وحرص جیسی چیزوں کو واضح دیکھ سکتے ہیں اور یہ احساس ہمیں تخیل بھی دیتا ہے تو کبھی حقیقی دنیا کی تصویر دکھاتا ہے۔ کرشن چندر کے افسانے کا مرکز معاشرے کی تعمیر ہے۔ وہ سماج کے مختلف عناصر سے طرزِ حیات کو جینے کا سلیقہ سکھاتے ہیں۔ اُن کی کہانی میں جگہ جگہ فطری حسن دکھائی دیتا ہے وہی رومانی فضا تیار کر کے کرداروں کو مزید حسین بنادیتے ہیں

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Green Nanotechnology: A Review on Synthesis of Silver Nanoparticles an Eco-friendly Approach

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ABSTRACT

Green synthesis is required to avoid the production of unwanted or harmful by products through the buildup of sustainable and eco-friendly synthesis. The field of nanotechnology is the most dynamic region of research in material sciences and the synthesis of nanoparticles (NPs) is picking up significantly throughout the world. To avoid the chemical toxicity, biosynthesis of metal nanoparticles is proposed as a cost effective and environmentally friendly alternative. Aloe vera extract was processed using a green and facial method. The particle size of silver nanoparticles (AgNPs) could be turned by varying both time and temperature. Aloe vera leaf extract is a medicinal agent with antibacterial effect. Constituent of aloe vera leaves include lignin, hemicelluloses and pectins which can be used in reduction of silver ions to produce as AgNPs with antibacterial activity. AgNPs showed highest antifungal activity. AgNPs are used for a wide range commercial reasons to restrict microbial growth. The increasing use of silver nano particles in modern materials ensures they will find their way into environmental system. AgNPs prepared by physical, chemical and biological synthesis. This review article is focus on green synthesis of NPs and synthesis of AgNPs by using Aloe Vera plant.

KEYWORDS: Green Chemistry, Silver nanoparticles, Eco-friendly, Antimicrobial activity.

INTRODUCTION

The nanoparticles are used to described a particle with size in the range of 1-100 nm. Its nanotechnology approaches to control disease in human and plant have recently been increasing greatly and the unique physicochemical properties of nano-size metal particles make them successful in biology and medicine[1].

Nanoparticles (NPs) are usually defined as a particle of matter that is between 1-100 nanometers (nm) in diameter. Nanotechnology is important field of modern research deal with design and synthesis of NPs [2]. NPs have wide range of applications in areas such as health care, cosmetics, food and feed, environmental health, mechanics, optics, medical science, chemical industries, electronics, space industries, energy science, optoelectronics, catalysis, single electron transistors, light emitters, non-linear optical devices and photo electrochemical applications as shown in fig. 2[3-8]. Out of them silver nanoparticles (AgNPs) have unique optical, electrical, and thermal properties. An increasingly common applications is the use of AgNPs for antimicrobial coatings and many textiles, keyboards, wound dressings and biochemical devices[9,10]. AgNPs are most widely used sterilizing nanomaterials in consuming and medicinal products, for instant, textiles, food storage bags, refrigerator surfaces and personal care products. AgNPs are widely used as probes for Surface Enhanced Roman Scattering (SERS) and Melal Enhanced Fluorescence (MEF) compare to other noble metal nanoparticles, AgNPs exhibit more advantages for probes such as higher extinction coefficients, sharper extinction bonds, and high field enhancements[9]. Green chemistry is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances[10]. Nanotechnology also lower costs produces stronger and lighter wind turbines, improves fuel efficiency and thermal insulation of some nano components can save energy as shown in fig. 1[11]. The properties of some nano materials make them ideal for improving early diagnosis and treatment of neurodegenerative diseases or cancer. AgNPs plays an important role in nanoscience and nanotechnology particularly in nanomedicine. AgNPs have been focused on potential applications in cancer diagnosis and therapy. Multifunctional bio applications of AgNPs are antibacterial, anti-inflammatory, antiangiogenic and anticancer activity of AgNPs. Application of AgNPs is anticancer agent and have ultimately enhanced the tumor-killing effect of anticancer drugs [12]. Nanotechnology is the technology of future and has revolutionized all fields of medicine, agriculture, environmental and electronics by providing abilities as multi-task applications. Basically, green chemistry is the eco-friendly way to produce materials with reduced usage and safe materials and if not, fully few issues associated with nanotoxicology and hazards can be handled to a good extend with green approaches of synthesis "Green synthesis" or "Green Nanotechnology" is a new platform to nano synthesis procedures [13-16].

5-6+14 = 19.6

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A SYSTEMATIC REVIEW ON NOVEL CORONAVIRUS (COVID-19): KEYS TO ORIGIN, SYMPTOMS, AND PRECAUTIONS

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AUTHORS' CONTRIBUTIONS

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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Systematic Review Article

ABSTRACT

The world is facing new pandemic situation due to corona disease infection and adverse effects on whole world as well as on human daily life. The (COVID-19) i.e. the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) responsible for corona disease. In December 2019, several patients from Wuhan, China were admitted with symptoms of pneumonia. After a few weeks, it spread to the many parts of China and a later to other countries of the world causes corona disease. This virus is supposed to get transferred from bat to human and afterward infected human to healthy human in it's periphery which caused respiratory-related diseases. As this virus is found for very initial time, so no specific medicine is available for such infection; Hence, on the basis of prior symptoms and observations WHO prepared circulated advisory for precautionary measures needed to prevent the contamination and spreading of the disease. Due to most of the countries are affected by COVID-19, it is not only affected humans globally but also affected each and every aspect of life on earth such as science and technology, religion, educational disruption, the lockdown of most of the countries, financial markets, global economy, entertainment industries, unemployment, transportation, global tourism etc.

Keywords: COVID-19; coronavirus; precautions; effects.

1. INTRODUCTION

A mysterious new strain of virus SARS-CoV-2 commonly called corona which leads to death over 4,632 population in China and affected more than thousands of peoples, most of the part of world is infected like America, Italy, France, India, and many other countries. The novel coronavirus belonged to the family of viruse named which is given from its appearance like spike proteins on their shell. It is like the structure of sun so name as the corona which comes from latin word crown [1]. Coronaviruses (CoVs) are a big family of viruses, numerous of which affected the respiratory system of infected persons and causes Severe Acute Respiratory Syndrome [1,2]. SARS-CoV-2 are belonging to the nidovirales order and coronaviridae family which are having four genera namely alpha-, beta-, gamma- and delta-CoV. All CoVs are presently identified to origin disease in humans to belong to the alpha- or the beta-CoV. Many of these CoVs can causes infection in animal's species like bats, cattle, and camels. The virus that is frequently infected from an animal to a human is called a zoonotic virus. When a virus passes from animals to humans for the first time it is called a spillover event [3,4]. According to WHO,

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INTRODUCTION

The nanoparticles are used to described a particle with size in the range of 1-100 nm. Its nanotechnology approaches to control disease in human and plant have recently been increasing greatly and the unique physicochemical properties of nano-size metal particles make them successful in biology and medicine[1].

Nanoparticles (NPs) are usually defined as a particle of matter that is between 1-100 nanometers (nm) in diameter. Nanotechnology is important field of modern research deal with design and synthesis of NPs [2]. NPs have wide range of applications in areas such as health care, cosmetics, food and feed, environmental health, mechanics, optics, medical science, chemical industries, electronics, space industries, energy science, optoelectronics, catalysis, single electron transistors, light emitters, non-linear optical devices and photo electrochemical applications as shown in fig. 2[3-8]. Out of them silver nanoparticles (AgNPs) have unique optical, electrical, and thermal properties. An increasingly common applications is the use of AgNPs for antimicrobial coatings and many textiles, keyboards, wound dressings and biochemical devices[9,10]. AgNPs are most widely used sterilizing nanomaterials in consuming and medicinal products, for instant, textiles, food storage bags, refrigerator surfaces and personal care products. AgNPs are widely used as probes for Surface Enhanced Roman Scattering (SERS) and Melal Enhanced Fluorescence (MEF) compare to other noble metal nanoparticles, AgNPs exhibit more advantages for probes such as higher extinction coefficients, sharper extinction bonds, and high field enhancements[9]. Green chemistry is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances[10]. Nanotechnology also lower costs produces stronger and lighter wind turbines, improves fuel efficiency and thermal insulation of some nano components can save energy as shown in fig. 1[11]. The properties of some nano materials make them ideal for improving early diagnosis and treatment of neurodegenerative diseases or cancer. AgNPs plays an important role in nanoscience and nanotechnology particularly in nanomedicine. AgNPs have been focused on potential applications in cancer diagnosis and therapy. Multifunctional bio applications of AgNPs are antibacterial, anti-inflammatory, antiangiogenic and anticancer activity of AgNPs. Application of AgNPs is anticancer agent and have ultimately enhanced the tumor-killing effect of anticancer drugs [12]. Nanotechnology is the technology of future and has revolutionized all fields of medicine, agriculture, environmental and electronics by providing abilities as multi-task applications. Basically, green chemistry is the eco-friendly way to produce materials with reduced usage and safe materials and if not, fully few issues associated with nanotoxicology and hazards can be handled to a good extend with green approaches of synthesis "Green synthesis" or "Green Nanotechnology" is a new platform to nano synthesis procedures [13-16].

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२. डॉ. बाबासाहेब आंबेडकरांचे आर्थिक विचार आणि सद्यस्थितीतील उपयुक्तता

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सारांश

भारतीय घटनेचे शिल्पकार म्हणून डॉ. बाबासाहेब आंबेडकर यांचा संपूर्ण भारतीयांना आणि जगाला परिचय आहे. त्यांचे ज्ञान फक्त कायदेशास्त्रा पुरते मर्यादित नव्हते तर त्यांनी विज्ञानाच्या विविध शाखांमध्ये म्हणजेच समाजशास्त्र, राज्यशास्त्र, मानववंशशास्त्र, अर्थशास्त्र आणि धर्मशास्त्र या विषयावर अभ्यासपूर्ण लेखन केलेले आहे. एक महान समाजसुधारक, भारतातील पददलितांचा कैवारी, मानवी हक्कांचे संरक्षणकरर्त, शिक्षणतज्ञ, पत्रकार म्हणून त्यांना मान्यताही मिळाली. परंतु त्यांच्या बहुविध व्यक्तिमत्त्वाचा एक महत्त्वपूर्ण पैलू मात्र अजूनही दुर्लक्षित राहिलेला आहे आणि तो म्हणजे त्यांनी अर्थतज्ञ म्हणून बजावलेली कामगिरी प्रस्तुत शोधनिबंध डॉ.बाबासाहेब आंबेडकर यांच्या आर्थिक विचारांचा मागोवा घेऊन त्या आर्थिक विचारांची प्रासंगिकता आजचे अर्थिक प्रश्न समस्या सोडविण्यासाठी कसे मार्गदर्शक होऊ शकतात याविषयी अभ्यास मत मांडलेले आहे.

प्रास्तविक

डॉ. बाबासाहेब आंबेडकर अर्थशास्त्राचे विद्यार्थी होते. त्यांनी परदेशी विद्यापीठांच्या अर्थशास्त्र या विषयातील तीन पदव्या प्राप्त केल्या होत्या.भारतात आल्यानंतर त्यांनी मुंबईच्या सिडनेहॅम महाविद्यालयात अर्थशास्त्राचे प्राध्यापक म्हणून काही काळ नोकरी केली. 1926 मध्ये मुंबईच्या विधान मंडळावर सदस्य म्हणून नियुक्ती झाल्यानंतर अर्थसंकल्पावर त्यांची भाषणं अभ्यासपूर्ण आहेत. त्यांनी विधिमंडळात काही विधेयके मांडली. त्यामध्ये खोत पद्धती नष्ट झाली पाहिजे, सावकारी नियंत्रण, महार वतन नष्ट झाली पाहिजेत, भारतीय समाजाने त्यांच्या आर्थिक विचारांकडे दुर्लक्ष करून त्यांच्यावर अन्याय केला आहे. सर्वसामान्य माणसाच्या बाबतीत डॉ. आंबेडकर यांचे अर्थशास्त्रीय कामगिरीबद्दलच्या अज्ञानाचे ठीक आहे. परंतु अर्थशास्त्राचे अभ्यासकांचे काय? प्रस्तुत शोधनिबंधामध्ये आंबेडकरांच्या अर्थशास्त्रीय विचारांचा शोध घेऊन त्यांची प्रासंगिकता मांडण्याचा प्रयत्न केलेला आहे.

16. Dr. Babasaheb Ambedkar and Women Empowerment

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Abstract

India has had a male dominated culture since pre-independence times. Decisions in the family whether economic, social or any other, were taken by the men in the family. Men did not give women any rights. Even women of that time were made to believe that there is nothing wrong in being dominated by men. But after independence, women in the country were made aware of their rights and duties just like men. Many social reformers made efforts in this regard. Among such social reformers, Dr. Babasaheb Ambedkar's name has to be mentioned first. When Dr. Babasaheb Ambedkar became the first law minister of independent India, he made efforts at the government level for women's right to justice and women's empowerment. Dr. Babasaheb Ambedkar's views on women empowerment were not accepted. Even then, most of the landlord's wives, had taken to the streets along with other women against Dr. Babasaheb Ambedkar. The main reason why women in the society do not want equal rights with men is the illiteracy among women and recognition of patriarchal culture. However, Dr. Babasaheb Ambedkar came to India after studying in an advanced country of the world.

The importance of women's capacity and participation in the economic development of the country was known to Dr. Babasaheb Ambedkar. Half of the country's population is women. To make women economically independent, they should have the freedom to make decisions in the family, women should have the freedom to choose any profession, to do business and to have a job. When women become self-sufficient, economically and socially capable, the development process will gain momentum. Dr. Babasaheb Ambedkar made efforts for this. But initially Dr. Babasaheb's efforts were not successful. Politicians and women activists who decide policy in the country had to pay attention to Dr. Babasaheb Ambedkar's work of women empowerment. Thanks to the efforts of Dr. Babasaheb Ambedkar, women have become empowered today and

INDUSTRY 4.0 AND INDIA : OPPORTUNITY AND CHALLENGES

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ABSTRACT: -

The Industrial Revolution led to the invention of new devices. From about 1784, steam-powered automatic machines began to be used for production. This was the first stage of the Industrial Revolution. About 90 years later, electricity was invented and machines were made to run on electricity. From about 1870, electric automatic machines began to be used for production. It was the second stage of the Industrial Revolution. After this the production technique began to change radically. Computer systems and information technology began to be used for production. Production of various high-qualityequipment's and commodities was started. This innovative change has beentaking place in the industrial sector since 1969. This came to be called the Third Industrial Revolution. Since 2016 there have been incredible changes in production techniques and quality. Automation came in robotic technology, artificial intelligence, machine learning, nanotechnology and manufacturing. The whole human life became subject to machines. It is considered the fourth stage of the Industrial Revolution. In this fourth phase, India has a chance to lead. India has the highest number of highly educated youth in the world. India is the second largest English-speaking country in the world, with India having the second highest number of Internet users in the world. This has provided a great opportunity to India during the Fourth Industrial Revolution.

KEYWORDS: -

Industrial Revaluation, Opportunities, Challenges, Steamenergy, electricity, Artificial intelligence, Machine learning etc.

INTRODUCTION: -

The wheel was invented in mechanics and human life became faster. The year 1700 AD has become very important in the economic history of the world. In this century, humans have tried and succeeded in inventing new things. Labour incentive techniques were improved and human labor was mechanized. This came to be known as industrialization. After 1750, competition for the use of machinery for the manufacture of consumer utilities goods in Europe. And it was from this competition that steam-powered automated machines were created. The steam engine was used for production in 1784. With the help of steam-powered automated machines, new things began to be created for consumer goods. This was a very important and revolutionary change of industrialization. Man is an intelligent creature. Man, constantly strives to create new things. It is human nature to constantly improve production techniques. This led to the invention of electricity in the late 18^{th} century, in 1870, and the subsequent development of electrically powered devices. This led to a radical change in production techniques. That is, after the invention of electricity, new consumer utilities goods and new equipment began to be created using electricity. This gradual industrial development was called the 'Industrial Revolution'. At the time of the First Industrial Revolution of 1784 and the Second Industrial Revolution of 1870, India (British India) was dependent on British government. So, the British kept India away from the Industrial Revolution. After India's independence in August 1947, the responsibility for India's overall economic development fell on the Indian rulers. The role of industrialization in the overall development of the country was made

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२४. नाशिक जिल्ह्यातील कृषी क्षेत्रावर कोवीड-१९ चा परिणाम

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प्रस्तावणा

जगात 150 पेक्षा अधिक देशांमध्ये कारोना विषाणूचा संसर्ग पसरलेला आहे. 'या विषाणूचा पहिला रुग्ण चीन मध्ये 10 डिसेंबर 2019 मध्ये आढळून आला.'[1] असे वृत्त अमेरिकेमधील 'वॉल स्ट्रीट जनरल' मध्ये प्रकाशित झाले. या नंतर कोरोना विषाणूचा संसर्ग जगातील विविध देशामध्ये वेगाणे पसरला. भारतात देखील कोरोनाचा संसर्ग चीन मधुनच झाला. 'चीनच्या वुहान विद्यापीठात मेडिकलच्या तीसऱ्या वर्षात शिक्षण घेणाऱ्या विद्यार्थीनीला कोरोनाची बाधा झाली ही विद्यार्थीनी सुट्यांमध्ये भारतात परतली तेव्हा 20 जानेवारी 2020 रोजी तीचा कारोना अहवाल पॉझिटिव्ह आला.'[2] ही विद्यार्थीनी केरळ राज्यांची रहिवाशी होती. महाराष्ट्रात देखील '09 मार्च 2020 रोजी पुण्यात पहिला कारोना रुग्ण आढळून आला.'[3] आणि संपूर्ण महाराष्ट्रात कोरोना विषाणूचा उद्रेकच झाला. 'नाशिक जिल्ह्यात देखील कोरोनाचा शिरकाव मार्च महिन्याच्या 29 तारखेला झाला.'[4] कोरोनाचा वाढता धोका लक्षात घेउन 'केंद्र शासनाने 22 मार्च 2020 रोजी देशात एक दिवशीय जनता कर्फ्यू घोषीत केला. याला देशातील जनतेने उत्स्फुर्तपणे प्रतिसाद दिला. त्यानंतर 25 मार्च 2020 पासून संपूर्ण देशात लॉकडाऊन लागू करण्यात आले.'[5]

जनतेच्या मनात कोरोना संसर्गाची भिती असल्यामूळे देशातील सर्व स्तरावरील व सर्व क्षेत्रातील जनतेने लॉकडाऊन नियमांचे काटेकोर पालन केले. या लॉकडाऊनचा फटका देशातील शेती, उद्योग व व्यापार/सेवा या तीनही क्षेत्रांना बसला. उद्योग आणि व्यापार सर्वाधिक बाधित झाले. देशाचा आर्थिक विकास दर घसरु लागला. 2020–21 या आर्थिक वर्षात भारताचा जीडीपी विकास दर घसरु लागला '2020–21 या आर्थिक वर्षात भारताचा जीडीपी विकास दर उणे 7.3% इतका घसरला.'[6] भारताला स्वतंत्र्य मिळाल्यानंतर पहिल्यांदाच देशाचा विकास दर ऐवढ्या नीचांकी पातळीवर आला. या घसरणीत कृषी क्षेत्राचा देखील समावेश होता. कृषी क्षेत्राच्या विकासासाठी शासन स्तरावरुन विविध धोरणात्मक उपाययोजना आखल्या जातात. मात्र प्रभावी अंमलबजावणीत काही उणीवा व अडथळे निम्रण होत असल्यामुळे कृषीचा विकास दर हा कधीच पाच टक्यांच्या पुढे गेला नाही. भारतात कोरोना संसर्गाचा प्रसार झाल्यानंतर जे निर्बंध लादण्यात आले त्याचे अत्यंत प्रतिकुल परिणाम कृषी क्षेत्रावर झाले असल्याचे शेतकरी वर्गाकडुन सांगितले जाते. प्रस्तुत संशोधनात लेखात उत्तर महाराष्ट्रातील नाशिक जिल्ह्यातील कृषी क्षेत्रावर झालेला परिणाम विश्लेषीत करण्यात आलेला आहेत.

संशोधन लेखची उदिष्टे

1. नाशिक जिल्ह्यातील कृषी पिक रचनेवरील कोवीडचा परिणाम अभ्यासणे.
2. नाशिक जिल्ह्यातील कृषी विपणनावरील कोवीडचा परिणाम अभ्यासणे.

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गोषवारा : (Abstract)-

१ डिसेंम्बर २०१९ मध्ये चीनच्या वूहान(हुबेई)पासून निर्माण झालेल्या कोरोना विषाणूचा(व्हायरस) प्रसार जून २०२१ पर्यंत भारतासह १९४ देशात झाला.या विषाणूमुळे जगातील १७५.२ दशलक्ष लोकांना संसर्ग होऊन ३७.७८ लक्ष लोकांना आपले प्राण गमवावे लागले आहेत(1). महामारीमुळे फक्त जीवितहानी झाली आहे असे नसून प्रत्यक्ष-अप्रत्यक्ष ७० % लोकांचे जीवन प्रभावित होऊन आर्थिक व सामाजिक स्तरावर हाहाकार निर्माण झालेला आहे. जागतिक आरोग्य संघटनेच्या अहवालानुसार भारतात अमेरिकेनंतर सर्वाधिक कोरोना संसर्ग झालेले रुग्ण आणि अमेरिका,ब्राझील नंतर सर्वाधिक जीवितहानी झाली(2).म्हणून कोविड-19 मुळे भारतीय अर्थव्यवस्थेवर कोणते आर्थिक परिणाम झाले आहेत याचे अध्ययन प्रस्तुत शोधनिबंधातून करण्यात आले आहे.

सूचकशब्द(Key Words): भारतीय अर्थव्यवस्था,कोरोना,कोविड-१९,महामारी,भारतीय अर्थव्यवस्था

प्रस्तावना: (Introduction)-

कोरोना व्हायरस विषाणूचा गट असून [illegible] प्राणी व पक्षांना विविध रोग होतात.मानवास या विषाणूचा संसर्ग श्वसन मार्गद्वारे होतो.१९२० च्या दशकात पाळीव कोंबड्यांना आयबीव्ही विषाणूमुळे तीव्र श्वसन संसर्ग, १९४० च्या दशकात एमएचव्ही आणि टीजीव्ही विषाणूचा संसर्ग, १९६० च्या दशकात २२९ इ आणि ओसी ४३, २००३ मध्ये एचसीओव्हिएनएल ६३, २००४ मध्ये एचकेयू १,२०१२ मध्ये मेर्स सीओव्ही आणि २०१९ मध्ये एसएआरएस कोव्ह-२ हे मानवी कोरोना व्हायरस आढळून आले.परंतु २०१९ मध्ये वूहान मध्ये आढळून आलेला कोरोना व्हायरस यास कोविड -१९ म्हणून संबोधण्यात येत आहे.हा व्हायरस इतर कोरोना व्हायरस पेक्षा अधिक तीव्र व स्वररचना बदलणारा असल्याने अधिक प्राणघातक ठरलेला (3).त्यामुळे जगभरात जवळपास सर्वच देश आणि तेथील लोकसंख्या प्रत्यक्ष-अप्रत्यक्ष प्रभावित झालेली आहे. ओईसीडी च्या अहवालानुसार,कोरोना पूर्वी जगभरात 1.40 कोटी लोक बेरोजगार होते.कोरोनानंतर मात्र त्यात दुप्पटीने वाढ होण्याचा अंदाज आहे.जागतिक व्यापार संघटनेच्या मते,जगभरातील 2.5 कोटी लोकांच्या नोकऱ्या जातील 2020 मध्ये कामगारांचे अंदाजे 860 ते 3400 [illegible] चे वेतन बुडणार आहे.त्यामुळे मागणीच्या बाजूने कमतरता निर्माण होऊन व्यापारी वर्गाचे सुद्धा प्रचंड नुकसान होणार आहे.तसेच 90 लाख ते 3.5 कोटी कामगारांना वर्किंग पावर्टी मध्ये असतील.म्हणजे काम असेल पण पुरेसा मोबदला नाही.एंजल गुरिया(ओईसीडी चे जनरल सेक्रेटरी)यांच्या मते,जगाचा विकासदर फक्त [illegible]

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जागतिक आरोग्य संघटनेने ११ मार्च २०२० रोजी कोरोनाला जागतिक महामारी घोषित [illegible] जानेवारी २०१९ (केरळ मधील त्रिशुर येथे [illegible] आढळून आली(6) [illegible] २०२१

"शाश्वतआर्थिक विकासासाठी पर्यावरण संवर्धनाची आवश्यकता"

डॉ. ज्ञानेश्वर नामदेव सोनवणे

सहाय्यक प्राध्यापक, कर्मवीर भाऊसाहेब हिरे, कला, विज्ञान आणि वाणिज्य महाविद्यालय,निमगाव,ता.-मालेगाव,जि.-नाशिक

गोषवारा:

भावी पिढीच्या गरजा पूर्ण करण्याची पर्यावरणीय क्षमता कायम ठेवून पर्यावरणाचा ऱ्हास न करता वर्तमान पिढीच्या सर्व गरज पूर्ण करणारा विकास म्हणजे शाश्वत विकास (जागतिक पर्यावरण आणि विकास आयोग) (१). पर्यावरणाचा आणि मानवाच्या आर्थिक विकासाचा अतूट संबंध असल्याने पर्यावरण संवर्धन हा शाश्वत विकासाचा आधार स्तंभ ठरतो. पर्यावरण सवर्धना शिवाय शाश्वत आर्थिक विकास केवळ अशक्य असतो. परंतु जीडीपी वाढीशी संबंधित आर्थिक विकास साध्य करण्यासाठी नैसर्गिक साधनांचे अतिरिक्त दोहन होऊन पर्यावरणाचा ऱ्हास होत आहे. जीडीपी वाढीस प्रमुख आणि पर्यावरणास दुय्यम स्थान दिल्यामुळे संपुर्ण इकोसिस्टिमला धोका पोहोचून जागतिक तापमान वाढ, समुद्रजल पातळीत वाढ, चक्रीवादळे, पूर. दुष्काळ, ओझोन क्षय, आम्लपर्जन्य यासारख्या आपत्ती निर्माण होऊन पर्यावरणावर आधारित कृषिप्रधान अर्थव्यवस्थेतील आर्थिक विकास बाधित आणि खंडित होत आहे. अलीकडील काळात पर्यावरणाचा ऱ्हास करून केवळ तात्पुरता अथवा वर्तमान पिढीचा विचार करून साध्य केलेला विकास हा अशाश्वत असतो आणि पर्यावरण सवर्धना शिवाय शाश्वत विकास केवळ अशक्य आहे हे लक्षात आल्यामुळे शाश्वत आर्थिक विकास साध्य करण्याचे उद्दिष्टे सर्व देशामध्ये स्वीकारण्यात आलेले आहे. विकास ही निरंतर चालणारी प्रक्रिया असताना त्यात विकासाचे सातत्य कायम अथवा शाश्वत ठेवणे हे एक मोठे आव्हान ठरलेले आहे. यास्तव भविष्यकालीन चिरस्थायी आर्थिक विकासासाठी पर्यावरण संवर्धनाची आवश्यकता निर्माण झालेली आहे.

सूचकशब्द (Keywords): नैसर्गिकसंसाधने, पर्यावरणसंवर्धन, आर्थिकविकास,शाश्वतविकास,

प्रस्तावना(Introduction):

विकास ही सतत चालणारी प्रक्रिया असून विकासाचे आर्थिक, सामाजिक, राजकीय, सांस्कृतिक, विकास असे अनेक पैलू आहेत. त्यापैकी आर्थिक विकास तवास्तव सकल उत्पादनात वाढ अथवा दरडोई उतपन्नतील दीर्घ कालीन वृद्धी मोजली जाते (२). एकोणिसाव्या शतकाच्या उत्तरार्धापासून सर्वच अर्थव्यवस्थांमध्ये जलद आर्थिक विकास घडवून आणण्याचे उद्दिष्टे स्वीकारून जलद आर्थिक विकासासाठी नैसर्गिक साधनसंपत्तीचा अधिकाधिक वापर करण्याचे धोरण स्वीकारण्यात आले. त्यामुळे एका बाजूला

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गोषवारा (Abstract):

शिक्षण हे व्यक्तीच्या सर्वांगीण विकासाचे एक महत्त्वपूर्ण साधन आहे.शिक्षण ही एक प्रक्रिया असून अध्यापन,अध्ययन आणि मूल्यमापन या तीन घटकांसाठी सर्वत्र राबवली जाते.प्राचीन काळी विद्यार्थी गुरुकुलात जाऊन, इंग्रजी अंमलानंतर शाळेत जाऊन आणि अलीकडील काळात प्रामुख्याने कोरोनाच्या पर्शवभूमीवर घरी बसून ई-साधनांच्या साहाय्याने अध्ययन करीत आहे.आजच्या संकटाच्या काळात ई-साधनांची अध्यानातील उपयुक्तता अनेक दृष्टीने सिध्द होत असताना उच्च शिक्षण क्षेत्रातील त्रुटी व उणिवांच्या पार्श्वभूमीवर ग्रामीण भागात ई साधनांच्या उपयुक्ततेची वास्तवता तपासणे कालसंगत ठरणारे आहे.

सुचकंशब्द : (keywords): ऑनलाइन शिक्षण ,ई-लर्निंग,ई-साधने

प्रस्तावना :

शिक्षण व्यक्तीच्या जीवनासह देशाच्या विकासात महत्वाची भूमिका बजावणारे साधन असून कोणत्याही समाजाच्या नवीन पिढीच्या उज्ज्वल भविष्यासाठीचा सर्वात महत्वाचा घटक बनला आहे.त्यामुळे प्राचीन काळापासून परिस्थिती सापेक्ष शिक्षणव्यवस्था निर्माण करून शिक्षणाची प्रक्रिया राबविली जाते.भारतात प्राचीनकाळी राजाश्रयातून गुरुगृही किंवा गुरुकुलात जाऊन विध्यार्जन केले जात होते.परंतु नंतरच्या काळात चारभिंतीच्या आता खडू-फळा या साधनांच्या साहाय्याने अध्यापन करणाऱ्या अध्यापकाच्या समोर बसून अध्ययन केले जात होते.परंतु अलीकडील काळात इंग्रजी माध्यमांच्या शाळांचे वाढते प्रमाण आणि जागतिकीकरणाच्या रेट्यामुळे संगणक,लॅपटॉप,मोबाईल, एलसीडी,रेडिओ,दूरदर्शन या श्राव्य व दृक्श्राव्य इलेक्ट्रॉनिक माध्यमातून झूम,गूगलमिट,गूगल क्लास रूम यासारख्या अनेक अप च्या साहाय्याने अर्थात ई-साधनांच्या साहाय्याने अध्यापन-अध्ययन केले जात आहे.परंतु कोविड -19 या जागतिक महामारीच्या काळातील लॉकडाऊन च्या पार्श्वभूमीवर ई-साधनांच्या साहाय्याने शिक्षण प्रक्रिया पूर्ण करणे ही कालसापेक्ष अपरिहार्य बनली आहे.वर्तमान आणि भविष्यातील डिजिटल पिढीसाठी आयसीटी कौशल्ये आत्मसात करणे ही काळाची गरज ठरणार आहे.(मोली.ली-2005).इंटरनेट,एक्स्ट्रानेट,सॅटेलाइट,ब्रॉडकस्ट,औडिओ, व्हिडीओ,च्या सहाय्याने होणारे ई-अध्ययन कोणत्याही वेळी,कोणत्याही ठिकाणी अध्ययनासाठी उपयुक्त आहे(उरडन आणि वेगेन-2000,होलमेस आणि गार्डनर-2006).अध्ययनातील अनेकविध पर्यायामुळे ई-अध्ययन अधिक लोकप्रिय होत आहे(चँग-2003,वू-2016).आयटीसीमुळे अध्यापन आणि अध्ययनात अधिक प्रमाणात विविधता निर्माण होत आहे(सराबदानी,जाफरजाहेद आणि शामीजानजानी-2017).ई-साधनांमुळे अध्ययनात नवोन्मेष, कौशल्ये आणि इतर लाभ विद्यार्थ्यांना मिळतात(बेकिरी,चेस,बिशाका-2010).ई-साधनांद्वारे अध्ययनाचे लाभ विद्यार्थी व विद्यापीठ या दोहोंना होतात(भुसारी,जो,चिग्रेक-2012).ई-साधनांद्वारे अध्ययनात एक लय प्राप्त

डॉ. बाबासाहेब आंबेडकरांच्या आर्थिक विचारांची उपयुक्तता

प्रा. डॉ. ज्ञानेश्वर नामदेव सोनवणे

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गोषवारा:

भारतीय राज्यघटनेचे शिल्पकार ,दलित व शोषितांचे उद्धारक, कायदेतज्ज्ञ, इतिहासतज्ज्ञ, राजनीतिज्ञ, शिक्षणतज्ज्ञ तसेच धर्म व समाजकारणाचे जाणकार म्हणून डॉ बाबासाहेब आंबेडकर हे सर्वांना सुपरिचित आहेत. तसेच ते एक जगप्रसिध्द अर्थतज्ज्ञ आहेत म्हणूनच स्वतंत्र भारताचे आर्थिक धोरण ठरविताना धोरणकर्त्यांनी डॉ .आंबेडकरांच्या विचारांना अधिक प्राधान्य दिले. आजच्या वर्तमान काळातही बाबा साहेबांचे आर्थिक विचारहे प्रासंगिकवउपयुक्त असल्याचे निदर्शनास येते.

सूचक शब्द:डॉ बाबासाहेब आंबेडकर, भारतीय अर्थव्यवस्था, आर्थिक विचार.

प्रस्तावना:

भारतरत्न डॉ .बाबासाहेब आंबेडकर हे भारतीय राज्यघटनेचे शिल्पकार आणि आधुनिक भारताचे जनक म्हणून ओळखले जातात. स्वातंत्र्योत्तर काळात भारताच्या आर्थिक नियोजनात डॉ .आंबेडकरांच्या आर्थिक विचारांचे प्रतिबिंब उमटलेले दिसून येते.त्यांच्या आर्थिक विचाराचे प्रारूप हे आर्थिक ,सामाजिक, धार्मिक ,भौतिक तंत्रज्ञान व मानवी मूल्यांचे मिश्रण आहे .त्यांनी आर्थिक विश्लेषण अनुभवावर व वैज्ञानिक मापदंडांवर आधारित केले.आपल्या आर्थिक तंत्रातरुपयाच्या प्रश्न , कृषी, उद्योग , व्यापार ,श्रमविभागणी, मजूरी, श्रमिकांचे शोषण वकल्याण, भूमी सुधारणा,जल व ऊर्जा व्यवस्थापन, सार्वजनिकआयव्यय, महिला विकास व भागीदारी ,करपद्धती यांसारख्या अनेकविध आर्थिक घटकांचा आपल्या अनेकविध ग्रंथांतून व भाषणातून परामर्श घेऊन विश्लेषण मांडलेले आहे.त्यांचे आर्थिक विचार हे एक शताब्दी पुढे असल्याने आजच्या वर्तमान स्थितीतही त्यांचीउपयुक्तता जाणवते.

शोधनिबंधाचे उद्दिष्टे:

१.डॉ. बाबासाहेब आंबेडकरांच्या आर्थिक विचारांची माहिती घेणे.

२. डॉ. आंबेडकरांच्याआर्थिक विचारांच्या उपयुक्ततेचा आढावा घेणे.

डॉ. बाबासाहेब आंबेडकरांचे आर्थिक विचार

डॉ. बाबासाहेब आंबेडकरांनी रूपयांचा प्रश्न- उगम आणि निरसन,ईस्ट इंडिया कंपनी- प्रशासन आणि अर्थनीती,ब्रिटिशभारतातीलप्रांतिकवित्ताचीउत्क्रांती, संघराज्य विरुद्ध स्वातंत्र्य, पाकिस्तान अथवा भारताची फाळणी, संस्थाने आणि अल्पसंख्याक, हिंदू स्त्रियांची उन्नती आणि अवनीती, भारतातील जाती व्यवस्था ,तिची उत्पत्ती आणि विकास यासारखे अनेक ग्रंथ लिहून आपल्या विविधांगी विचारांची आर्थिक विचारांशी सांगड घातली .

उदयोन्मुख भारतीय अर्थव्यवस्थेपुढील आव्हाने

प्रा. डॉ. डी. एन. सोनवणे

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गोषवारा: -

भारतीय अर्थव्यवस्था ही जगातील एक प्रमुख उदयोन्मुख अर्थव्यवस्था असूनएकआर्थिक महासत्ता होण्याच्या दिशेने वाटचाल करीत आहे. परंतु अर्थव्यवस्थेची ही वाटचाल निष्कंटक असेल असे मानणे भाबडेपणाचे ठरेल.कारण आर्थिक महासत्तेकडे वाटचाल करीत असताना अर्थव्यवस्थेसअनेकआव्हानांनासुद्धा सामोरे जावे लागत आहे .

सूचक शब्द: भारतीय अर्थव्यवस्था, उदयोन्मुख अर्थव्यवस्था,अर्थव्यवस्थेपुढील आव्हाने.

प्रस्तावना :-

प्राचीन काळात भारतास "सोने की चिडीया" म्हटले जात होते . आर्थिक इतिहासकारयंगरमैडिसिन यांच्या मते दहाव्या शतकापर्यंत भारतीय अर्थव्यवस्था ही जगातील सर्वात मोठी अर्थव्यवस्था होती. पहिल्या , दहाव्या व सतराव्या शतकात अनुक्रमे जागतिक जीडीपीच्या32.9% ,28.9 % आणि 24.4 % जीडीपी(GDP) हा भारताचा होता .मात्र त्यानंतर वेगवेगळ्या आक्रमणकारी आणि प्रामुख्याने इंग्रज राजवटीत भारतीय अर्थव्यवस्थेतून प्रचंड प्रमाणात आर्थिक निस्सारण होऊन भारतीय अर्थव्यवस्था दुभंगलेली, विस्कळीत व कुंठीत स्वरुपाची बनली होती.स्वातंत्र्योत्तर काळात 1950-51 पासून आर्थिक नियोजनाच्या माध्यमातून आर्थिक विकासासाठी नियोजित प्रयत्न करण्यात आले .त्यामुळे भारतीय अर्थव्यवस्थेच्या विकासाला चालना व 1991 च्या एलपीजी धोरणामुळे गती मिळाली.आर्थिक सुधारणांचा परिणाम म्हणून भारतीय अर्थव्यवस्था ही जागतिक स्तरावर एक आर्थिक महासत्ता म्हणून उदयास आली.स्वातंत्र्याचा अमृत महोत्सव साजरा केला जात असताना 2020-21 च्या आंतरराष्ट्रीय नाणेनिधीच्या जागतिक आर्थिक सर्वेक्षणानुसार, भारताचा जीडीपी9%तर पुढील तीन वर्षांत जगातील सर्वाधिक वेगाने वाढत जाणारी उदयोन्मुख अर्थव्यवस्था असणार आहे.जागतिक बँकेच्या अहवालानुसार कोरोनाचीतिसरी लाट असूनही भारतीय अर्थव्यवस्था 2021-22 मध्ये वेगाने घोडदौड करील आणि अर्थव्यवस्थेच्या वाढीचा वेगअन्य अर्थव्यवस्थांच्या तुलनेत अधिक असेल(जागतिक अर्थव्यवस्था-5.5%, चीन –8% , जपान-1.7 % , रशिया-4.3 %).रिझर्व्ह बँकेच्या पतधोरण आढाव्यात देशाची अर्थव्यवस्था 9.5 % दराने वाढण्याची शक्यता वर्तवली आहे.असे असले तरी भारतीय अर्थव्यवस्थेत सर्वच आलबेल आहे असे मानणे अंधविश्वासठरणारेआहे.कारण भारतीय अर्थव्यवस्थेपुढे वाढती बेरोजगारी, विदेशी कर्जाचा वाढता भार, लोकसंख्येचीअतिरेकी वाढ, मानव संसाधनांचा सुमार दर्जा, संसाधनांचानिम्नदर्जायासारख्या अनेक समस्या सुद्धा आहेत. या समस्यांची सोडवणूक करून शाश्वत विकासाचे उद्दिष्ट साध्य करण्याचे आव्हान भारतीय अर्थव्यवस्थेपुढे आहे.

शोधनिबंधांची उद्दिष्टे

१. भारतीय अर्थव्यवस्थेपुढीलआव्हानांचा शोध घेणे.

संशोधन प्रणाली:

उदयोन्मुख भारतीय अर्थव्यवस्थेपुढील आव्हाने या विषयावरील शोधनिबंधासाठीदुय्यम स्रोतांच्या आधारे(संदर्भग्रंथ, वेबपेजेस) तथ्य संकलन करून तथ्यांची मांडणी करण्यात आलेली आहे .

उदयोन्मुख भारतीय अर्थव्यवस्थेपुढील आव्हाने

१. वाढती बेरोजगारी:

14. Constitutionalism in India

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Introduction

Today marks the 70th anniversary of the Indian Constitution. In these seventy years, India has faced many challenges, faced many crises, but the institutional structure of the political system built by the Indian Constitution remains intact today. Has succeeded in maintaining it to this day. India has managed to maintain its faith in democratic values with maintaining its economic growth rate while battling rival neighbours like Pakistan and China. India is the largest democracy in the world. Europe and many countries in the world have as many voters. But the same number or more of the election staff carry out the election process in India every five years. What did the Indian Constitution give you? Before thinking about this, every Indian should also think about the social and political situation in the country before the constitution came into existence. With what political values was our state system working?

Research Methodology

The library method has been used for the present research article. The articles, thesis and books on constitutional amendment and constitutional process has been used as a reference for other writings.

Hypothesis

1. This research paper reviews the development of the post-independence constitution.
2. This paper also consider the challenges facing the constitution
3. It also describe the strengths of the constitution as well as the constitutional framework.

Prior to the enactment of the Constitution, India faced various difficulties. It was the first duty of the State Constitution to grant political rights in a situation where the society was suffering from thousands of years of unjust tyranny of Mughals and other dynasties. Apart from this, India had to be given a definite economic program by the Constitution as the Indian economy was in a complete disintegration during the state of British rule. The constitution was drafted by the Indian legislators against the backdrop of culturally divided caste and religion. In the eighteenth century, the newly independent countries made their own constitutions. In many

आंतरराष्ट्रीय संबंधातील नवीन राजकीय अर्थव्यवस्था

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प्रा. डॉ. मनिष सोनवणे

म.स.गा.महविद्यालय, मालेगाव

पूर्वी विकसित देश अविकसित देशांकडून कच्या मालाची खरेदी करत. आपल्या देशातील उत्पादित मालाला बाजारपेठ म्हणून अविकसित देशांचा वापर करीत त्यामुळे अविकसित देशांचे मोठ्या प्रमाणात शोषण होत होते.दुसऱ्या महायुद्धानंतर अनेक देश स्वतंत्र झाले त्या देशांमध्ये उद्योग प्रक्रिया सुरू झाली व त्याच्यातील वस्तूंचे उत्पादन होऊ लागले. त्यामुळे आम्हाला निर्यात करण्यासाठी काही व्यापारी सवलती विकसित देशांनी द्याव्यात अशा प्रकारची मागणी त्यांनी जागतिक स्तरावर करण्याला सुरुवात केली. नवीन अर्थव्यवस्थेच्या पुनर्रचनेची गरज व्यक्त करत संयुक्त राष्ट्र संघटना व त्यातील संस्थांनी अविकसित देशांच्या या मागणीला काही प्रमाणात पाठपुरावा केला त्यामुळे आज अविकसित देशांमध्ये बदल झाले. त्याचा फायदा त्यांना झालेला आपल्याला दिसून येतो. त्यासाठी अनेक द्विपक्षीय राष्ट्रीय करार करण्यात आले त्यात अनेक संस्थांचा सहभाग हा महत्त्वपूर्ण ठरला. दक्षिणेकडील राज्यांच्या मागण्या केवळ राजकीय स्वरूपाच्या नव्हत्या तर त्याला नैतिक पाठबळ सुद्धा होते या प्रश्नाकडे लक्ष वेधण्यात दक्षिणेकडील देश यशस्वी झाले.

पंडित नेहरू-

नवीन आंतरराष्ट्रीय अर्थव्यवस्था सर्वांचे हित व सर्व राष्ट्रांच्या राजकीय व आर्थिक स्वातंत्र्याच्या मान्यतेवर अधिष्ठित अशी आहे.

अकलक अल्ह-

नवीन आंतरराष्ट्रीय अर्थव्यवस्थेची मागणी सन्मान उत्पन्नाची नसून तिसऱ्या जगातील राष्ट्रात सम्मन संधी देण्याची व मिळवण्याची आहे.

फिडल कॅस्ट्रो-

नव्या जगाच्या निर्मितीची मागणी आम्ही करीत आहोत नवीन जगातील अर्थव्यवस्था समतेवर शांततेवर आधारित असावी त्याचबरोबर प्रचलित जुलमी अर्थव्यवस्था बदलून टाकावी.

दुसऱ्या महायुद्धानंतरच्या काळात आंतरराष्ट्रीय व्यापार आणि त्यासंबंधीच्या प्रश्नांवर आंतरराष्ट्रीय स्तरावर विविध संस्था, संघटना मध्ये मोठ्या प्रमाणावर चर्चा करण्यात आली. परंतु तिला मूर्तरूप १९५४ मध्ये दिले गेले. १९५४ मध्ये संयुक्त राष्ट्राच्या महासभेने नवीन आंतरराष्ट्रीय आर्थिक व्यवस्थेसंबंधीचा प्रस्ताव मंजूर केला.

१.यात राष्ट्रांची हक्क आणि कर्तव्य निश्चित करण्यात आली.

२.विकसनशील देशांना काही प्राथमिक वस्तूंची विकसित देशात निर्यात करण्याची संधी देण्यात यावी असे निश्चित करण्यात आले.

३.आंतरराष्ट्रीय क्षेत्रात खाद्यान्नाची व्यवस्था निर्माण करण्यात यावी.

४.उत्पादनाची क्षमता विकसित देशांकडून विकसनशील देशांकडे वळविण्यात यावी. ५.आंतरराष्ट्रीय व्यापार करत असताना विकसनशील देशांना व्याजदरात काही सवलती देण्यात याव्यात.

६.नवीन अंतरराष्ट्रीय आर्थिक व्यवस्था प्रभावी करण्यासाठी विकसनशील देशांनी परस्परांची सहकारी वाढवावी.

७.आंतरराष्ट्रीय व्यापाराची आचारसंहिता कार्यान्वित व्हावी.

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The Work and the Approach of the Election Commission of Liberal India

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1990 Political Economics and Political sociology are accompanied by the study of political process through electoral curriculum RS McCullum called election psychology in his science. Before the twentieth century, not much attention was paid to electoral studies. The study has become socially and psychologically analytical. The current situation is studied by international studies. Elections are studied in India in two ways. Study of Voter Behaviour and General Elections. The study of voting behaviour in the context of elections was done on the basis of social factors such as caste, religion, class and gender. Mr. Y.D. Phadke has conducted a detailed study of the Lok Sabha elections from 1952 to 1999 in which the electoral system has been studied in detail.

Different perspectives on election studies

Historical perspectives Historical perspectives specific events, the process of selection of candidates during the election, election trend these factors are taken into account. The scientific analysis of the 1945 general election in England was conducted by R. B. McCullum in 1952.

Later, election **statistics** gained importance in electoral analysis. Stuart and Rice made significant contributions. The combined results of a statistical and historical approach led to major changes in electoral analysis. Stuart and Rice preferred numerical analysis. Voter statistics began to study political trends of voters.

Behavioural studies have emerged in the United States and techniques have been developed to study human behaviour Information from Election Commission, Economic and social base of political parties, direction of trends, economics of campaign this type of election study began Since 1989, the polls conducted by various media outlets or other organizations for commercial purposes has been based on the predictable environment of the election results, which has given rise to the importance of conducting accurate constituency-wise polls[1]

The systematic approach to information is based on election surveys as well as emerging statistical methods and the interrelationships between political and non-political events in society. The systematic approach is based on election surveys as well as emerging statistical methods. In India, Rajni Kothari and Tarun Seth J.C. Anand have studied this pattern.

At present the study of electoral behaviour of different countries is being studied from an **international perspective**. The electoral process of two or more countries is being studied with the help of democratic institutions, election process, voting percentage, faith on democracy this study is based on a scientific survey. At present, the study of electoral behaviour in different countries is being studied from an international perspective. Suhas Palashikar , Yogendra Yadav have studied democracy in various countries of South Asia on the basis of a scientific survey.

Importance of Voting Right

The right to show consent or disapproval of a scheme or proposal and to choose one or more of the candidates to stand for office is called the right to vote. The real basic purpose of voting is to involve as many people as possible in the regulation of social life. Democracy

"A COMPARATIVE STUDY OF TREES AND POPULATION IN THE EASTERN AND WESTERN PARTS OF MALEGAON CITY"

Dr. U. P. Suryawanshi

Dept. of Geography M. S. G. College Malegaon Camp, Nashik

INTRODUCTION:

Malegaon city is located in Nashik district of Maharashtra state. It is located on the Mumbai-Agra National Highway northeast of Mumbai. And north of Manmad. The fort was built by Naroshankar (1740) and was used as a fortress in the North Peshwa. After the defeat of Bajirao II by the British, he captured it (1818) and set up a military base there. Apart from this, Su. There are hundreds of small and big temples and 43 mosques.

Malegaon's importance in the textile industry has increased due to its cotton production and ease of transportation. Here Su. There are 30,000 machine looms and 1,500 handlooms. Apart from these, ropes, kersunyas, burudkams, mats etc. Small businesses run on a large scale. The Muslims here are pioneers in the textile industry. Malegaon sari and cloth is famous in Maharashtra. Due to Panjhan project, the area of Malegaon has become fertile and cotton, groundnut, wheat, millet, onion etc. Major crops come from Malegaon traders. The market fills up here every Monday and Friday.

Today, the campaign of planting two crore trees all over Maharashtra started in a happy atmosphere as if it was a national festival.Although the government has taken the initiative for this, tree planting has become a popular movement due to public participation. The success of the project is due to public participation, he said in a press conference held at the office of the sub-forest department here. Considering Malegaon Municipal Corporation, the population of Malegaon Municipal Corporation area is 476641 as per 2021 census and the city has three separate parts. Although (1) old part (original city), (2) cantonment and (3) Sangamesh war, the trees in the old part and camp area have been surveyed as a sample. In this context, the purpose of the present study is to identify the differences between population and trees in Malegaon metropolitan area. The specific objectives of the study are as follows:

2. The specific objectives of the study are as follows:

1. Studying the population by ward.
2. In this context, the purpose of the present study is the population of Malegaon metropolitan area and to study the differences between trees.
3. Suggest ways to bring together and invest in local and national institutions and integrate and implement similar development programs.

DATA AND METHODOLOGY:

This study has been done in two phases. Attempts will be made to identify the development gap by visiting the city background and city, review the relevant literature, analyse and source the available secondary data, measure the primary sample survey. Programs using the following data collection techniques: Sample, Home Survey, Interview Schedule In some wards, a total of 12 such areas have been selected even though the number of specimens has exceeded the planned 12 due to population size.

Under the Green Maharashtra Mission, government agencies, social organizations, schools and colleges in Malegaon city and taluka enthusiastically participated in the tree planting program.

Transformation of Cropping Pattern in Kasmade Region since Last Two Decades in Nasik District

Dr. U. P. Suryawanshi and Prof. S. K. Wagh
Dept. of Geography, M. S. G. College Malegaon Camp.

Abstract

The Kasmade Belt is important and fast-developing agro region in the Nasik district. The KASMADE means the Kalwan, the Satana, the Malegaon and the Deola tahsils. Agriculture forms the backbone of Indian Economy. This sector of Indian Economy contributes about 1/3 of National Income. Over the periods of several years of planning structure of Indian Agricultural Economy has changed substantially.

Since the Independence agriculture supports the Indian population by producing large amount of various food crops. Thus, the prosperity of the entire Nation depends on the Development of agriculture. The agricultural progress remains a basic prerequisite for sustained economic growth.

Agriculture is multidimensional and multivariable complex, dynamic and diversified primary economic activity considering the importance of agriculture the Indian Government is continuously trying to develop this sector. The First Five Year Plan laid special emphasis on agricultural development. The fundamental utility of land is satisfying human needs of food habitation and housing materials. It is essential to have proper planning in land use pattern which is changed spatially and temporarily. The agricultural pattern is transformed due to various reasons, such as impact of Climate change, uncertainty of rainfall, and the ground water level is decrease.

The Kasmade Region is under the Drought Prone Zone and the North-Eastern and South-Eastern part of the Kasmade Belt faced the severe water scarcity problem because this part is under the Rain Shadow Region. These conditions are dominated on agriculture pattern of the Kasmade Region. The scarcity of water is important problem faced by the peasant. The given region having different types of cropping pattern, some part of the Kasmade Region is Western Ghats Zone and the cropping pattern of this region is totally different from the northeastern part of the Kasmade Region. In the Kasmade region the land use pattern is changed from last two decades, people adopt new types of crops for cultivation. There are so many varieties of crop which have less supply of water and the HYV (high yielding varieties) are used for cultivation. Transformation of agriculture is also occurring due to lack of water management. Today the Government of Maharashtra provides new trends in Agriculture as well as provides many schemes to the farmer. The last year the Government of Maharashtra inaugurated the Jalayukta Shivar Abhiyan, which is very helpful to the farmer for irrigation and also rise in ground water level.

The objective of the study is to calculate the transformation of land use pattern in the Kasmade Region and what type of changes are occur in the cropping pattern.

The area of forest cover (FC), Net Sown Area (NSA), Area not available for cultivation (ANC), fallow land (FL), Cultivable Waste (CW) have been converted into percentage to total geographical area. Further these have been used for showing the spatial distribution of land classification with suitable cartographic maps. Besides information embodied by using the relative District Census Handbook. District Gazetteer and District socio-economic Review of Nasik District.

"A COMPARATIVE STUDY OF TREES AND POPULATION IN THE EASTERN AND WESTERN PARTS OF MALEGAON CITY"

Dr. U. P. Suryawanshi

Dept. of Geography M. S. G. College Malegaon Camp, Nashik

INTRODUCTION:

Malegaon city is located in Nashik district of Maharashtra state. It is located on the Mumbai-Agra National Highway northeast of Mumbai. And north of Manmad. The fort was built by Naroshankar (1740) and was used as a fortress in the North Peshwa. After the defeat of Bajirao II by the British, he captured it (1818) and set up a military base there. Apart from this, Su. There are hundreds of small and big temples and 43 mosques.

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भारतीय काव्य में सांस्कृतिक जीवन मूल्य

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प्रस्तावना :

मानवीय जीवन मूल्य का इतिहास सृष्टि के आदिम काल से अपनी धाराएँ निर्धारित करता हुआ वर्तमान तक क्रमबध्द हैं | प्रत्येक युग के महान चिंतकों ने समयुगीन मानव जीवन के संबंध में विचार एवं चिंतन कर विभिन्न धर्मो, दर्शनों एवं विचाधाराओं के रूप में जो निर्णय लिए वे युगीन जीवन – मूल्य निर्धारित करने में सहायक सिध्द हुए |मानव जीवन का परम्परागत प्रवाह एतिहासिक और आधुनिक काल में समकालीन परिस्थितियों के अंतर्गत नूतन दिशा और क्षेत्र ग्रहण करता रहा हैं |

'जीवन –मूल्य' की परिभाषा करने से पूर्व 'जीवन' तथा 'मूल्य ' इन दो शब्दों का अर्थ समझ लेना उचित होगा | जीवन क्या है ?इस प्रश्न पर विभिन्न दृष्टिकोन से विवेचन किया गया है |फलत: इस संबंध में कोई अंतिम निर्णय नहीं किया जा सकता | अत: जीवन को परिभाषित करना कठिन कार्य है , अनुभूति सत्यों की पूर्णत:अभिव्यक्ति देना संभव नहीं तथा उसे शब्दों में समेटना भी संभव नहीं है;क्योंकि शब्दों की अर्थात भाषा की अपनी मर्यादा है| सामान्य रूप से 'जीवन'शब्द का प्रयोग जीवन धारियों के कार्य –कलापों ,उनकी मान्यताओं विश्वासों और उनके अनुभवों के लिय किया जाता है | मूलत: जीवन और परिवेश के मध्य क्रिया – प्रतिक्रिया का ही दूसरा नाम जीवन हैं |

जयशंकर प्रसाद "जीवन विश्व चेतना के आकार धारन करने की चेष्टा है|" १

नालंदा विशाल शब्द -सागर "जीवित रहने का भाव, प्राण धारन करना, जन्म से मृत्यु तक का समय जिंदगी |"२

'मूल्य' का अर्थ

जीवन मूल्य किसी समाज की उदात्तता के परिचायक होते हैं |मूल्य का समांतर अंग्रेज़ी शब्द है Value वास्तव में किसी समाज की विशेषताएँ या अन्य समूहों के लिए अनुकरणीय उपलब्धियाँ ही उसका मूल्य या Value कही जाती हैं | जीवन मूल्य का संबंध केवल अभ्यता से नहीं संस्कृति से होता है |'मूल्य'शब्द अंग्रेज़ी के वैल्यू शब्द का पर्याय है ,जो लैटिन भाषा के वोलेड़े से बना है ,जिसका अर्थ सुंदर या अच्छा या उत्तम है |3 मूल्य शब्द की व्युत्पत्ति 'मूल्य' धातु के साथ 'यत' प्रत्यय लगाने से हुइ है, जिसका अभिप्राय है,किसी वस्तु में दिया जानेवाला धन ,दाम ,कीमत, बाजारभाव आदि | 'मूल्य' शब्द अर्थशास्त्र से आया है|

'संस्कृति'शब्द मुलत:संस्कार पर आधारित हैं| 'संस्कार' रसायनशास्त्र का शब्द है| जिसका अर्थ होता है –'सम्यक क्रिया करना'एवं पारिभाषिक रूप में इसका अर्थ होगा 'शुद्ध करना'|इसी शब्द का जब मानवीय व्यवहार क्षेत्र में प्रयोग करते है|तब शब्द की लक्षणा शक्ति की सहायता से संस्कार को परिभाषित करते हैं|मानव की आदिम प्रवृतियों को विभिन्न नित्य ,नैमित्तिक और नैष्ठिक क्रियाओ और क्रमानुष्ठान आदि द्वारा शुध्द कर उन्हें सौम्य बना देना ही मानवीय संदर्भ में 'संस्कार'है|

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फीचर फिल्म लेखन के सामग्री संकलन स्त्रोत

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वर्तमान युग में मनोरंजन का सर्वाधिक लोकप्रिय और व्यावसायिक माध्यम है फीचर फिल्म लेखन। यदपि आज केबल संस्कृति टी.वी. के माध्यम से घर-घर में प्रवेश कर गई है, तथापि उनकी लोकप्रियता में कोई कमी आई हो, ऐसा प्रतीत नहीं होता। फीचर फिल्म पर रंग का प्रभाव महत्वपूर्ण है। जब कभी भी कोई फीचर फिल्म बनायी जाती है तो उसके लिए एक स्पष्ट और संम्पूर्ण पटकथा की आवश्यकता होती है। यदपि पटकथा ही कही जाती है, परंतू यह अन्य सभी प्रकार की पटकथाओ जैसे - लघु फिल्मों की पटकथा, टेलीविजन व धारावाईक की पटकथा, विज्ञापन की पटकथा आदि से अलग होती है। इसे कई विद्वान एकमुश्त पटकथा भी कहते है। राजेंद्र पांडे के मतानुसार "सिनेमा की पटकथ एकमुश्त होती है यानी वह टुटती नहीं। उसकी शुरुवात मध्य और अन्त से निश्चित होता है।"(१)

वास्तव में फिल्म लेखन एक कौशल्यपूर्ण कार्य है। वह एक ऐसी ऐन्द्रजालिक निर्माण प्रक्रिया है, जो अपने निर्माताओं से कुशलता की मॉग करती है। डॉ. सुशील सिध्दार्थ के शब्दों में "फिल्म लेखन में उत्सुक व्यक्ति को प्रारंभिक चरण में ही यह समझ लेना चाहिए कि इस क्षेत्र में सैध्दांतिक ज्ञान के साथ व्यावहारिक दक्षता का योग अत्यंत आवश्यक है। कारण यह है कि पॉच-दस पृष्ठ की कहानी या कल्पना को लंबी पटकथा में ढालने हेतू उसमें कतिपथ बातें जोडनी-घटानी पडती है। ऐसा करते समय परदा माध्यम के कई तदनों कों ध्यान में रखना पडता है।" बजट, अभिनय, छायांकन, स्थान, वातावरण, दर्शकों की मानसिकता कों ध्यान में रखना पडता है। (२)

फीचर फिल्में सीरियलों से बिल्कुल अलग होती है। सीरियलों के पास ज्यादा समय होता है वही विज्ञापन और लघुफिल्मों के पास समय बहुत कम होता है। इस प्रकार फीचर फिल्मों के पास एक मानक समय होता है, की जीसमें एक स्पष्ट और सार्थक दृश्य कथा का प्रवाह निर्मित किया जा सके। अधिकांश फीचर फिल्म का शुध्द व्यावसायिक उद्येश्य होता है। इसके अतिरिक्त फीचर फिल्म के लेखन से पूर्व फिल्म के दर्शक वर्ग को तय करना आवश्यक होता है क्योंकि फिल्म का उद्येश्य है कि लोग उसे देखे।

इस प्रकार फीचर फिल्म लेखन के सैध्दांतिक स्तर पर लेखन करने की पध्दति है उसके उपर विचार करना महत्वपूर्ण है।

कथा विचार (Theme of the Story)

कहानी सार्थक घटनाक्रमों का एक संपूर्ण ढॉचा है। कहानी का निर्माण शोध व थीम के अनुसार होता है। डॉ. सुशील सिध्दार्थ के अनुसार "वृक्ष के संदर्भ में जो स्थिति बीज की है, पटकथा के संदर्भ में वही स्थिति कथा विचार की है।" (३) इसे ही लोगों ने सुविधानुसार 'धीम', 'आईडिया' या "थॉट" कहा है। प्रसिध्द कथा-पटकथा लेखक पंडित मुखराम शर्मा का कथन इस संदर्भ में विचारणीय है। उनके अनुसार "फिल्म लेखन का जो तरीका मैं समझता हूँ-वह फिल्म की थीम से शुरु होता है।" (४) इस 'विषय' तत्व की

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भारत की भील आदिवासी जन-जातियों का जनजीवन

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प्रस्तावना :

देश की सबसे प्राचीन प्रजाति आदिवासी हैं। ये समुदाय इतिहास की एक लम्बी कडी से संबधित है। तथा इन आदिवासियों को कई नामों से जाना व पहचाना जाता है। प्रायः इन्हें आदिवासी के आलावा, वनवासी, गिरिजन आदि नामों से भी पुकारते हैं। सभ्यता की दौंड में सुसंस्कृत व्यवस्था सीमित साधनों की रही, खेती बाडी करने का इतिहास कोई पूराना नहीं है।

आरंभिक काल से ही आदिवासी नैसर्गिक वातावरण का प्रेमी रहे हैं। वृक्षों के प्रति जा सम्मान की भावना मिलती है, इसी कारण कई वृक्ष काटने से बच गयें हैं। कठिन दिनों में ये वृक्षों को गिरवी रख कर अपना काम चलाते है। जंगलों में रहते हुए उनके पास जडीबूटियों के उपयोग तथा विभिन्न प्रकार की व्याधियों के उपचार की गहरी जानकारी हैं। आदिवासी समुदाय में सहकारिता की भावना कई अवसरों पर देखने को मिलती है। जब कृषक भील को खेत की कटाई, बुआई, करनी होती है तो वह श्रमदान के लिए गांव के अन्य परिवारों को आमंत्रित करते हैं। आमंत्रित परिवार मिलकर खेतों की कटाई, बुआई कर मेहमान द्वारा दिया एक समय का भोजन कर सुन्तुष्ट अनुभव करते हैं। सहकारिता की यह रस्म 'हलमा' कहलाती हैं।

लोकसंगीत आदिम जातियों का अलिखित एवं मौखिक होता है। यह एक पीढी से दूसरी पीढी में हस्तान्तरित होता हैं। हमारे देश में कुल ५३२ जनजातियाँ है और उनकी जनसंख्या कुल जनसंख्या के करीब सात प्रतिशत हैं। घुरिये ने आदिवासियों को 'पिछडे हिंन्दु' भी कहा है। भारत में अनुसूचित आदिवासी समुहों की संख्या ७०० से अधिक है। सन १९५१ की जनगणना के अनुसार आदिवासियों की संख्या १, ६१, ११. ४६८ थी जो २००१ की जनगणना के अनुसार ८, ४३, २६, २४० हो गई। यह देश की जनसंख्या का ८.२ प्रतिशत है। १ गांव में मौत-मरण हो तो ढोल बजाकर गांव सूचित करते हैं। इस अवसर पर प्रत्येक हिशिया एक-एक लकडी और कुछ अनाज दुखी परिवार को देता हैं। जनजाति व्यक्तियों का वह एक समूह है जो निश्चित भौगोलिक क्षेत्र में निवास करता हैं। भील जनजातियाँ अपनी संस्कृति को आज भी विविधता से बनाए हुए है। २

भील मध्यभारत की एक जनजाति का नाम हैं। यह जनजाति भारत की सर्वाधिक विस्तृत क्षेत्र में फैली हुई जनजाति हैं। प्राचीन समय में यह लोग दक्षिण दिशा से लेकर लंका तक फैले हुये थे। भील जनजाति की भाषाकों भील भाषा कहते हैं। भारत बहादुर धनुष पुरुष भी कहा जाता हैं। 'भील' शब्द की उत्पत्ति 'भिल्ला' शब्द से हुई। संस्कृत में 'भिंद' शब्द से 'भील' शब्द की उत्पत्ति हुई हैं। इस का अर्थ बार-बार लक्ष को धनुष से मारना। तमील में 'बिंस्टूबर' से भील शब्द बना हैं, इस का अर्थ धनुष लिया जाता है। द्रविड में 'भिलु' शब्द भील शब्द बना है जिसका अर्थ धनुष्यबाण होता है।३

आदिवासी का जनजीवन :

आदिवासी का जनजीवन संयुक्त रुप से देखने कों मिलता हैं। उनकी गावों की बसावट की संरचना पर्वतीय जगहों में विस्तृत दिखाई देती है। बुनियादी तौर पर भीलों में दो प्रकार की विभिन्नताएं है। पर्वतीय ढलाऊ स्थानों पर पाल में रहनेवाले आदिवासी और मैदानी भागों में मिश्रित जातियों के गांव में रहनेवाले आदिवासी १ पाल एक भौगोलिक और सांस्कृतिक इकाई है, ऐसे गांव जो पहाडी क्षेत्र में है, तथा पथरीली एवं ढलाऊ क्षेत्र में बसे हुए है, इन्हे पाल कहते हैं। यह इकाई कई गोत्रों के फलों से बनी होती हैं। पाल में

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हिंदी कविता में पर्यावरण चेतना

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जीवन की उत्पत्ति ही पर्यावरण में हुई है और पर्यावरण ने ही मानव जीवन को बनाया है। पर्यावरण का अस्तित्व हम पर नहीं बल्कि हम पर्यावरण के अस्तित्व पर निर्भर हैं। मानव सभ्यता पर नजर डालें तो यह बात सामने आती है कि सभी सभ्यताँए प्राय: नदी तरों पर, वनों की गोद में ही पली और बढी है। यही कारण है कि जहाँ भी सभ्यताओं के भग्नाशेष मिले हैं वहीं आस-पास जलस्त्रोत भी अनिवार्य रूप से दिखाई दिए हैं। प्रारंभ में यद्यपि शिक्षा नहीं थी परंतु फिर भी लोग जलस्त्रोतों को गंदा नहीं करते थे। अशिक्षा के कारण सफाई आदि को धर्म से जोड दिया गया था, क्योंकि मानव जाति धर्म भीरू होती है।

पर्यावरण शब्द एवं उसका अर्थ व्यापक है जिसमें सारा ब्रम्हाण्ड ही समा जाता है। परि अर्थात हमारे चारों ओर का, आवरण अर्थात ढकना ही पर्यावरण है। यह सारा संसार जैसे-आकाश, वायु, जल, पृथ्वी, अग्नि तथा वन, वृक्ष, नदी, पहाड, समुद्र एवं पशु पक्षी आदि से आवृत्त है। यह सभी तत्वों तथा पदार्थों का समग्र रूप ही पर्यावरण है। उसी पर्यावरण में हम सब पैदा होते है, जीवित रहते है, साँस लेते है, फलते-फुलते है और अपने समस्त कार्यकलाप करते है। प्रकृति के पाँच तत्वों से मिलकर मानव शरीर की रचना हुई है। इसी प्रकार तुलसीदास ने `रामचरितामनस` के `किष्किन्धाकाण्ड` में लिखा है कि मनुष्य का शरीर भी प्रकृति के पाँच तत्वों - पृथ्वी, जल, पावक, गगन व समीर से मिलकर बना है -

``छिति जल पावक गगन समीरा
पंच रचित अति अधम सरीरा।`` (१)

भारतीय संस्कृति में वन और वनस्पति का बहुत अधिक महत्व रहा है। हमारे ऋषि-मुनि वनों में ही आश्रम बनाकर रहते थे। प्रकृति से उनका गहरा संबंध था। मानव, वन्य जीव-जन्तु, वृक्ष, पर्वत, सरिताएँ, ऋतुएँ आदि सभी परस्पर रूप से जुडे हुए है तथा यह पर्यावरण के अभिन्न अंग है। पुरातन युग में वन संन्यासी जीवन के तप का प्रमुख केन्द्र हुआ करते थे। वानप्रस्थ आश्रम के लिए संस्कृत में कहा गया है - ``वाने वन समूहे प्रतिष्ठते इति।`` अत: यह उल्लेखनीय है कि वेदों, उपनिषदों, पुराणों, स्मृतियों, सूत्रग्रंथो आदि सभी में सम्पुर्ण भारतीय संस्कृति के भव्योज्ज्वल रूप प्रतिनिहित है। कवि अधिक संवेदनशीलता के कारण प्रकृति के समस्त दृश्यों से अभिभूत होकर वर्णन करता है। आदिकवि वाल्मीकि ने जब प्रकृति के दो निर्द्वन्द्व प्राणियों को मुक्त विहार करते देखा तो उनकी आत्मा भाव विह्वल हो उठी, जब दूसरे ही क्षण एक को व्याध के बाण से आहत देखा तो करूणा का क्रन्दन फूट पडा। परिणाम स्वरूप कविता का जन्म हुआ -

`` मा निषाद ! प्रतिष्ठां त्वागमय: शाश्वती समः।
यत्क्रौंचयों मिथुनादेकमवधी काम मोहितम् ।।``२

प्रकृति के प्रति यह कवि-प्रेम अनादिकाल से अनवरत जारी है। यह वर्णन कभी स्वतंत्र आलंबन रूप मे, कभी हृदयगत भावों को उद्दीप्त करने अथवा आगे की घटनाओं की पृष्ठभूमि के रूप में होता है।

काव्य विधा में स्वतंत्रता आंदोलन का योगदान

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जहाँ नहीं पहुचा रवि वहा पहुचा कवि ऐसा कवि को कहा जाता है ।कवि भी समाज काही एक प्राणी है। यह असंभव है कि वह अपने युग की विचारधाराओं से मुक्त रह सके ।कवि समाज का सर्वाधिक संवेदनशील प्राणी होता है । अत: उसके लिए सामाजिक परिस्थितयों की उपेक्षा करना असंभव है।काव्य केवल कल्पना नही अंगार भी है।काव्य तो जीवन के लिए आनंदायिनी, रोगनाशिनी ,रविकिरण जिसकी रोशनी पडते ही अंधकार में प्रकाश और प्रकाश में स्वच्छता आ जाती है।

राष्ट्रीय आंदोलन के घटनाक्रम एक अन्य दिलचस्प पहलू है कि इसमें सामान्य जनता के उभार की शक्ल उभरी है।भारत के इतिहास में पहली बार हुआ कि उसे असंख्य -असंख्य लोगों ने बिल्कुल नये ढंग से अपने दुनिया को देखना शुरू किया। यहाँ दो चित्रों पर ध्यान दिजिए ,पहली का संबंध विचार से है ,लोगों ने मस्तीक का इस्तेमाल करते हुए विचारों के स्तर पर परंपरा, धर्म नैतिकता, सदाचार, सामाजिक जबाबदारी, जाती विभाजन के नकारात्मक पक्ष आदि विषयों का बीजारोपण हुआ। दूसरी चीज यह थी की सामान्य लोगों ने अपने मामूली जिंदगी को ,और आपने गली -मोहल्ले कस्बों, गांवों की सच्चाई को अपने दृष्टिकोन से देखना-परखना शुरू किया ।

राष्ट्रीय आंदोलन का जनजागरण तथा जागृती कवि विधा द्वारा की गई। कवि द्वारा विविध लोकगीतों के माध्यम से आझादी का शंखनाद हुआ ।काव्य द्वारा देशाभिमान के प्रति जागृकता निर्माण की गई। उसी समय बांगला के बंकिमचंद्र चटर्जी और रवींद्रनाथ टैगोर का स्मरण होताहै। बंकिमचंद्र जी की रचनाओं ने राष्ट्रीय 'आनंदमठ में वंदेमातरम् 'की रचना की। वंदे मातरम गीत ने हमारे सभी देशवासियों को एक सूत्र मेंपिरो कर उसमें ऐसा रोमांस खडा किया था कि अंग्रेज सरकार इस शब्द मात्र से ही कांपने लगी थी ,जहाँ पर भी वंदे मातरम की गुज सुनाई दी जातीथी ,वही अंग्रेज सरकार अनुमान लगा लेती थी ।यहा पर क्रांतिकारी राष्ट्रवाद की पाठ्यपुस्तक का कार्य किया ।

स्वतंत्रता आंदोलन के इस महायज्ञ में कवियों ने तत्कालिन समाज मे चेतना के ऐसे बीज बोये,जिनके अंकुरों की सुवास से सुवासित वृक्षों ने उस झंझावात को जन्म दिया ,जिसने समाज के हर वर्ग को इस आंदोलन में लाकर खडा किया। गोपालदास व्यास के शब्दों में-"आजादी के चरणों में जो जयमाला चढाई जाएगी ।"वह सुनो ,तुम्हारे शीशों के फुलों से गुंथी जाएगी। "व्याज जी ने अपने उन महान क्रांतिकारियों को जिन्होंनेदेश के लिए, अपना सर्वस्व न्यौछावर किया, ऐसे भावपूर्ण शब्दों में अपनी श्रद्धांजलि अर्पित कर मानों समस्त राष्ट्र की ओर से ही उनकी स्मृतियों पर अपने पुष्प अर्पित कर दीये है ।माइकेल मधुसूदन ने बंगाली में भारतेंदु हरिश्चंद्र ने हिंदी में नर्मद ने गुजराती में चिपलूनकर ने मराठी में भारतीने तमिल में तथा अन्य अनेक कवियों नेविभिन्न भाषाओंमें राष्ट्रीयता की भावना से परिपूर्ण उत्कृष्ट साहित्य का सृजन किया। ऐसा काव्य लेखन एवं गीतलेखन किया गया था , जिसे पढकर या गाकर तथा सुनकर हमारे देश की तत्कालीन युवा पीढी के रक्त में क्रांति का उबाल आ जाता था ।उनकी बाजुए फडफडने लगती थी,और मन राष्ट्र वेदी पर बलि देकर देश के लिए सर्वस्व न्यौछावर करने की भावना से ओतप्रोत हो उठता था ।

HOW TO BECOME ENTREPRENEUR

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What is an entrepreneur?

The entrepreneur is defined as someone who has the ability and desire to establish, administer and succeed in a start-up venture along with risk entitled to it, to make profits. The best example of entrepreneurship is the starting of a new business venture. The entrepreneurs are often known as a source of new ideas or innovators, and bring new ideas in the market by replacing old with a new invention.

It can be classified into small or home business to multinational companies. In economics, the profits that an entrepreneur makes is with a combination of land, natural resources, labour and capital.

In the simplest terms, an entrepreneur is anyone who creates a business and takes on the majority of the risk when starting a new venture. An entrepreneur is also the person who will take in most of the reward if their business is a success.

Entrepreneurship

Entrepreneurship is the ability and readiness to develop, organize and run a business enterprise, along with any of its uncertainties in order to make a profit. The most prominent example of entrepreneurship is the starting of new businesses.

In economics, entrepreneurship connected with land, labour, natural resources and capital can generate a profit. The entrepreneurial vision is defined by discovery and risk-taking and is an indispensable part of a nation's capacity to succeed in an ever-changing and more competitive global marketplace.

How to become an entrepreneur

Being an entrepreneur means having an idea and setting up a business based on it. Once a business idea is generated, an entrepreneur has to undertake many activities to transform it into reality. Starting from market research to study competitors and identify the target audience, to the recruitment of professionals, taking care of the financial aspects and administering the entire work – there are multiple stages involved in how to become an entrepreneur.

- **Is becoming an entrepreneur right for me?** -The first step to choosing a career is to make sure you are actually willing to commit to pursuing the career as entrepreneur. Don't waste your time doing something as entrepreneur. If you are new in this field you should read about, ***What do entrepreneurs do?,Are entrepreneurs happy with their careers?What are entrepreneurs like?biography of succesfulentrepreneurs,traits of entrepreneurs.***
- ***Entrepreneurial Spirit*** - Entrepreneurial spirit is a mindset. It's an attitude and approach to thinking that actively seeks out change, rather than waiting to adapt to change. It's a mindset that embraces critical questioning, innovation, service and continuous improvement. "It's about seeing the big picture and thinking like an owner,"

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Preparation and Characterization of WO_3 Thick Film Resistors using Screen Printing Technique

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ABSTRACT

Tungsten trioxide (WO_3) thick films prepared by standard screen printing technique and fired at different temperatures in air atmosphere. The compositional, morphological and structural properties of films were analyzed by Field Emission scanning electron microscopy (FESEM), Energy dispersive spectroscopy (EDS) and X-ray diffraction (XRD). The films were observed to be oxygen deficient, it indicates that the films are non- stoichiometry in nature. As deposited and fired films were analyzed using SEM to know its surface morphology. XRD showed the polycrystalline nature. The crystallite size changes from 28.2133 nm to 58.5176 nm for all strong orientation with increase in firing temperature. The role of firing temperature on electrical resistivity has been studied and showed decrease in resistance with increase in temperature.

KEYWORDS: Thick films, XRD, FESEM, Structural properties, Electrical properties.

INTRODUCTION

To produce compact, robust and relatively inexpensive hybrid circuit for many purposes, Screen printing technique was introduced in the later part of 1950's, after that thick film technique has attracted by the sensor field[1]. Thick films are suitable for gas sensors since the gas sensing properties are mostly related to the material surface and the gases are always adsorbed and react with the films surface[2]. Screen printing is simple and economical method used to produce thick films of various materials[3-10]. The semiconducting metal oxides such as TiO_2, SnO_2, ZnO, Fe_2O_3, WO_3 etc. such type of semiconducting metal oxides (SMO's) offer the potential for developing portable and inexpensive gas sensing devices, which have advantages of simplicity, high sensitivity and fast response. The sensor is a device senses input signal. The working principle of these semiconductor gas sensors is based on change in conductivity when exposed to the target gases[11]. WO_3 is a widely studied transition metal oxide and behaves as n-type semiconducting oxide due to non- stoichiometry. It has been widely studied for several applications in optical fields and used as gas sensor. Several deposition methods have been used to grow WO_3 films such as Spray pyrolysis, Vacuum evaporation, chemical vapor deposition, magnetron sputtering, pulsed laser deposition, sol -gel technique, screen printing technique[12]. Among the various metal oxides that can be used in gas sensors, only those materials based on tungsten trioxide/titanium oxide have been widely manufactured and utilized[13].

EXPERIMENTAL

WO_3 Thick film preparation:

Table 1: Preparation of WO_3 films

Substrate material	Glass
Active Material	WO_3 (AR Grade)
Deposition Technique	Screen Printing
Types of screen	40S-Mesh No.355
Material Calcined time	1 hour.
Calcined temperature	4500c
Active Material to Organic vehicles ratio	70:30
Organic vehicles (Binders)	BCA & EC
Settling time	15-20 minutes.
Drying under IR	45 minutes.
Firing Time	2 hours.
Peak firing temp. (FT)	350°C, 450°C & 550°C

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Comparative Study of Electrical and Gas Sensing Properties of Undoped and Tin Oxide Doped with Antimony and Cadmium

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ABSTRACT

This paper presents the electrical and gas sensing characterizations of pure tin oxide annealed at 400°C and tin oxide doped with antimony and cadmium. The effect of doping on conductivity and stability of SnO_2 is presented by comparing electrical parameters of undoped and tin oxide doped with antimony, and cadmium annealed at different temperatures. The film samples were fabricated by Physical Vapour Deposition technique at room temperature and high vacuum. The prepared film samples were annealed at 300, 400 and 500°C for 2 hours. They were analyzed XRD, FESEM, EDXS for structural, surface morphology, compositional, Electrical and Gas Sensing Characterizations to study electrical resistance, activation energy calculations and gas sensing of the prepared samples.

KEYWORDS: Tin oxide, Doping, TCR, Activation energy, Sensitivity.

INTRODUCTION

Undoped tin oxide and that doped with cadmium and antimony are compared with reference to electrical and gas sensing characterizations such as sensitivity and selectivity. Electrical parameters were studied by using I-V characteristics and variation of film resistance with film temperature. Ohmic and semiconducting nature of the sample material was confirmed from I-V characteristics. Activation energy was evaluated from the resistance temperature curves. Similar electrical resistance measuring system was employed for gas sensing purpose. Electrical resistance of thin film samples was measured in air and in the test gas atmosphere as well. The ratio of the two resistances gave sensitivity of the sample towards the test gas. Other gas sensing parameters like selectivity, response time, recovery time, stability etc. of the sample were studied using the same electrical circuit arrangement. Gas sensing studies respectively involved gas response (sensitivity) variation with operating temperature and selectivity. Tin oxide has been a versatile material for gas sensing purpose. It behaved as a sensor for more than one gas hence it is less selective and more sensitive. Doped samples showed relatively higher selectivity than the pure ones under the similar conditions of operating temperature and gas concentrations.

Methodology: Tin oxide thin film samples were prepared by using Physical Vapour Deposition technique at room temperature and pressure of about 10^{-5} torr. The samples were annealed at three different temperatures, viz. 300, 400 and 500°C for 2 hours. It was found from optimization of annealing temperature that those samples annealed at 400°C showed better results over the samples annealed at other temperatures. Hence all the investigations were carried out for this annealing temperature. It is well known that strain developed during deposition could be removed from the films by annealing. Thus, annealing gives rise to the well stabilized film sample required for gas sensing purpose. This stability can be observed during electrical as well as gas sensing studies.

EXPERIMENTAL

Electrical characterizations were carried out in two parts. First part is I-V characteristics and the second one is Resistivity profile (R versus t and logR versus 1000/T graphs).

I-V Characteristics

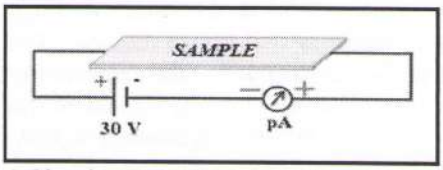

Fig. 1 Circuit connections for I-V characteristics

The Game of Masking and Unmasking in When I Hid My Caste

- Dr. R. V. Tribhuvan, Malegaon, Nasik

Abstract :

The pain, horror and frustration of existence is clearly discerned in the masking stories which are supposed to be the electric shock to the conservative, heinous, malicious, callous and tyrannical indian society that gives importance to the abstract thing like caste bu t not taking fellowmen as humans. When I hid my caste is the title story in the short stories anthology by Baburao Bagul entitles as When I Hid My caste. The present paper castes lurid light on the game of masking and unmasking of the caste in particular and Indian society in general. Very few characters give us the panoramic picture to discern easily the horrible caste system prevailed in the country before independence, after independence and is still seen today even though we swagger to live in the free and modern India. However, the actual scenario is different and we have not completely come out of the conservative mind set which still doesn't give any room to the lower caste people the security and feeling of being one of us. Hence, many or we can say most of the people feel the other, or can be said there are made to fell the other. In the short story, When I hid My caste is a wonderful psychological game of masking and unmasking of the caste proned people and caste creators, the constant role play of the people who are holding the masks and who are unravelling their and other masks make us think what kind of society we are !

Keywords : conservative society, caste, creed, gender, identity, masking, unmasking, lower caste, linguistic genocide.

Introduction : Marathi A-literature :

Indian writing particularly in Marathi was the writing of the hegemonist, 44 the beau monde, the so called elite groups, the middle

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DBU Catalyzed One Pot Four-Component Synthesis of Pyrano Pyrazole Derivatives with their Antioxidant Activity

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ABSTRACT

A green, efficient and simple procedure has been developed for the synthesis of Pyrano [2,3-*c*] Pyrazoles from a one pot four component condensation of Ethylacetoacetate, Malononitrile, Hydrazine hydrate and different substituted aromatic Aldehydes using 1,8-diazabicyclo [*5.4.0*] undec-7-ene (DBU) as catalyst in ethanol-water. The synthesized Pyrano [2,3-*c*] Pyrazoles were screened for their Antioxidant activity. These newly synthesized compounds were evaluated by their using various spectroscopic techniques and also elemental analysis.

Keywords : Pyrano pyrazoles, MCRs, DBU

I. INTRODUCTION

Multicomponent Reactions (MCRs) are very proficient in the synthesis of organic molecule[1-3]. In this protocol single step reaction gives magnificent yield without any isolation of intermediate and intimately associated with the principals of green chemistry.[4]

Pyrano pyrazole derivatives has vital role in the class of organic compounds because of their broad spectrum of biological as well as pharmacological importance. The Pyrano pyrazole moieties of the drug with wide medicinal application such as antimicrobial[5-6], antitumor[7], antipyretic[8], anti-inflammatory[9], antidepressant[10], antihypertensive[11], and peptide deformylase inhibitor[12]. Moreover, Dihydro pyrano [2,3-*c*] pyrazole showed hypotensive and hypoglycemic agents[13], mollusicidal activity[14] and as well as a screening hit for Chkl kinase inhibitor[15].

Chemists have reported various methods for the synthesis of Pyrano pyrazole derivatives. Various method of four component synthesis by using Thiamine hydrochloride (VB_1)[16], CsF[17], ZnO nanoparticle[18], CAPB[19], $NaHSO_3$ using ultrasound mediated,[20] TBAHS,[21] and molecular iodine non recoverable[22] also have

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Synthetic Development and Assessment of Antioxidant Activity of Imino[1,2,4]triazolo[1,5-*a*]pyrimidine-6-carbonitrile and Its Derivatives

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Abstract—The reaction of 2-[bis(methylsulfanyl)methylidene]malononitrile with 1*H*-1,2,4-triazol-3-amine in *N*,*N*-dimethylformamide in the presence of anhydrous potassium carbonate led to the formation of 7-imino-5-(methylsulfanyl)-1,7-dihydro[1,2,4]triazolo[1,5-*a*]pyrimidine-6-carbonitrile. The latter was then reacted with some nitrogen and carbon nucleophiles such as substituted anilines and active methylene compounds to afford the corresponding 5-substituted derivatives. The structure of the synthesized compounds was confirmed by IR, NMR, and mass spectra and elemental analyses. Furthermore, their potential as antioxidant agents was evaluated using DPPH and hydroxyl radical scavenging assays.

Keywords: multicomponent reactions (MCR), 1,2,4-triazole, [1,2,4]triazolo[1,5-*a*]pyrimidine, 2-[bis(methylsulfanyl)methylidene]malononitrile, antioxidant activity

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INTRODUCTION

Multicomponent reactions (MCRs) are classical examples of synthetic efficiency and reaction design for diversity-oriented synthesis in organic chemistry [1–3]. The simplest definition of MCR is that it is a one-pot reaction wherein two or more reactants rearrange into a single complex structure with functional diversity, without adding any external reagents or changing reaction conditions throughout the progress of the reaction [4, 5]. For the past few decades, significant research has been devoted both at academic and industrial scale toward the development of new heterocyclic compounds in a one-pot synthetic protocol [4–7]. Usually, MCRs follow a one-pot multistep process and a complex mechanistic pathway where all the steps are reversible and the last step is irreversible [8].

However, the major challenge in the commercialization of novel MCRs and elementary heterocyclic synthesis is to master and gather expertise toward uncommon combinations and arrangements under similar reaction conditions [4–6, 8]. The most advantageous feature of MCRs is that it can be extended into various promising synthetic protocols which can further be

Eco Friendly Cremation: A Need of Hour in India

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Abstract

Throughout India the majority of Hindu communities opt to burn the bodies of their relatives on a funeral pyre where almost and always using wood. Which means tones of wood burnt annually for cremations across the country? Excluding some parts of west and central India, where the body is burnt on a pyre made of cow dung cakes, which up to certain extent eco-friendly practice but value of cow dung as organic manure is? Now days the mortality of humans has risen sharply due to covid 19 in the country and for funeral purposes fire wood are being utilized on large scale and gradually it leads in to localized desertification.

According to UN data, nearly 400-500 kg of wood is required to cremate a body with fifty million trees consumed by funeral pyres across the country every year. These produce 500,000 tonnes of ash and eight million tonnes of carbon dioxide.

And to avoid this, citizens are encouraged for eco-friendly cremation concept. Awareness campaigns are conducted for promotion of such practices and hope of getting good response from the citizens in future. In state like Maharashtra some Companies and Corporate bodies are engaged in eco-friendly practices.

As an alternative to funeral wood Swami Samarth Bio-coal Briquettes Pvt Ltd. Company from Nashik has donated 10 tones Bio-coal Briquettes to Panchavati, Amardham (crematorium). Similarly, Nagpur Municipal Corporation (NMC) (MS), has become the first civic body in the nation to begin cremation using briquettes made of agro waste. NMC with the help of city-based NGO has cremated many dead bodies using agro waste Briquettes. It is the third alternative of eco-friendly cremation adopted by the NMC after using LPG and cow dung cakes.

Using agro-waste for briquettes has resulted in multiple co-benefits. The farmers are able to dispose of the crop residue in a better manner. The soil remains healthy as burning crop residue was destroying the soil quality and fertility. The crusher, collection and then briquette making all have generated employment opportunities for the locals. And in the city, people cremate their dead ones without the guilt of felling trees.

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सहायक प्राध्यापक, राज्यशास्त्र विभाग, महाराजा सयाजीराव गायकवाड, कला, वाणिज्य आणि विज्ञान महाविद्यालय कॅम्प, मालेगाव, जि. नाशिक.

प्रस्तावना

'१६ वे शतक हे यूरोपियन सुधारणा वादाचे आहे यात रुसो होब्ज,रुसो वोल्टेयर, जे.एस. मिल, या विचारवंताचा यूरोपियन राजकीय सामाजिक आणि आर्थिक जिवणावर अमिट असा प्रभाव आपणास दिसून येतो १८ व्या शतकात भारतात प्रबोधनाचे वारे वाहू लागले यात रानडे फुले . राजा राम मोहन रॉय टिळक. आगरकर , राजश्री शाहू महाराज असे कित्येक विचारवंत होऊन गेले प्रत्येक विचारवंतांनी आपल्या परीने भारताच्या राजकीय सामाजिक आणि आर्थिक विकासासाठी योगदान दिले यामुळे पारंपरिक असणारा भारतीय समाज आधुनिक विचारविश्वाकडे अग्रेसर झाला या सर्व विचारवंतामध्ये डॉ.बाबासाहेबआंबेडकर यांचे नाव आदराने घेतले जावे असे आहे. जरी १६ वे आणि १७ वे शतक हे यूरोपियन विचारवंतांच्या नावे असेल आणि १८ वे व १९ वे शतक भारतीय विचारवंतांच्या नावे असेल तरी भारताच्या संदर्भात २० वे आणि २१ वे शतक हे निश्चितपणे डॉ. बाबासाहेब आंबेडकर आंबेडकर यांचे नावे आहे भारतीय समाजाची आर्थिक राजकीय आणि समाज शास्त्राच्या आधारे शास्त्रीय विश्लेषण करणारे आंबेडकर हे पहिले विचारवंत होय. बाबासाहेब आंबेडकर यांनी कोलंबिया विद्यापीठ आणि लंडन स्कूल ऑफ ऑफ इकॉनॉमिक्स या शिक्षण संस्थांमधून अर्थशास्त्र विषयात पीएच.डी. पदव्या मिळविल्या; तसेच त्यांनी कायदा, अर्थशास्त्र आणि राज्यशास्त्र या विषयांवर संशोधन केले. त्यांच्या सुरुवातीच्या कारकीर्दीत, ते एक अर्थशास्त्रज्ञ, प्राध्यापक आणि वकील होते. त्यानंतर त्यांनी सामाजिक व राजकीय क्षेत्रांत काम केले. ते भारताच्या स्वातंत्र्यासाठी प्रचारामध्ये व चर्चांमध्ये सामील झाले, वृत्तपत्रे प्रकाशित केली, दलितांसाठी राजकीय हक्कांचा व सामाजिक स्वातंत्र्याचा पुरस्कार केला, तसेच आधुनिक भारताच्या निर्मितीत मोलाचे योगदान दिले. आंबेडकरी विचारांचा प्रभाव भारतातच नाही तर जगभरातल्या समता लढ्यांमध्ये सुद्धा दिसतो. तसेच आंबेडकरांचे तत्वज्ञान आंबेडकरवाद हा मानवी मूल्यांवर आधारित आहे. त्यांच्या तत्वज्ञानातून इतर देशातील शोषित लोकांना प्रेरणा मिळाली आहे. जपानमध्ये बुराकू नावाची एक शोषित जमात आहे. या जमातीच्या नेत्यांनी भारतात येऊन आंबेडकरांच्या तत्वज्ञानाचा अभ्यास केला व त्यापासून प्रभावित झाले. ते नेते आंबेडकरांच्या तत्वज्ञानाचा बुराकू जमातीत प्रसार करीत आहे. बुराकू जमात ही डॉ. बाबासाहेब आंबेडकरांना आपले प्रेरणास्थान मानते. नेपाळमधील दलितही आंबेडकरांपासून प्रभावित झाले आहेत. ते आंबेडकरांकडे आपला मुक्तिदाता म्हणून पाहतात आणि नेपाळी आंबेडकरवादी चळवळही चालवतात. आंबेडकरांच्या तत्वज्ञानाचे पालन करणे: "शिका, संघटित व्हा, संघर्ष करा" हा जातीनिष्ठ भेदभाव आणि अस्पृश्यता दूर करण्याचा एकमेव मार्ग असल्याचे त्यांचे मत आहे. युरोपमधील हंगेरी

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Green Approach for the Synthesis of Chalcone: Review of Methods

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ABSTRACT

A method for synthesizing chalcones that is simple, fast, efficient, and environmentally friendly has been developed. Using green methods reduces or eliminates the risk of chemicals entering the environment and causing harm to human health, which is an absolute necessity. In this review, we discuss the various methods for synthesizing chalcone, such as microwave-assisted, ultrasound-assisted, green solar power, grinding, and more, to make products more environmentally friendly.

KEYWORDS: environment, microwave-assisted, ultrasound-assisted, green solar power, grinding.

INTRODUCTION

Chalcone is one-of-a-kind α, β-unsaturated carbonyl with biologically active properties, and it is a precursor of various heterocyclic compounds found in plants, like flavonoids. Chalcones are thought to play a fundamental role in the synthesis of various therapeutic compounds. Chalcones have piqued the interest of scientists around the world for decades due to their wide and varied pharmaceutical properties and easy preparation[1]. Different synthetic methods for the preparation of chalcone are nowadays being reported due to their remarkable biological applications. Claisen-Schmidt condensation is the most familiar reaction in the synthesis of chalcones through condensation reactions using acid or base catalysis. Due to its simplicity and better yields when compared to other conventional methods, it is the most frequently used procedure for the synthesis of chalcones[2]. The main disadvantages of this technique are the slow reaction rates and the possibility of by-products; it normally requires more reaction time and in some cases, unused starting materials[3]. The development of processes for the sustainable production of chemicals and materials is referred to as the "green synthetic protocol"[4]. Energy-efficient and environmentally sustainable processes such as microwave-assisted, ultrasound-assisted, green solar-assisted, and grinding are used in the synthesis of different biologically active compounds. The green approach to chalcone synthesis is described below.

Green synthetic approaches: Green chemistry approaches for carrying out various chemical reactions include microwave irradiation (MWI), ultrasonication, green solar-assisted and grinding. By using these technologies organic reactions become more efficient and cost-effective by increasing the rate of the reaction with reduced reaction time and high product yield and reducing the chances of by-products[5].

Fig.1 Green Synthetic Approaches For Chalcone

Article-The Effect of Natural and Man-Made Disasters in India

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Abstract-

This article attempts to gain a better understanding of how the natural and man-made disasters affect human being. This article mainly focuses on different natural and man-made disasters happened in India. Our country India is considered to be the largest country in the world to face natural and manmade calamities. To date India has endured many setbacks. Natural disasters, such as earthquakes, volcanoes, hurricanes, floods, and cloudbursts and man-made disasters like air leaks, chemical leaks, road accidents, bomb blasts, riots, fires, communal riots and terrorism make a person helpless. Natural disasters have destroyed many people's homes. Looking at the consequences of this disaster, it is clear that it is not just the loss of life but the loss of property and the environment.

Keywords: *- natural and man-made disasters, destroyed, endured, setbacks, consequences.*

Introduction:-

The number of natural and man-made disasters in India is increasing day by day. Natural and man-made disasters not only cause loss of human civilization but also great loss of life. Natural disasters are caused by the natural behavior and beyond the control of human beings that occur on a regular basis whereas manmade disasters are a consequence of man-made activities. India has taken the hardest hit from natural disasters due to their massive population. Natural disasters can have a life-altering effect on the individuals and families fortunate enough to survive them. But the effect of natural disasters can be felt at the community, city and state level, or many times can affect an entire country. Natural disasters such as excessive rainfall, floods, earthquakes, droughts, landslides, tsunamis, droughts, hurricanes, and manmade disasters like fires, bomb blasts, gas leaks, chemical spills, road accidents, terrorism, etc. have caused social, economic and even loss of life. In many cases, Irresponsibility, lack of seriousness ignorance has increased the damage

Theme: In this article, I have compiled the different effects most horrible natural and manmade calamities of Indian history. Natural disasters and manmade cause problems that last after the disaster is done, including problems with the environment, infrastructure, public health and humanitarian issues etc.

Environmental Problems

Natural disasters from tsunamis and flood can cause wide-ranging and long-term consequences for ecosystems: releasing pollution and waste, or simply demolishing habitats. Tsunamis and flood destroy vegetation such as trees, resulting in landslides and coastlines that slip into the sea. Nuclear disaster caused a cascade of issues in the ecosystem and surrounding waters, spreading radioactive material through far-ranging ocean currents. Whole ecosystems can be dramatically damaged or transformed from a single disaster event. These changes force human inhabitants to redesigning their lifestyles and livelihoods around an altered environment.

Infrastructural Damage

One of the most immediate and devastating concerns with natural and manmade disasters are the damage to both public and private infrastructure. Natural disasters such as Floods, Earthquakes, landslides excessive rainfall, Tsunamis can destroy entire buildings and can cause serious property damage. Many peoples who live in an area hit by a natural and manmade disaster lose everything they own which leaves them homeless. Certain natural disasters fall outside of the scope of insurance coverage and many private homeowners do not have property insurance and this means that in the wake of a disaster. Disasters can have long-term negative consequences beyond demolition of infrastructure and the immediate loss of life. The rebuilding process is time-consuming, expensive and psychologically tumultuous for people.

Public health

Health issues are one of the most devastating emerging problems after any disaster. During and after the disaster like hurricanes and floods standing water can be a breeding ground for pathogenic bacteria and disease vectors like mosquitoes. It is because facilities for water and toilet hygiene are damaged. After a disaster contaminated water and food supplies pose a risk to people's and animal health. Flood waters can carry many sources of contamination such as dirt or oil which causes infectious diseases such as Malaria and cholera etc. In cases where infrastructure and transportation

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Different Natural Resources of Medicinal Use

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Abstract :- Different traditional medicines are crucial in our human life. Traditional medicine has been showing us the way to a healthy life for thousands of years. In ancient India, traditional medicines were considered one of the best ways to treat diseases and lead a healthy lifestyle. Due to the importance of maintaining good health as like in the prevention, diagnosis, improvement and treatment of illnesses we have still using the principles and concepts of Ayurveda even in the modern world. Different forms of medicine such as traditional Indian medicine, Ayurveda and Unani have been practiced in some areas of the world. This paper attempts to gain a better understanding of how these different medicines are useful in developing drug discovery. The rare characteristics of an application, current status and modern research of different kinds of traditional medicine systems are summarized in this study. When used to develop new drugs traditional medicines have their various advantages such as their unique diversity of chemical structures, clinical practice and biological activities.

Keywords :- traditional medicines, drug discovery, chemical structures, clinical practice, biological activities.

Introduction :- The significant progress in the production of synthetic drugs obtained mainly from plant materials, still play a crucial role in medicine. In India and some regions of the world, they are still the basis for this treatment. In developed countries, a return to traditional herbalism has been observed due to the widespread belief that herbs, being effective, do not have side effects. A number of species are not only used for medicinal purposes as spice, food and cosmetics but are also raw materials for the respective industries. The ever-growing needs of consumers, a lot of introduced plant species rich in biologically active compounds, are being successfully cultivated in many countries. Considering all of these factors make activities related to the acquisition of plant raw materials and their processing more and more profitable. As a result of the vast interest in medicinal plants, new earning opportunities are opening up for rural populations. Today to prevent, diagnose and treat health problems these practices continue to exist in healthcare systems and support local communities in many places around the world.

Theme :- In this article, I have compiled the different natural recourses of medicinal use. Medicinal products are plant material or natural products extracted from the plant source and used for thousands of years but still offer modern scientists a considerable chemical challenge, as they are highly complex.

1.Aloe vera - Aloe vera is used for medicinal purposes in several cultures. Aloe vera contains 75 potentially active constituents: enzymes, vitamins, minerals, sugars, lignin, salicylic acids and amino acids.Vitamins A,C and E act as antioxidants that neutralizes free radicals. It contains Enzymes such as aliiase, cellulase, amylase, bradykinase, carboxypeptidase, catalase, and peroxidase etc. It contains Minerals like calcium, copper, selenium chromium, magnesium, manganese, potassium, sodium and zinc. All these are essential for the proper functioning of various enzyme systems in different metabolic pathways. Sugars: It contains monosaccharides and polysaccharides.It provide Anthraquinones, it is known as laxatives. Aloin and emodin act as analgesics, antibacterials and antivirals. It provide steroids such as cholesterol, campesterol, β-sisosterol and lupeol.

2. Neem - All the parts of this tree is utilized in traditional medicine. Its flower contains a number of compounds with insecticidal activity such as nHentriacontane, n Nonacosane, nPentacosane, 2-

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Synthesis, spectroscopic and dft based quantum chemical study of (2*E*)-1-(4-chlorophenyl)-3-[4-(propan-2-yl) phenyl] prop-2-en-1-one

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Abstract: The (2*E*)-1-(4-chlorophenyl)-3-[4-(propan-2-yl) phenyl] prop-2-en-1-one was synthesized by condensation reaction between 4-isopropyl benzaldehyde and 4-chloroacetophenone in ethanol as solvent. The synthesized compound was characterized by FT-IR and Proton NMR techniques. The optimized molecular geometry, bond length, Mulliken atomic charges, bond angles, vibrational frequencies, the dipole moment of title compound have been computed by density functional theory (DFT) using a standard B3LYP method with 6-311++G (d, p) basis set by using Gaussian-03 (W) package. The various thermochemical properties, global chemical reactivity descriptors, FMO analysis and molecular electrostatic potential (MEP) were also investigated at the same level of theory.

Keywords: DFT, B3LYP, HOMO-LUMO, MESP

1. INTRODUCTION

Chalcone is a common name for the, α-β unsaturated ketones that are made by condensing an aromatic aldehyde with substituted acetophenone in the presence of a base [1] Kestanecki coined the term "chalcones," and Tambor's other chalcone names are benzalacetophenone and phenyl styryl ketone. Chalcones are chemically 1, 3-diaryl-2-propene-1-ones, which have two aromatic rings

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A SOCIO-PSYCHOLOGICAL STUDY OF THE FEMALE CHILD RAKA IN ANITA DESAI'S NOVEL, *FIRE ON THE MOUNTAIN*

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ABSTRACT:

Anita Desai portrays in her novels the suffering women from the elite class of the modern Indian society to her ultimate ironic vision wherein the sense of modernity itself remains questioned. In the novel, Fire on the Mountain, Desai depicts the gravest situation of the life of the three women characters, Nanda Kaul, Ila Das and Raka, the female child. In case of Raka, the parents grossly fail to perform their parental duties towards the female child. She emerges as a victim of lack of parental care, concern and affection from the prevailing familial situation wherein the male-dominating superiority-complex of the father often creates conflicts and domestic violence. It forms in Raka's mind fear and anxiety. She remains without parental love, acceptance, appreciation and harmony. Being a female child, she is not even fully accepted outside, amidst the patriarchal views. As a result, her sensibilities and cognitive abilities remain thwarted. She is deprived of the genial current of soul which evolves from harmony and affection. In consequence, Raka fails to recognize her identity and her relationship of harmony with others. She becomes a recluse and prefers to live in loneliness, away from the social forces. The agony and torment emerging from the deprivation of the basic childhood needs of Raka is directly condensed into the uncontrollable instinctive and hysterical behaviour which takes its full range across the Kasauli hills. It remains her attempt to recover pleasure in living for which she is deprived. With the death of Nanda Kaul towards the end of the novel, the future of Raka in terms of life has been questioned by the novelist. It is shown declined towards insecurity and fatality as it is without basic human needs and hence without socialization.

Key words: Childhood, Female-Child, Patriarchal, Domestic Violence, Anxiety, Sensibilities, Affection, Acceptance, Self-Respect, Appreciation, Socialization, Deprivation, Isolation

Introduction:

Anita Desai as the Indian novelist in English gained significance with her portrayal of the ironic conditions of the elite- class Indian families. In doing so, she focussed on the psychological complexities of the suffering women. Her fiction, *Games at Twilight and Other Stories* (1978) and *The Village by the Sea* (1982) are recognized as children's fiction that

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THE CHILDHOOD POETICS OF POVERTY: A STUDY OF ANITA DESAI'S NOVEL, *THE VILLAGE BY THE SEA*

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ABSTRACT:

As Indian writer in English, Anita Desai has been a writer of human psyche, dealing with the socio-psychological issues of her characters amidst the cultural and social hardships of the modern Indian society. She is hailed worldwide for portrayals of the suffering souls of Indian women and children amidst the patriarchal social construct. Her novel, The Village by the Sea is a classic example of Children's Fiction that could inspire adolescents and adults towards the ideals of life. It portrays from the reality basis, a poverty-ridden family of a fisherman of a village located at the western coast of India. Formed of the traditional patriarchal Hindu cultural traits, the adolescents, Lila and Hari, maintain the equilibrium of the family with honesty, courage, hardwork and persistence amidst the domestic hardships. Their adolescence can be analytically viewed through the lenses of the theories of psychology and sociology as given by Abraham Maslow, Elizabeth Hurlock, Jerry j. Bigner and Sudhir Kakkar. Along multiple parameters, the novel proves to be a prose-epic.

Key words: Indian Culture, Coastal Village, Family, Mother, Father, Adolescence, Poverty, Self-Respect, Hope, Self-Actualization, Honesty, Hardwork

Introduction:

The world views Anita Desai as a great Indian writer in English who created the modern classics in literature during the second half of the twentieth century and even after it. The greatness lies not only in the thematic concern for Indian life, but also in the way to narrate it. It is the vision of life and the subsequent formulation of language in a specific mould of a psychological writing that endows poetic character to her short-stories and novels. Her concern for the agony and suffering of Indian women, children and immigrants remained a major part of her vision towards welfare of mankind. The corpus of her writings is large. It begins with Cry the Peacock (1963) and continues with 'The Lady and the Unicorn' (2015).

'The Village by the Sea' (1982) is one of her novels which is generally known as Children's Fiction. However, the adolescents projected in the novel are culturally elevated and courageous to face the adversity of human situation and look forward with hope for betterment and happiness. Probably, this is the reason as to why the novel won the annual Guardian Children's Fiction Prize by a Panel of British Children's Writers. The novel has a strong documentary touch wherein much from the real life has been reflected. It is stated by