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STUDY OF FORMATION AND PERFORMANCE OF NATIONALIST CONGRESS PARTY: POLITICAL APPROACH

Dr. Talekar C.K.

Dept of Political science

Gandhi Mahavidhyalaya, Kada. Tq. Ashti. Dist. BEED

Introduction
The Nationalist Congress Party was formally established in June 1999 in New Delhi by members of the Indian National Congress (Congress Party) Sharad Pawar, Sangma, and Tariq Anwar after they had been expelled from that party for demanding that a person born in India should be allowed to become the country's president, vice president, and prime minister. The issue arose after Sonia Gandhi, the Italian-born widow of former prime minister Rajiv Gandhi, became leader of the Congress Party and thus ordinarily would become prime minister if the party were to gain a parliamentary majority and form a government. Pawar was elected president of the Nationalist Congress Party, and Sangma and Anwar became its general secretaries. None of the Nationalist Congress Party's election campaigns, however, has highlighted the foreigner issue. At the time of formation of the Nationalist Congress Party, the Indian Congress (Socialist) party merged with the new party. The Nationalist Congress Party being founded on opposition to the leadership of Sonia Gandhi, the party joined the Congress led UPA to form government of Maharashtra in October 2002. In 2004, the party joined the UPA to form the Indian Government led by Manmohan Singh. Nationalist Congress Party leader, Sharad Pawar served as the minister of agriculture for the five-year terms of Singh led government. The party remained part of the Congress led Maharashtra state government until 2014.

Objectives of research

- To give an overview on formation of Nationalist Congress Party.
- To study of performance of Nationalist Congress Party.
- To study Of Electoral performance Nationalist Congress Party in Lok Sabha, Rajya Sabha and Panchayatsabha.

Research Methodology:

For the purpose of this study used social science research methodology to study the research topic. Used scientifically analysis. In this method used secondary data tools. In this secondary data tool used reference books, research articles, newspapers, journals, published and unpublished materials and also taken help of internet facilities.

Party symbol

The election symbol of Nationalist Congress Party is an analogue clock. The clock is shown in blue and has two legs and an alarm button. It is situated on a tri-coloured Indian flag.

Party leadership

The party's primary base is the state of Maharashtra and leadership reflects that. Also since the 1980s, Indian politics has become dynastic, possibly due to the absence of a party organization, independent civil society associations that mobilize support for the party, and centralized financing of elections. This phenomenon is seen from national level down to district level. In that regard Nationalist Congress Party is considered the party with the highest level of dynasticism in Indian politics. The party founder, Sharad Pawar has many members of his family such as daughter Supriya Sule and nephew Ajit Pawar holding prominent positions in the party.

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June 2020

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Economical and Social Issues

Chief Editor
Mr. Arun B. Godam

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Physical Activities for Sports Performances

Dr. Sayed Zameer Shabbir

H.O.D. Physical Education
Gandhi College Kada, Ta- Ashti, Dist. Beed.

Physical activity is any movement that increases heart rate and breathing. Being physically active improves health and well-being. It has benefits for all ages, including reducing risk for chronic diseases, improving sleep, increasing energy, and improving self-confidence and mental health. Adding more physical activity today provides extra health benefits. Physical activity is important throughout human life. We also need to learn movement skills through running, kicking, throwing, catching and jumping. When we learn these movement skills then improve physical literacy and become more confident and comfortable with doing these movements, and when this happens we want to play and be active for a lifetime. Lack of physical activity is associated with a range of negative health outcomes whereas increased physical activity can improve physical as well as mental health and Performances with this purpose I choose the topic for my research paper.

Objectives of Research paper

- 1) To overview on types of physical activity.
- 2) To study and overview on physical fitness

Research Methodology:

For the purpose of this study used social science research methodology to study the research topic Used scientifically analysis. In this method used secondary data tools. In this secondary data tool used reference books. Research articles, news papers, journals, published and unpublished materials and also taken help of internet facilities.

Forms of Physical Activity

People of all ages will improve their health and well-being by changing into additional physically active. consultants suggest that adults get 30-60 minutes of moderate-intensity physical activity on a daily basis. Moderate-intensity physical activity refers to tier of effort within which an individual ought to expertise some increase in respiratory or pulse rate. While the simplest quite activity is that the one that you just can do, there square measure many kinds of physical activity and it's most likely an honest plan to incorporate a number of every of the subsequent so as to attain overall fitness:

Strength or Weight coaching

Weight coaching is that the solely thanks to increase your metabolism in order that you burn additional calories when you've stopped sweat by increasing your muscle mass -- and this can be the simplest strategy to forestall weight gain as you age. Strength coaching, like weight lifting, helps build bones stronger, improves balance and will increase muscle strength. All of this helps forestall pathology and lowers the danger of hip fractures from falls. Strength coaching has conjointly been shown to minimize inflammatory disease pain. Strength coaching are often done on each the higher and lower body by exploitation weight machines, lifting free weights or utilizing special elastic bands (available at sporting smart stores). to forestall injury, confer with associate skilled United Nations agency will assist you learn to figure properly with weights.

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19. Environmental Application of Nanotechnology

J. M. Bhandari

Department of Physics, A. J. V. P. M's Gandhi College, Kada, Tal - Ashu, Dist - Beed

R. B. Kavade

Bhagwan Mahavidyalaya Ashu, Dist - Beed

R. G. Vidhate

Anandrao Dhonde alias Babaji College, Kada, Tal - Ashu, Dist - Beed

K. M. Jadhav

Department of Physics, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Abstract

Nanotechnology is an upcoming technology that can provide solution for combating pollution by controlling shape and size of materials at the Nanoscale. Global deterioration of water, soil, and atmosphere by the release of toxic chemicals from the on-going anthropogenic activities is becoming a serious problem throughout the world. This poses numerous issues relevant to ecosystem and human health that intensify the application challenges of conventional treatment technologies. Therefore, this review sheds the light on the recent progresses in nanotechnology and its vital role to encompass the imperative demand to monitor and treat the emerging hazardous wastes with lower cost, less energy, as well as higher efficiency. Essentially, the key aspects of this account are to briefly outline the advantages of nanotechnology over conventional treatment technologies and to relevantly highlight the treatment applications of some nanomaterial.

Keywords: Nanotechnology, Nanomaterial application, Water, Air pollution, Soil pollution.

Introduction

The term "Pollution" has many definitions, one being "the presence of a substance in the environment whose chemical composition or quantity prevents the functioning of natural processes and produces undesirable environmental and health effects." With growing urbanization and increasing population, pollution has become the biggest environmental challenge. Environmental pollution is undoubtedly one of the main problems that society faces today. New technologies are constantly being explored for the remediation of contaminants of the air, water,



Elimination and Eradication of Malaria in District Nashik Maharashtra

Suvarna Deshpande¹, Dr. Ramesh Abdar²

1. Sanjivani Diagnostics Nashik. Health solutions Nashik

Email:suvarnadeshpande35@gmail.com

2. Shri Amolak Jain Vidyaprasarak mandal, Shri S.K.Gandhi Arts & Amolak Science College Kuda Dist Beed

3.

Abstract

Malaria is a major Health Problem & Challenge with population density wide inadequate water supply, Solid waste management, climate change affect on production of mosquitoes.

Malaria is mosquito born infectious disease that affects humans and animals. It causes the symptoms that typically include fever, tiredness, vomiting and headache symptoms usually begin after 10-15 days after bitten by infected mosquito. If not properly treated people may have recurrence of disease. A world free of Malaria would present enoroumous benefits in terms of health, equity and economy WHO has an ambitious goal for reducing the burden of malaria & 21 countries reducing having the potential to eliminate the local transmission of malaria by innovation.

The main challenge is to eradicate & eliminate the malaria from every part of the world in collaborative process to address technologies in Maharashtra also.

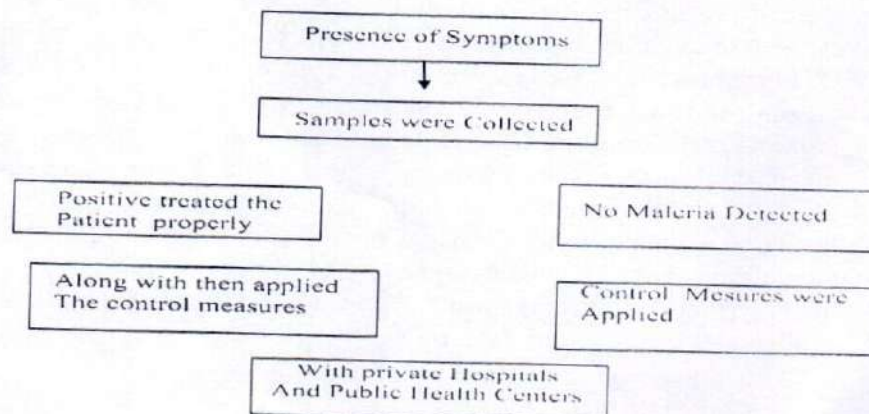
Blood samples were collected from Hospitals and PHC Nasik

In Hospital 359 sample were collected from which 12 Samples are came positive for P. Vivax And for 1 Positive for P. Falciperum from Local Hospitals Nashik.. In the period of 2013 to 2019. The positive cases of malaria are absolutely reduced upto 2 to 3%.

All results are confirmed by rapid testing or collecting samples and slides and showing that among 798151 sample, were collected and total positives are only 9 and Faciperum is 1 and other are Vivax & Death are Zero.

INTRODUCTION:

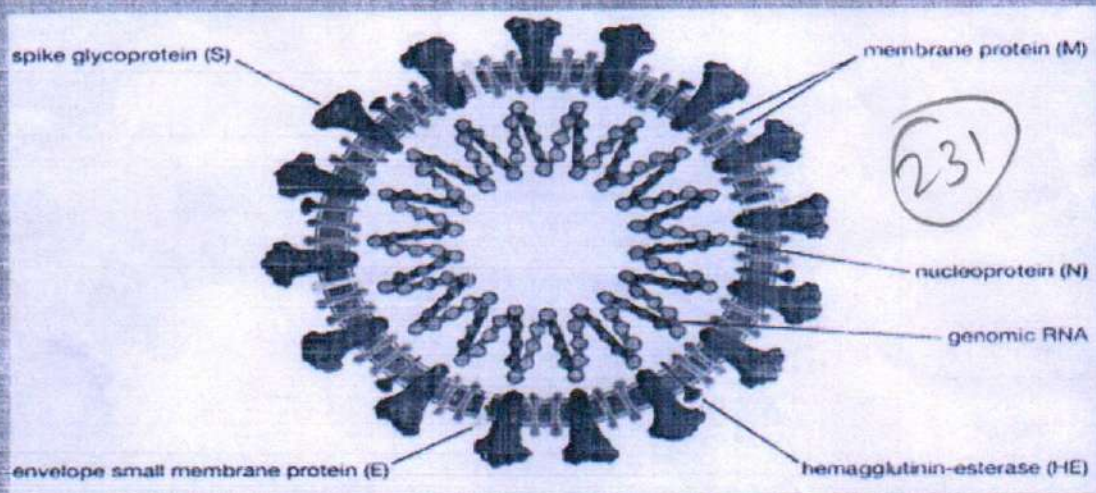
INTRODUCTION



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Structure of COVID-19

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No. 2

EFFECT OF FUNGICIDES ON *FUSARIUM OXYSPORUM* CAUSING ROOT WILT OF CHICKPEA

S.S. Patale

Smt.S.K. Gandhi Arts, Amolak Science and P.H Gandhi Commerce College, Kada, Tq. Ashti, Dist. Beed. 414202 (M.S.) India

ABSTRACT

Effect of two fungicides (Mancozeb and Carbendazim) was evaluated against *Fusarium oxysporum*, *in vitro*.. Mancozeb showed minimum inhibitory effect on *Fusarium oxysporum*, while Carbendazim was more effective in inhibiting growth of the pathogen.

Key words: Chickpea, *Fusarium oxysporum*, Fungicides, Inhibition.

Introduction:

Many soil borne fungi may cause plant diseases such as root wilt, damping-off, root rot, collar rot, crown rot etc. Chickpea (*Cicer arietinum* L.) gets affected by several soil borne pathogens, out of which *Fusarium oxysporum* is one of the soil borne pathogen (Seema and Devaki, 2010). The management of this pathogen is difficult owing to its saprophytic survival ability in soil (Dey 2005). Reduction or elimination of soil borne fungi is effective to overcome the problem, which may be achieved through use of fungicides.

Material and Methods:

Fusarium oxysporum was isolated from the infected root of Chick pea (*Cicer arietinum* L.) as described by Golakiya *et al.* (2018). The efficacy of fungicides against *Fusarium oxysporum* was evaluated on Czapek Dox Agar (CZA) medium using Mancozeb 75WP and Carbendazim 50WP. Various concentrations of fungicides (250 to

2750 ppm) were mixed with Czapek Dox Agar (CZA) medium and allow solidifying. Mycelial disc of *Fusarium oxysporum* was placed on the medium and incubated. Its growth was recorded at 24 hours' interval in the form of diameter of colony till the petri-dish of control showed full fungal growth. Percent inhibition of growth was determined following Kinney (1923) and Nisa *et al.* (2011).

Result and Discussion:

Two fungicides viz. Mancozeb 50 WP and Carbendazim 75 WP exhibited varying level of inhibitory effects against the growth of *Fusarium oxysporum* (Table 1). Mancozeb showed maximum inhibition at the concentration of 2750 ppm, while Carbendazim at 1750 ppm. Sumitha and Gaikwad (1995) also reported that the growth of pathogen was completely inhibited by Bavistin (Carbendazim). It was thus found worthwhile to use systemic fungicides viz. Mancozeb and Carbendazim against *Fusarium oxysporum*



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Marathwada University, Aurangabad)
Washi, Dist-Osmanabad, Maharashtra,
India-413503

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MAGIC REALISM IN LITERATURE AND CINEMA**NARENDRA GAWALI**

Asst. Prof.

S.K. Gandhi College Kada

Tal. Ashti, Beed.

ABSTRACT:

Magic realism was first introduced by Fran Roh. In magic realism the supernatural is not displayed as questionable. The idea of terror overwhelms the possibility of rejuvenation in magical realism. Several prominent authoritarian figures, such as soldiers, police, and sadists all have the power to torture and kill. In One Hundred Years of Solitude, Marquez incorporates many supernatural motifs like levitation and flying carpets. Many films have magical realist narrative and events that contrast between real and magical elements, or different modes of production.

Key Words: Magic, Fantasy, Supernatural, Hybridity, Real-World Setting.

Magical realism is one of the most unique literary movements of the 20th century. While most commonly associated with Latin American authors, writers from all over the world have made big contributions to the genre. Magical realism is a genre of literature that depicts the real world as having an undercurrent of magic or fantasy. Magical realism is a part of the realism genre of fiction.

Definition of "Magical Realism"

A literary mode rather than a distinguishable genre, magical realism aims to seize the paradox of the union of opposites. For instance, it challenges polar opposites like life and death and the pre-colonial past versus the post-industrial present. Magical realism is characterized by two conflicting perspectives, one based on a rational view of reality and the other on the acceptance of the supernatural as prosaic reality. Magical realism differs from pure fantasy primarily because it is set in a normal, modern world with authentic descriptions of humans and society. According to Angel Flores, magical realism involves the fusion of the real and the fantastic, or as he claims, "an amalgamation of realism and fantasy". The presence of the supernatural in magical realism is often connected to the primeval or "magical" Indian mentality, which exists in conjunction with European rationality.

Background

The term "magical realism" was first introduced by Franz Roh, a German art critic, who considered magical realism an art category. To him, it was a way of representing and responding to reality and pictorially depicting the enigmas of reality. In Latin America in the

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Changing pattern of Population Occupational structure in Beed District

Dr. Udhav E. Chavan

Gandhi College Kada, Tq. Ashti, Dist. Beed

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Abstract:

The Beed District is predominantly agricultural in nature. Near about 78.04 % working force is engaged in agriculture activity. The spatial distribution of farm workers to total workers for 2001 and 2011. The farm workers include the cultivators and agriculture laborers, whereas, workers refer to participation in economically productive activity as well as supervision and direct work.

The spatial distribution of farm workers to total workers for 2001 and 2011 in the area under study. The region has 743059 farm workers (77.60 % to total workers) in 2001 and 979846 (78.04 % to total workers) in 2011. It shows increasing farm workers by 7.91% in the area under study.

Key Words: Cultivators, Agricultural laborers, Main workers, Marginal workers, Household Workers, Other workers.

1.1 Introduction:

The availability of labors resource and its involvement in various activities of agriculture represent the scenario of development of the region. The Beed District has prepon-derance of agriculture, engaging 93.35 % population as working force (Census of India, 2011). The population can generally, be grouped into two groups:

1. Working population
2. Non-working population.

Talep Sir

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Dr. Nandkumar Kumbharikar

India-China relations: A political perspective

Dr. Talekar, C.K.

Dept of Political science , Gandhi Mahavidhyalaya, Kada Tq. Ashti. Dist. BEED

Abstract:

India China relations assume importance given the two emerging powers in the Asia Pacific which are engaged in a dyad of geopolitical competition and contest. India and china are two major countries of Asia. Well relations developed in this country. But there are much more conflict points between these two countries. Indian-Chinese relations, refers to the bilateral relationship between China and India. India China border dispute remains a core concern requiring careful management to prevent differences developing into conflict. Major factors in India China relations which are diverse include geo-politics, regional relations and security. Diplomacy, border dispute, defence and security relations. However, since the late 1980s, both countries have successfully rebuilt diplomatic and economic ties. In 2008, China became India's largest trading partner and the two countries have also extended their strategic and military relations. Despite growing economic and strategic ties, there are a lot of hurdles for India and the PRC to overcome. India faces trade imbalance heavily in favour of China. The two countries failed to resolve their border dispute and Indian media outlets have repeatedly reported Chinese military incursions into Indian territory. Both countries have steadily established military infrastructure along border areas including amidst the 2020 China-India skirmishes.

Key words: India-China relations, International relations.

Introductions:

India and china are two major countries of Asia. Well relations developed in this country. But there are much more conflict points between these two countries. Indian-Chinese relations, refers to the bilateral relationship between China and India. The tone of the relationship has varied over time; the two nations have sought economic cooperation with each other, while frequent border disputes and economic nationalism in both countries are a major point of contention. The modern relationship began in 1950 when India was among the first countries to end formal ties with the Republic of China (Taiwan) and recognize the People's Republic of China as the legitimate government of Mainland China. China and India are two of the major regional powers in Asia, and are the two most populous countries and among the fastest growing major economies in the world. Growth in diplomatic and economic influence has increased the significance of their bilateral relationship. Cultural and economic relations between China and India date back to ancient times. The Silk Road not only served as a major trade route between India and China. Relations between contemporary China and India have been characterised by border disputes, resulting in three military conflicts – the Sino-Indian War of 1962, the Chola incident in 1967, and the 1987 Sino-Indian skirmish. In early 2017, the two countries clashed at the Doklam plateau along the disputed Sino-Bhutanese border. However, since the late 1980s, both countries have successfully rebuilt diplomatic and economic ties. In 2008, China became India's largest trading partner and the two countries have also extended their strategic and military relations. Despite growing economic and strategic ties, there are a lot of hurdles for India and the PRC to overcome. India faces trade imbalance heavily in favour of China. The two countries failed to resolve their border dispute and Indian media outlets have repeatedly reported Chinese military incursions into Indian territory. Both countries have steadily established military infrastructure along border areas including amidst the 2020 China-India skirmishes.

Objectives of research

- 1) To overview on India-China relations.
- 2) To study of Cross-border Disputes in India and China.
- 3) To study Of Issues and challenges of India-China relations

Research Methodology:

For the purpose of this study used social science research methodology to study the research. Used scientifically analysis. In this method used secondary data tools. In this secondary data tool used research books. Research articles, newspapers, journals, published and unpublished materials and also taken internet facilities

Historical background

India established diplomatic relations with the PRC on 1 April 1950, the first communist/socialist nation in Asia to do so. Chinese Communist Party Chairman Mao Zedong viewed India as an integral part of the People's Republic of China. The preceding government of the Republic of China, Chiang Kai-shek also claimed Tibet as Chinese territory, however was unable to re-assert control.

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CURRENT GLOBAL REVIEWERSpecial Issue 29 Vol. 2
Sept. 2020Peer Reviewed
SJIFISSN : 2319 - 8648
Impact Factor : 7.139**Politics of Maharashtra: Issues and challenges****Mr. Gondkar. T. D.**

Dept of Political science, Gandhi Mahavidhyalaya, KadaTq. Ashti. Dist. BEED

Abstract:

Maharashtra is a state in the western region of India and is India's third-largest state by area. It has over 112 million inhabitants and its capital, Mumbai, has a population of approximately 18 million. The government of Maharashtra is conducted within a framework of parliamentary government, with a bicameral legislature consisting of the Maharashtra Legislative Assembly and the Maharashtra Legislative Council. 2019 Vidhan Sabha elections The BJP-Shiv-Sena and NCP-Congress alliances remained intact for the Vidhan Sabha elections in October 2019. The BJP and Shiv Sena together gained the majority of seats in the assembly but could not form government due to squabbles between the two parties. The BJP, with 105 seats, was far short of the 145 seats required to form majority and declined to form a minority government. At the same time, Shiv Sena started talks with the NCP and Congress to form government. Maharashtra has always been a difficult state to manage. The state has some of the richest people in the world; at the same time it has some of the poorest people. It is a challenge to address the needs of these extremes. Due to the divisive policies of BJP, social tensions have arisen. Therefore, a person with a secular attitude and commitment to inclusive development alone can successfully lead the state. BJP does not have leaders who can address these challenges. After overcoming initial challenges such as portfolio distribution, the CM's inexperience in administration, and the uneasiness with new allies, the government now faces the task of bringing the economy back on track.

Key Words: Politics of Maharashtra, Issues in Maharashtra, challenges of politics
Politics of Maharashtra: Issues and challenges

Introduction:

Maharashtra is a state in the western region of India and is India's third-largest state by area. It has over 112 million inhabitants and its capital, Mumbai, has a population of approximately 18 million. Nagpur is Maharashtra's second, or winter, capital. Government in the state is organized on the parliamentary system. Power is devolved to large city councils, district councils (Zila Parishad), sub-district (Taluka) councils, and the village parish councils (Gram panchayat). The politics of the state are dominated by the numerically strong Maratha-Kunbi community. There are national and regional parties in the state, serving different demographics, such as those based on religion, caste, urban and rural residents. Maharashtra elects members to both chambers of the Indian Parliament. Representatives to India's lower chamber, the Lok Sabha, are elected by adult universal suffrage, and a first-past-the-post system, to represent their respective constituencies. They hold their seats for five years or until the body is dissolved by the President on the advice of the council of ministers. Representatives to the upper chamber, the Rajya Sabha, are elected indirectly by the Vidhan Sabha members. Maharashtra elects 48 members out of 543 total elected members of the Lok Sabha and 19 out of 233 elected members of the Rajya Sabha. The government of Maharashtra is conducted within a framework of parliamentary government, with a bicameral legislature consisting of the Maharashtra Legislative Assembly and the Maharashtra Legislative Council. The Legislative Assembly (Vidhan Sabha) is the lower chamber and consists of 288 members, who are elected for five-year terms. There are 25 and 29 seats reserved for the Scheduled Castes and Scheduled Tribes and others, respectively. The Legislative Council (Vidhan Parishad) is the upper chamber and is a permanent body of 78 members. The government of Maharashtra is headed by the Chief Minister, who is chosen by the party or alliance with a majority of members in the Legislative Assembly. The Chief Minister, along with the council of ministers, drives the legislative agenda and exercises most of the executive powers. However, the constitutional and formal head of the state is the Governor, who is appointed for a five-year term by the President of India on the advice of the Union government. Since its inception in 1960, and also of predecessor states such as Bombay, the politics of Maharashtra has been dominated by the Indian National Congress party. Maharashtra became a bastion of Congress party stalwarts such as Yashwantrao Chavan, Vasantdada Patil, Vasantrao Naik, and Shankarrao Chavan. Sharad Pawar has been a significant personality in state and national politics for nearly forty years. During his career, he has split Congress twice, with significant consequences for state politics. After his second parting from the Congress party in 1999, Sharad Pawar formed the Nationalist Congress Party (NCP) but joined a Congress-led coalition to form the state government after the 1999 Assembly elections.

The Congress party enjoyed a nearly unchallenged dominance of the state political landscape until 1995 when the coalition of Shiv Sena and the Bharatiya Janata Party (BJP) secured an overwhelming majority.

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A NEW APPROACH TO SOLVE ASSIGNMENT PROBLEM USING CONGRUENCE MODULO AND ITS CODING IN MATLAB

DHANASHRI A. MUNOT¹ AND KIRTIWANT P. GHADLE

ABSTRACT. AP is the fundamental application of TP studied in the area of Operations research. In this paper authors have proposed a new algorithm using congruence modulo approach to solve AP which is also demonstrated by illustrating numerical examples. Obtained results show that this is one of the efficient and simple method for obtaining an optimal solution of AP, then some methods commonly used in the literature. Proposed algorithm is also coded in MATLAB which makes it user friendly.

ABBREVIATIONS

Linear Programming Problem (LPP), Assignment Problem (AP), Transportation Problem (TP), Bottleneck Assignment Problem (BAP).

1. INTRODUCTION

Assignment Problem (AP) is one of the fundamental application in the theory of optimization, which is about the best way of assigning a set of m elements to another set of m elements in which, each element of the first set has to be assigned to exactly one element of the second set and vice-versa. AP appears in some decision making situations when a set of jobs has to be assigned to a

¹corresponding author

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Key words and phrases. Assignment problem, Transportation problem, congruence modulo, MATLAB.

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Yoga and its benefits for Women

Dr. Sayed Zameer Shabbir

H.O.D.Physical Education

Gandhi College Kada, Ta- Ashti, Dist. Beed

Introduction

Yoga provides the body with agility, strength, flexibility, free of diseases and aches, endurance and efficiency. Secondly mind plays an important role in the learning process. Yoga assures the mind with alertness, awareness, attention concentration, peace, assimilation, retention and reproduction. Thus there is a higher need of Yoga for the health and physical fitness. A woman body is exclusive, for it is clear by transition through youth, the productive time, menopause and post menopause the knowledge stage. At what time a woman can maintain balanced and pleasant-sounding reproductive scheme, it leads to greater energy and happy wellness. Be supposed to women practice yoga any differently from men? How might a woman modify her practice to be in accord with the changes her body undergoes throughout a life time? A yoga practices has the potential to support positive transformation through these natural cycles. Women have must, not only, take care of their domestic duties with efficiency and grace, but also work outside the four walls justifying their education and intellectual capabilities. Yoga is a means to achieving sanity and serenity in their trying and taxing world.

Yoga is an ancient discipline. It is recognized as one of the most important and valuable gifts of our culture. The modern era, with the development of science and technology, provides man more comforts for his basic necessities. But the these comforts man faces lot of problems, which cannot be solved only by the above facilities. Today the world is looking for solutions to solve the menacing problems of unhappiness, restlessness, emotional imbalance, hyper activity, tension, stress, etc. Simple breathing techniques motivation help women calm down and handle their multiple responsibilities with proficiency and poise. Yoga does additional for women than just make their bodies supple. It lends balance to the mind and nourishment to the soul. That is why women should not consider yoga as another chore on their overloaded schedule but as a necessary activity that will help them handle their other obligations optimally. The logical question that arises in relation to yoga is when to start. This is the icing on the cake as far as women are concerned because yoga is suitable for all ages.

Objectives of research

- 1) To explain Concept and procedure of yoga.
- 2) To overview on Yoga.
- 3) To study importance of Yoga and its benefits for specialy women.

Research methodology

The purpose of the study of importance of Yoga and its benefits for Women is used by man, Women performers, coaches and officials to try to improve performance and human life. For this paper researcher is used descriptive research methodology and scientific analysis. The researcher is used secondary data form reference books, research articles newspapers, journals, published and unpublished materials and also taken intimate facilities.

Benefits of Yoga for Women

Makes happier the yoga, exercises in their life might facilitate them to achieve inner peace. On behalf of the items, it's necessary for the ladies to own information concerning such yoga exercises of Padmasana, Dansana, Gomukhasana and Sucirandhrasana. Yoga helps ladies in receiving pregnant as traditional yoga follow will increase organic process and secretion balance. Those ladies follow yoga have double the probabilities of obtaining pregnant as there's reduced stress and magnified blood circulation to the fruitful organs.

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TO STUDY SEED GERMINATION PERCENTAGE OF BRINJAL BY USING TRICHODERMA SPECIES

P.S. Anarse* and I.G. Sayyad

Dept. of Botany, Gandhi College, Kada Dist Beed

*Corresponding Author: panduranganarse43@gmail.com

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ABSTRACT:

The present investigation was carried out at kada on brinjal to determine the seed germination percentage of brinjal by using *Trichoderma* species. The efficiency of Bio-control means in controlling seed borne fungal diseases by using one *Trichoderma* species. Four different hybrid varieties of Brinjal and one wild varieties of Brinjal planted in pot for experimental work in Botany garden. The seed were purchased in various company i.e Ankur, Panchganga, Arnav, Mahyco and wild variety. The seed germination in Ankur is 70%, Panchganga 80%, Arnav 90%, Mahyco 92% germination were seen as compare to wild and control variety.

Key Words: - Seed germination, *Trichoderma*, Hybrid varieties, Brinjal

INTRODUCTION:

Brinjal (*Solanum melongena* L.) belongs to the family Solanaceae and is known under the botanical name. It is affected by several diseases, which do not control the plants to grow and yield to the best of genetic potential. Various disease management methods have been implemented to combat and eradicate pathogenic fungi. These include cultural, regulatory, physical, chemical and biological methods. In that situation Bio-control offers a good choice to grows to control the disease avoid the pollution Biological control of plant disease is suggested as on alternative to chemical control (Cook, 1977) and is considered as a cost effective and an environmental eco-friendly technique. Humus an organic rich soil of valley is flavoured to flourish the bioagents easily can control the diseases. Infected domestic antagonistic are most virulent strains to the pathogens (Dohroo, 2001) because of their persistent capability under soil and local climate conditions.

MATERIAL AND METHOD:

The practical work is done in the laboratory as well as in pot culture in botanic garden three

hybrid varieties of seed and one wild variety taken for the study of seed borne fungi on seed germination of Brinjal, Ankur, Panchganga, Mahyco, Arnav and wild variety of each of 100 seeds were sown in pot. The seed are treated with *Trichoderma* Species. The germination percentage of seed Mahyco is more than that of others. The seed health test is done by standard method (ISTA, 2001). The seed borne fungal pathogen associated with seeds was observed by binocular microscope by the key of Mathurand Kongsdal (1994). BAU- Biofungicide (*Trichoderma* based preparation Hossain (2011) was collected from diseases resistance laboratory.

The germination percentage of hybrid varieties is more than that of wild variety by using the *Trichoderma* species to control the pathogen of diseases. The height of stem, length of leaf treated plants is large than of control plants. Thus, it is reported that least but similar prevalence of the fungi was recorded in the varieties tested.

RESULT AND DISCUSSION:

The effect of *Trichoderma* species on seed germination were studied by taking four different hybrid varieties and one control. The control have

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महाराष्ट्रातील लोककला : वसा आणि वारसा

प्रा.हारकर दत्तात्रय बद्दीनाथ

मराठी विभाग, गांधी महाविद्यालय, कडा, ता. आष्टी, जि. बीड

महाराष्ट्राला प्राचीन, समृद्ध अशी सांस्कृतिक पार्श्वभूमी लाभलेली आहे. या लोककलांची परंपरा महाराष्ट्राने तत्परतेने जतन केली आहे. या लोककलांना मानवी जीवनाचा अविभाज्य घटक मानण्यात येते. मानवाने आपल्या मनोरंजनासाठी या लोककलांच्या माध्यमातून प्रयत्न केले आहेत. लोककला हा मानवाने स्वयंस्फूर्तीने निर्माण केलेला कलेचा प्रकार आहे. लोकांनी निर्माण केलेल्या कला म्हणजेच लोककला होत. लोकांनी निर्माण केलेल्या लोककलांचा अभ्यास करताना आपणास असे म्हणता येईल की, लोककलाचे प्रयोगरूप लोककला आणि इतर लोककला हे दोन महत्त्वपूर्ण प्रकार पडतात. यातील एक महत्त्वपूर्ण प्रकार म्हणजे प्रयोगरूप लोककला हा मानवाने निर्माण केलेला लोककलेचा महत्त्वाचा प्रकार आहे. ज्या लोककला प्रयोगाच्या माध्यमातून सादर केल्या जातात त्यांना प्रयोगरूप लोककला असे म्हणतात. प्रयोगरूप लोककला विज्ञानामधील प्रयोगशाळेत केल्या जाणाऱ्या प्रयोगाप्रमाणे सादर केल्या जा नसून 'समाज' हीच प्रयोगरूप लोककलांची प्रयोगशाळा असते. त्यामुळे प्रयोगरूप लोककलेच्या स्वरूपात साचेबद्धपणा आढळून येत नाही. म्हणजेच प्रयोगरूप लोककला या "मुक्त" "स्वच्छंद" स्वरूपाच्या असतात.

गोधळ, वाघ्यामुरळीचे जागरण, दशावतार, किर्तन, सोंगी-भारुडे, दंडार, बहुरूपी, लोकनाट्य तमाशा अशा अनेक प्रयोगरूप लोककला महाराष्ट्रात लोकप्रिय असून गेल्या कित्येक वर्षांपासून बहुजन समाजाच्या मनोरंजनाची गरज भागवीत आहेत. लोककलांच्या स्वरूपाचा अभ्यास करताना आपणास असे म्हणता येईल की, प्राचीन काळी या लोककलेच्या प्रकारांना कोणत्याही प्रकारची संहिता, घाट, मर्यादा, बंधने नव्हती. वेळ-काळ, प्रसंगानुसार, मराठमोळ्या बहुजन समाजाचे मनोरंजन करण्याचे कार्य या लोककलेच्या माध्यमातून मोठ्या प्रमाणावर केले जात असे. त्यामुळे रसिक, श्रोते मंडळी आपल्या धकाकीच्या किंवा चाकोरीबद्द जीवनापासून अलिप्त राहून या प्रयोगरूप लोककलांच्या माध्यमातून मनोरंजनाच्या, आनंदाच्या महासागराची मनमुरादपणे चव चाखत असत. या लोककलेच्या माध्यमातून लोककलाकार, आनंद, मनोरंजन या सोबतच उपदेशाचे डोसही अल्प प्रमाणात का होईना, परंतु अतिशय साजुक आणि नाजुक स्वरूपात पाजवत असत. त्यामुळे रंजन आणि बोध (उपदेश) या दोन्ही प्रयोजनासाठी प्राचीन कालावधीपासून चालत आलेल्या प्रयोगरूप लोककलांचे मानवी जीवनात अनन्य साधारण महत्त्व आहे.

या लोककलेतील दुसरा महत्त्वपूर्ण प्रकार म्हणजे प्रयोगरूप लोककला होय. प्राचीन काळात संपूर्ण मराठी रसिकांचे, श्रोत्यांचे, बहुजनांचे नैसर्गिक आणि स्वच्छपणे मनोरंजन करणार्या लोककलांचा अभ्यास करता, लोककलेचे सादरीकरण, आशय, विषय, सांस्कृतिक, सामाजिक व धार्मिक विशेष या घटकावरून शिध्दिनाट्ये आणि "लोकनाट्य" ही दोन प्रकार पडतात.

विधिनाट्य :

पारंपारिक लोकजीवन हे "धर्म" या संकल्पनेवर आधारित असल्यामुळे लोकजीवनावर धर्म आणि धार्मिकतेचा मोठ्या प्रमाणावर प्रभाव पडलेला आहे. म्हणजेच धर्माशी संबंधीत सन, उत्सव, सोपस्कार आणि विधीया बाबी मानवी जीवनात प्राचीन कालावधीत सातत्याने येत असत. एवढेच नव्हे तर प्राचीन कालावधीत धार्मिक विधीय पूर्ण केल्या शिवाय मानवास द्य मोक्षप्राप्तीच प्राप्त होत नसते. असी संकल्पना, धारणा प्राचीन कालावधीत मानवी जीवनात रुढ होती. त्यामुळे धार्मिक विधीचा पगडा लोकजीवनावर मोठ्या प्रमाणात होता. लग्न, बारसे, उपनयन संस्कार इ. अनेक विधी लोकजीवनात साजरे केले जात असत. आणि या विधिप्रसंगी लोकांचे मनोरंजन करण्याच्या माध्यमातून विविध प्रकारचे 'नृत्य' सादर केले जात असत. त्यालाच विधिनाट्य असे म्हणतात.

किर्तन :

लोकजीवनात प्रतिष्ठा पावलेल्या प्रयोगरूप कलाप्रकारामधील विधिनाट्याचा किर्तन हा एक महत्त्वाचा प्रकार आहे. या कलाप्रकाराची बैठक शास्त्रीय स्वरूपाची असली तरी प्राचीन काळापासून मौखिक परंपरेने ही कला चालत आलेली आहे. लोक प्रबोधनाचे आणि लोकंरंजनाचे कार्य किर्तनाने केलेले आहे. किर्तन या लोककला परंपरेचा वारसा महाराष्ट्रात संत नामदेवापासून, एकनाथ, रामदास, तुकाराम यांच्यापासून ते आजतागायत ह.भ.प.

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RESEARCH ARTICLE

Stability Indicating Method for Known and Unknown Impurities Profiling for Vildagliptin in Vildagliptin Tablet

Nitin Mahajan^{1*}, Suparna Deshmukh² and Mazhar Farooqui¹

¹Post Graduate and Research Centre, Department of Chemistry, Maulana Azad College of Arts, Science and Commerce, Aurangabad, Maharashtra, India; ²Department of Chemistry, S.K Gandhi College, Kada, Tal: Asthi, Dist: Beed, Maharashtra, India

Abstract: Background: Vildagliptin is a drug for the treatment of diabetes. DPP-IV inhibitor represents a new class of oral antihyperglycemic agents to treat patients with type 2 diabetes. Several RP-HPLC methods have been reported to determine Vildagliptin alone. However, it has been noted that there are no available stability-indicating methods in pharmacopeias (USP/BP/EP/JP) nor in the available literature to quantify known and unknown impurity patterns for vildagliptin in vildagliptin tablets.

Objective: The aim of this study is to develop a new single, sensitive, robust and specific gradient RP-HPLC method to quantify known and unknown impurities and degradants of Vildagliptin in Vildagliptin tablets.

Methods: Chromatographic separation has been accomplished on the Hypersil ODS column (250 x 4.6) mm, 5 μm with a mobile phase consisting of a mixture of Perchloric acid Buffer, methanol, acetonitrile and Triethylamine delivered at a flow rate of 1.0 mL minute⁻¹ and the detection wavelength 210 nm. The developed method was validated as per ICH guidelines.

Results: Vildagliptin was found degraded significantly under oxidative and alkaline stress conditions. The degradation products were well resolved from Vildagliptin and its impurities. An analytical method was found linear, accurate and precise from LOQ (Limit of Quantification) level to 150% of impurity specification limit (0.5%).

Conclusion: The method found sensitive, rapid and accurate quantification of known, unknown impurities and degradants. The peak purity results confirmed that the Vildagliptin peak was homogeneous and pure in all stress samples, thus proving the stability-indicating nature of the method.

Keywords: Impurity profiling, degradation products, analytical method development, analytical method validation, HPLC, related substances, vildagliptin.

INTRODUCTION

The chemical structure for Vildagliptin is [S]-1-[N-[3-hydroxy-1-adamantyl] glycol] pyrrolidine-2-carbonitrile, a potent di-peptidyl peptidase IV [DIP-IV] inhibitor, which is a drug for the treatment of diabetes. DPP-IV inhibitor represents a new class of oral antihyperglycemic agents to treat patients with type 2 diabetes [1]. DPP-IV inhibitors improve fasting and postprandial glycemic control without hypoglycemia or weight gain. Vildagliptin inhibits the inactivation of GLP-1 [2, 3] and GIP [3] by DPP-IV, allowing GLP-1 and GIP to potentiate the secretion of insulin in the beta cells and suppress glucagon release by the alpha cells of the islets of Langerhans in the pancreas [4, 5].

The literature review revealed several methods of RP-HPLC reported to determine vildagliptin alone [6-11] and in combination with other drugs [12-16].

No Pharmacopeia (USP/BP/EP/JP) method is available for quantification of known and unknown impurities profiling for Vildagliptin in Vildagliptin Tablets.

However, the extensive literature review found that very few methods were reported for the identification of degradation products [17], related substances [18], and metabolites [19] of Vildagliptin.

The reported methods for determining its degradation product and metabolites are based on the LC/MS technique, which is highly costly and is not stability-indicating.

The method reported for related substances does not show stability-indicating nature, nor does it demonstrate the degradation kinetics of the vildagliptin molecule.

* Address correspondence to this authors at Post Graduate and Research Centre, Department of Chemistry, Maulana Azad College of Arts, Science and Commerce, Aurangabad, Maharashtra, Pin code: 431001, India; Tel: + 919284831693; E-mail: mahajan1925@gmail.com

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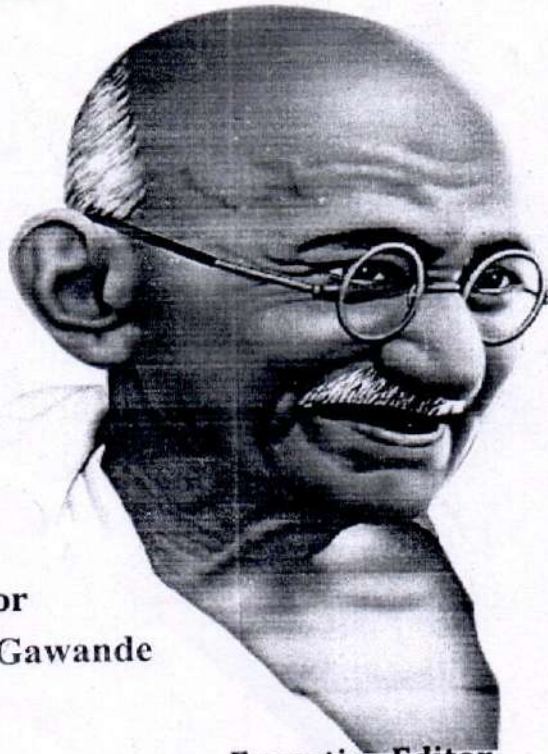
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असहकार चळवळ व भारत छोडो आंदोलनातील महात्मा गांधीजीची भूमिका**डॉ. राधाकृष्ण जोशी**

गांधी महाविद्यालय, कडा ता.आष्टी जि.बीड

गांधींचा जन्म 2 ऑक्टोबर, इ.स.1869 या दिवशी सध्याच्या गुजरातमधील पोरबंदर शहरात झाला. त्यांच्या वडिलांचे नाव करमचंद आणि आईचे नाव पुतळीबाई होते. करमचंद गांधी तत्कालीन काठेवाड प्रांतातील पोरबंदरमध्ये दिवाण होते. त्यांच्या आजोबांचे नाव उत्तमचंद गांधी असे होते. त्यांना उता गांधी असे देखील म्हणत. पुतळीबाई या करमचंद यांच्या चौथ्या पत्नी होत्या. आधीच्या तीन पत्नी प्रसूतिदरम्यान मृत पावल्या होत्या. अत्यंत धार्मिक वातावरणातील बालपणाचा मोठा प्रभाव गांधीजींच्या पुढील आयुष्यावर दिसून येतो. विशेषतः अहिंसा, शाकाहार, सहिष्णुता, इतरांबद्दल करुणा या तत्वांचे बीज याच काळात रोवले गेले. आईमुळे मोहनदासांवर जैन संकल्पना आणि प्रथांचा प्रभाव होता. प्राचीन वाङ्मयातील श्रावणबाळ आणि हरिश्चंद्र या दोन कथांचा मोहनदासचा मनावर गहिरा परिणाम होता.

असहकार चळवळ :

गांधीजींनी असहकार, अहिंसा आणि शांततामय विरोध यांना शस्त्र म्हणून इंग्रजांविरुद्ध वापरले. पंजाबमध्ये जालियनवाला बाग हत्याकांडानंतर लोकांच्या क्रोधाचा उद्रेग झाला आणि अनेक ठिकाणी हिंसक विरोध झाले. गांधीजींनी जालियनवाला बाग हत्याकांड तसेच त्यानंतरचे हिंसक विरोध दोन्हींचा निषेध केला. त्यांनी या दंग्यांना बळी पडलेल्या ब्रिटिश नागरिकांबद्दल सहानुभूती दर्शविणारा आणि दंग्यांचा निषेध करणारा एक ठराव मांडला. या ठरावाला काँग्रेसमध्ये सुरुवातीला विरोध झाला. पण गांधीजींच्या तत्त्वांनुसार कोणत्याही प्रकारची हिंसा ही पाप होती आणि त्याचे समर्थन करता येणे शक्य नव्हते. हे तत्त्व मांडणाऱ्या त्यांच्या भावनाप्रधान भाषणानंतर काँग्रेसने त्यांचा ठराव मान्य केला. पण या हत्याकांडाच्या आणि त्यानंतरच्या हिंसेच्या पश्चात गांधीजींनी आपले सर्व लक्ष पूर्ण स्वराज्यावर केंद्रित केले. त्यांच्या पूर्ण स्वराज्याच्या कल्पनेत पूर्ण वैयक्तिक, धार्मिक आणि राजकीय स्वातंत्र्य समाविष्ट होते.

डिसेंबर इ.स.1921 मध्ये भारतीय राष्ट्रीय काँग्रेसचे पूर्ण अधिकार गांधीजींना देण्यात आले. त्यांच्या नेतृत्वाखाली काँग्रेसची पुनर्बांधणी नवीन संविधानानुसार करण्यात आली. ज्याचा मुख्य उद्देश होता - स्वराज्य. पक्षाचे सभासदत्व थोड्याशा फीच्या मोबदल्यात सर्वांना खुले करण्यात आले. पक्षातील शिस्त वाढवण्यासाठी श्रेणीनुसार समित्या बनवल्या गेल्या. यामुळे फक्त उच्चभ्रूसाठीच समजल्या जाणाऱ्या पक्षाचे स्वरूप बदलले आणि काँग्रेस जनसामान्यांचे प्रतिनिधित्व करणारा पक्ष बनला. गांधीजींनी अहिंसेच्या तत्त्वाला स्वदेशीची जोड दिली. त्यांनी सर्वांना परदेशी - विशेषतः ब्रिटिश - वस्तूंचा बहिष्कार करण्याचे आवाहन केले. या तत्त्वांनुसार सर्व भारतीयांनी ब्रिटिश कपड्यांच्या ऐवजी खादीचा उपयोग करावा असे अमिप्रेत होते. प्रत्येक भारतीय पुरुष आणि स्त्रीने, प्रत्येक गरीब आणि श्रीमंत व्यक्तीने, दिवसाचा काही काळ भारतीय स्वातंत्र्यलढ्याच्या समर्थनार्थ चरख्यावर सूत कातावे असा गांधीजींचा आग्रह होता. याचा मुख्य उद्देश शिस्त आणि स्वावलंबनाचे महत्त्व लोकांच्या मनावर ठसवणे तसेच स्त्रियांना स्वातंत्र्यलढ्यात सहभागी करून घेणे हा होता. ब्रिटिश वस्तूंच्या बहिष्काराबरोबरच ब्रिटिश शैक्षणिक संस्थांचा बहिष्कार, सरकारी नोकरीचा त्याग आणि ब्रिटिशांनी दिलेल्या मान आणि पदव्यांचा त्याग करण्याचे आवाहन गांधीजींनी केले.

असहकार चळवळीला समाजातील सर्व स्तरांमधून उस्फूर्त प्रतिसाद मिळाला. पण असहकार चळवळ जोमात असतांनाच असहकार थांबवण्यात आली. याला कारण ठरले, उत्तर प्रदेशमधील चौरी चौरा गावात चळवळीला मिळालेले हिंसक वळण. 4 फेब्रुवारी इ.स.1922 रोजी पोलिसांनी जमावावर केलेल्या गोळीबाराने संतप्त होऊन आंदोलकांनी पोलिसांवर हल्ला केला व नंतर पोलिस ठाण्याला आग लावली. जमावावरील गोळीबारात तीन जण मरण पावले तर पोलिस ठाण्यात पोलिस जळून मरण पावले. पुढे अजून जास्त हिंसक घटना घडतील या भीतीने गांधीजींनी चळवळ स्थगित केली. 10 मार्च इ.स.1922 मध्ये गांधीजींना राजद्रोहाच्या आरोपाखाली अटक करण्यात आली व सहा वर्षांचा तुरुंगवास ठोठावण्यात आला. इ.स. 1924 मध्ये दोन वर्षांच्या तुरुंगवासानंतर अपेंडिक्सच्या ऑपरेशनच्या कारणावरून त्यांची सुटका करण्यात आली.

गांधीजी तुरुंगात असतांना त्यांच्या नेतृत्वाअभावी काँग्रेसमध्ये फूट पडू लागली. शेवटी काँग्रेसचे दोन गटात विभाजन झाले. एका गटाचे नेतृत्व वित्तरंजन दास आणि मोतीलाल नेहरू यांच्याकडे होते. हा गटाचा कल संसदीय कार्यकारणीत भाग घेण्याकडे होता. पण चक्रवर्ती राजगोपालाचारी आणि सरदार पटेल यांच्या नेतृत्वाखालील दुसऱ्या गटाचा याला विरोध होता. हिंदू-मुस्लिमांमधला चळवळीदरम्यान वाढीस लागलेला एकोपासुद्धा हळूहळू कमी होत होता. गांधीजींनी हे मतभेद दूर करण्याचे अनेक प्रयत्न केले. त्यांनी यासाठी तीन आठवड्यांचा उपवास केला. पण या प्रयत्नांना म्हणावे तितके यश मिळाले नाही.

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माहितीचा अधिकार कायद्याचे महत्त्व आणि अंमलबजावणी

प्रा.डॉ.चंद्रशेखर काशिनाथ तळेकर

राज्यशास्त्र विभाग,
एस.के.गांधी महाविद्यालय कडा, ता.आष्टी,
जि.बीड

प्रस्तावना :-

माहितीचा अधिकार कायदा हा मजबुत लोकशाहीच्या दिशेने मार्गक्रमण करण्यासाठीचा महत्त्वपूर्ण घटक समजला जातो. कारण या कायद्यामुळे देशातील सर्वसामान्य नागरिकांना प्रशासनातील कार्य-कार्यवाही विषयक माहिती उपलब्ध करून दिली जाते. आजपर्यंत फक्त संसदेत व विधानसभामध्येच जी माहिती मागवली जात असे तीच माहिती पुरवण्याच्या शासकीय अधिकारी, कर्मचाऱ्यांचा प्रयत्न असे. पण सामान्य जनतेने काही माहिती मागीतली तर गोपनीयतेच्या अथवा अन्य सबबी किंवा कारणास्तव माहिती देणे टाळण्याकडे बहुतांश शासकीय अधिकारी कर्मचाऱ्यांचा कल होता. पण या माहितीच्या अधिकारामुळे जी माहिती संसद - विधानसभांना दिली जाते तीच कोणत्याही सर्वसामान्य व्यक्तीने मागीतली असेल तर त्या व्यक्तीला पुरवणे माहिती अधिकाऱ्यांवर, बंधन कारक झाले. माहितीचा अधिकार किंवा कायदा स्वीडनने सगळ्या जगाला दिलेली एक अनमोल देणगी आहे. स्वीडनने १७६६ साली आपल्या देशातील सर्व नागरिकांना माहिती देण्याचा अधिकार मंजूर केला. जो प्रशासकीय पारदर्शकतेसाठी महत्त्वपूर्ण आहे. या दृष्टीकोनातून माहितीच्या अधिकार कायद्याचे महत्त्व स्पष्ट होते. हीच प्रक्रिया या अधिकार कायद्याच्या अंमलबजावणीद्वारे भारताने राबवून आपल्या देशातील नागरिकांना प्रशासकीय प्रक्रियेत सामावून घेतले असल्याचे दिसून येते या दृष्टीकोनातून माहितीचा अधिकार कायदा त्याचे महत्त्व व अंमलबजावणी विषयक विश्लेषण करण्याच्या उद्देशाने, हा शोधनिबंध प्रस्तुत करण्यात आला आहे.

शोधनिबंधाचे उद्देश :-

माहिती अधिकार कायद्याचे महत्त्व स्पष्ट करणे. माहितीचा अधिकार कायद्याची अंमलबजावणी विषयक विश्लेषण करणे. माहितीच्या अधिकाराची संकल्पना, उद्देश स्पष्ट करणे. या दृष्टीकोनातून माहितीचा अधिकार कायदा त्याचे महत्त्व व अंमलबजावणी विषयक विश्लेषण करण्याच्या उद्देशाने, हा शोधनिबंध प्रस्तुत करण्यात आला आहे.

माहितीचा अधिकार कायदा : अंमलबजावणी :-

माहितीचा अधिकार कायद्याची प्रक्रियेस खऱ्या अर्थाने १९८९-९० सालीच सुरुवात झाली होती. परंतु त्यास लागू होण्यास बराच काळ लागला. या कायद्यासाठी सर्वच स्तरातून जनसनास पारदर्शक, इमानदार, नैतिक बनवण्यासाठी माहितीचा अधिकार महत्त्वपूर्ण आहे असे ठरते होते त्याप्रमाणेच १९९६ च्या सार्वत्रिक लोकसभा निवडणुकी वेळी सर्वच राजकीय पक्षांनी आपल्या पक्षीय जाहिरनाम्यात माहिती अधिकाराला स्थान दिले. भारतात सर्वप्रथम माहितीचा अधिकार कायदा तामिळनाडू राज्याने १७ एप्रिल १९९६ रोजी राज्यस्तरावर लागू

PRAKASH B. JADHAVAR Dept. of Botany, Smt. S.K. Gandhi Arts, Amolak Science and P.H.
Gandhi Commerce College, Kada, Tq. Ashti, Dist. Beed-414202
Email: p.bjadhavar@gmail.com

Abstract:

Osmanabad district forms part of Godavari River Basin in maharashtra. Whereas Manjra, Sina, Terna, Bori, Benitura and Banganga are the main rivers which are flowing through the district. Author has earlier described the algal taxa belonging to chlorophyceae, and cyanophyceae from Banganga project of Osmanabad district in Maharashtra. Present paper deals with the further addition of taxa from the study area. During the present study the algal members of Chlorophyceae were noted from the study area and presented in the present communication.

Key words: Chlorophyceae, Algae, Flora, Banganga.

Introduction:

The Banganga Project is built up on Banganga River near Songiri and Bhongiri village of Bhoom tehsil in Osmanabad district. It is mainly used for irrigation and drinking water purpose. The study of algal flora of water reservoir was carried out to explore the diversity of algae of the water reservoir. The algal structure ranges from unicellular mucilaginous colonies to multicellular compact forms which show considerable diversity in form and adaptation to their distinctive environment (Krishnamurthy, 2000). During present study, the chlorophyceae algal taxa were observed.

Materials and Methods:

Random sampling technique has been used for collection of algal samples at the Banganga Project. Collections were made for 2 consecutive years (2015-2017), from October to January. The algal samples were preserved in 4% formalin. Identification of taxa was carried out by using Prescott (1951), Jadhavar and Pardiwal (2016), Krishnamurthy (2000), Prasad and Misra (1992), Pal *et al* (1962) and other relevant literature.

Results and Discussion:

During the study 15 taxa of Chlorophyceae were observed which are described as under.

1) *Spirogyra fallax* (Hansg.) Wille

Prescott, 1951, p 314, pl 77, f 10

Filaments of rather slender cylindrical cells, 35 μ in diameter and up to 8 times the diameter in length, with replicate end walls, conjugation scalariform, the tubes short but formed from both gametangia; fertile cells inflated. Zygospores ellipsoid; wall layer smooth; 45 μ in diameter.

2) *S. gratiana* Transeau

Prescott, 1951, p 315, pl 74, f 9

Filaments of elongate cylindric cells, 30 μ in diameter, 155 μ long, with replicate end walls; Chloroplasts two to three. Conjugation lateral or scalariform by tubes from both gametangia; fertile cells cylindric, or merely enlarged. Zoospores ellipsoid; median spore wall smooth and yellow.

3) *S. pratensis* Transeau

Prescott, 1951, p 319, pl 75, f 5

Filaments of rather slender cells, 17.5 μ in diameter, 95 μ long, with plane end wall, Chloroplast solitary, making 1-8 turns, conjugation by tubes from both gametangia; fertile cells inflated. Zygospores ellipsoid to subcylindric-ovate; median spore wall smooth, yellow at maturity.

4) *Closterium calosporum* Wittr. var. *maius* W.et. G.S.West.

Prasad and Misra, 1992, p 102, pl 16, f 24

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Human Rights

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“Human Rights and Women’s Education In India”

Prof. Bhosale S.E.

Gandhi College Kada, Tq. Ashti Dist Beed

Introduction:

The status of women in India has been subject to many changes over the span of recorded Indian history. The position in society deteriorated early in India’s ancient period, especially in the indo-Aryan speaking region and their subordination continued to be reified well in to India’s early modern period. Practices such as female infanticide, dowry, child marriage and the taboo on widow remarriage have long duration in India.

During the British Raj, measures aiming at a melioration were enacted, including Bengal Sati Regulation 1829, Hindu widows remarriage act 1870, Female infanticide prevention act 1870 and age of consent act 1891. Women’s rights under the constitution of India mainly include equality, dignity and freedom from discrimination; additionally India has various statutes governing the rights of women.

In past women’s status in India was confined within the four walls of home. They mainly played their role as a wife and mother. In the early Vedic period women enjoyed equal right to any type of education but in the later Vedic period they were educated according their Varnas. The girls of common families could not receive higher education.

There are many factors which contribute to gender discrimination in education. The most prime factor is social disinterest. As the society in which a girl child is raised determine the availability of education to her. Sometimes it is religion which restricts a girl child from enjoying her right to education. Article 10 of CEDAW, states that, The signatory states must take all necessary measures to eliminate discrimination in education and must ensure that women have access to educational information that will help secure the health and wellbeing of families. Culture plays the roll of a biggest obstacle in the way of the right to education of a girl child. Many families consider that the marriage is more important of their daughter than education.

Hindu women have to cope with much social and economic pressure even today such as the dowry problem, parental interference in marriage and carrier matters, domestic violence, gender based inequality in almost all areas of life, women trafficking.

The most important role of various conventions is to consider a child as an individual and member of family and community. The biggest challenge before Indian Government is to spread awareness into society about the importance of girls education. The right of education is precisely introduced from international human right perspectives and forms the perspectives of constitution of India. The right of education is protected as a social and economic right in constitution. With globalization the position of women in society has improved. Women have come out of the four walls of home and entered in the new aspects of life leading to the overall development of the community and in turn the whole nation.

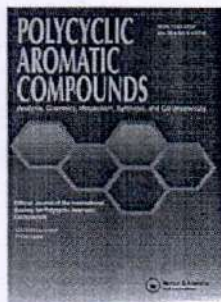
The Indian constitution has put the focus on gender equality everywhere in its preamble, Fundamental Rights, fundamental duties and Directive principles. The constitution not only grants equality to women, but also empowers the state to adopt measures of positive discrimination in favour of women for neutralizing the cumulative socioeconomic, education and political disadvantages faced by them.

In to January 1992, the government established national commission for women to look into all matters relating to the constitutional and legal safeguards for women. There are so many policies and laws that have been formulated by our government for the education of women such as Sakshar Bharat mission for female literacy, Rajiv Gandhi scheme for empowerment of adolescent girls, right to education, Kasturba Balika Vidyalaya, national programme for education of girls at elementary level, ratriya madhyamic shiksha abhiyan, Dhanlakhmi scheme, operation black board.

Social thinkers believe that in a nation like India giving education to women in as large number as possible can prove to be a panacea for many of the problems of women. Increasing dropout female children from schools is another problem though female children are getting admitted to primary, middle and high school in substantial number many of them dropout of the school in the middle without completing the course.

In spite of difficulties India has produced great women, not one or two of them, but a whole horde of them to quote few of them – Indira Gandhi, Lata Mangeshkar, Mother Teresa, Pratibha Patil, Sayra Nehwal, and many more. India has produced women saints, soldiers, politicians, teachers and many more there is no such a place where women have not yet entered. Almost in all the fields women become successful equal to men, who are becoming the sources of inspiration for other women to come forward.

Conclusion:



Synthesis of New Thiazole and Pyrazole Clubbed 1,2,3-Triazol Derivatives as Potential Antimycobacterial and Antibacterial Agents

Shivaji M. Jagadale , Yogita K. Abhale , Hari R. Pawar , Abhijit Shinde , Vivek D. Bobade , Abhijit P. Chavan , Dhiman Sarkar & Pravin C. Mhaske

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Synthesis of New Thiazole and Pyrazole Clubbed 1,2,3-Triazol Derivatives as Potential Antimycobacterial and Antibacterial Agents

Shivaji M. Jagadale^{a,b}, Yogita K. Abhale^c, Hari R. Pawar^c, Abhijit Shinde^d, Vivek D. Bobade^e, Abhijit P. Chavan^a, Dhiman Sarkar^f, and Pravin C. Mhaske^a

^aPost-Graduate Department of Chemistry, S. P. Mandali's Sir Parashurambhau College, Tilak Road, Pune, India (Affiliated to Savitribai Phule Pune University); ^bDepartment of Chemistry, S.K. Gandhi Arts, Amolak Science and P.H. Gandhi Commerce College Kada, Tal. Ashti, District Beed, India (Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad); ^cDepartment of Chemistry, Government College, Daman, India (Affiliated to Veer Narmad Gujarat University, Surat); ^dDepartment of Chemistry, Abasaheb Garware College, Pune, India (Affiliated to Savitribai Phule Pune University); ^ePost-Graduate Department of Chemistry, H. P. T. Arts and R. Y. K. Science College, Nashik, India (Affiliated to Savitribai Phule Pune University); ^fCombiChemBio Resource Centre, CSIR-National Chemical Laboratory, Pune, India

ABSTRACT

New series of 4-methyl-2-(4-substituted phenyl)-5-(4-((4-substituted phenyl)-1H-1,2,3-triazol-1-yl)methyl)-1-phenyl-1H-pyrazol-3-yl)thiazole, **6a-t** and 4-(1,3-diphenyl-1H-pyrazol-4-yl)-1-((1,3-diphenyl-1H-pyrazol-4-yl)methyl)-1H-1,2,3-triazole, **11a-o** derivatives have been synthesized by applying copper-catalyzed [3 + 2] cycloaddition reaction. The newly synthesized 1,3-thiazolyl-pyrazolyl-1,2,3-triazole (**6a-t**) and bis-pyrazolyl-1,2,3-triazole (**11a-o**) derivatives were screened for *in vitro* antimycobacterial activity against *M. Tuberculosis* H37Ra dormant and active and antibacterial activity against four pathogenic bacteria, *E. coli* (NCIM 2576), *P. fluorescens* (NCIM 2059), *S. aureus* (NCIM 2602) and *B. subtilis* (NCIM 2162). Compounds **6a**, **6f**, **6j**, **11e** and **11m** showed good activity against *M. tuberculosis* H37Ra Active strain, also compounds **6g**, **6h**, **11f**, **11n** and **11o** showed good activity against *M. tuberculosis* H37Ra Dormant strain. Compounds **6b**, **6i**, **6l**, **6o**, **6r**, **11k**, **11l** and **11m** showed good activity against *B. subtilis* with IC₅₀ 1.99–2.96 µg/mL. The antibacterial activity of thiazolyl-pyrazolyl-1,2,3-triazole and bis-pyrazolyl-1,2,3-triazole derivatives suggested that, these derivatives could lead to new compounds for treatment against bacterial infection.

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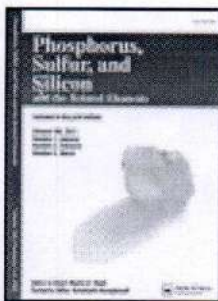
KEYWORDS

Thiazole; Pyrazole;
1,2,3-Triazole;
Antimycobacterial activity;
Antibacterial activity

Introduction

The WHO raised the red flag against an inappropriate use of antibiotics during the COVID-19 pandemic.¹ Therefore, the future antibiotic resistance will become the one of the major global health emergency and the effective prevention and treatment of an increasing range of infections due to bacteria, fungi, parasites and viruses become more challenging.² Two or more bioactive pharmacophore tethered scaffolds plays the significant role in the discovery of new lead candidate.³ Nitrogen and sulfur containing heterocyclic scaffolds are the precious sources that are continuously utilized in the field of drug discovery and development.^{4,5}

Clubbed polycyclic pyrazole, thiazole and triazole rings are privileged pharmacophores for the construction of lead molecules and have received much attention in recent years. 1,2,3-Triazole





Synthesis, characterization and antimicrobial screening of new pyrazolyl-1,2,3-triazolyl-thiazolyl-ethanol derivatives

Shivaji Jagadale , Manish Bhoje , Yogesh Nandurkar , Vivek D Bobade & Pravin C. Mhaske

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Synthesis, characterization and antimicrobial screening of new pyrazolyl-1,2,3-triazolyl-thiazolyl-ethanol derivatives

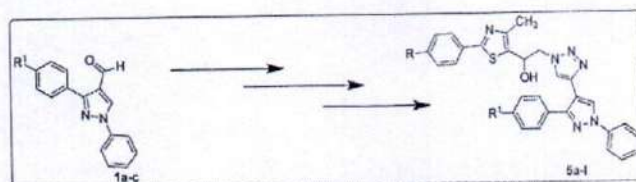
Shivaji Jagadale^{a,b}, Manish Bhoje^{a,c}, Yogesh Nandurkar^{a,d}, Vivek D Bobade^e, and Pravin C. Mhaske^a

^aPost-Graduate Department of Chemistry, S. P. Mandal's Sir Parashurambhau College (Affiliated to Savitribai Phule Pune University), Pune, India; ^bDepartment of Chemistry, S.K. Gandhi Arts, Amolak Science and P.H. Gandhi Commerce College (Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad), Beed, India; ^cS. N. Arts, D. J. Malpani Commerce and B. N. Sarda Science College (Affiliated to Savitribai Phule Pune University), Sangamner, India; ^dDepartment of Chemistry, Nowrosjee Wadia College (Affiliated to Savitribai Phule Pune University), Pune, India; ^ePost-Graduate Department of Chemistry, H. P. T. Arts and R. Y. K. Science College (Affiliated to Savitribai Phule Pune University), Nashik, India

ABSTRACT

Novel 2-{4-[3-aryl-1-phenylpyrazol-4-yl]-1,2,3-triazol-1-yl}-1-(4-methyl-2-aryl-1,3-thiazol-5-yl)ethanol derivatives, (**5a-l**) are synthesized by applying click reaction between 4-ethynyl-1,3-diphenyl-1H-pyrazole, (**2a-c**) and 2-azido-1-(4-methyl-2-arylthiazol-5-yl)ethanone (**3a-d**) followed by reduction of carbonyl with sodiumborohydride. The starting compounds 4-ethynyl-3-aryl-1-phenyl-1H-pyrazole (**2a-c**) were synthesized in good yield from 3-aryl-1-phenyl-1H-pyrazole-4-carbaldehyde (**1a-c**) using Bestmann-Ohira reagents. The newly synthesized azole derivatives (**5a-l**) were screened for *in vitro* antimicrobial activity against *Proteus mirabilis* (NCIM2388), *Escherichia coli* (NCIM2065), *Bacillus subtilis* (NCIM2063), *Staphylococcus albus* (NCIM 2178) and *in vitro* antifungal activity against *Candida albicans* (NCIM 3100), *Aspergillus niger* (ATCC 504), 2-{4-[3-(4-Methoxyphenyl)-1-phenylpyrazol-4-yl]-1,2,3-triazol-1-yl}-1-(4-methyl-2-phenyl-1,3-thiazol-5-yl)ethanol, (**5a**) 2-{4-[3-(4-fluorophenyl)-1-phenylpyrazol-4-yl]-1,2,3-triazol-1-yl}-1-[4-methyl-2-(4-methylphenyl)-1,3-thiazol-5-yl]ethanol, (**5h**) 2-{4-[3-(4-bromophenyl)-1-phenylpyrazol-4-yl]-1,2,3-triazol-1-yl}-1-(4-methyl-2-phenyl-1,3-thiazol-5-yl)ethanol, (**5i**) 2-{4-[3-(4-bromophenyl)-1-phenylpyrazol-4-yl]-1,2,3-triazol-1-yl}-1-[2-(4-chlorophenyl)-4-methyl-1,3-thiazol-5-yl]ethanol (**5j**) and 2-{4-[3-(4-bromophenyl)-1-phenylpyrazol-4-yl]-1,2,3-triazol-1-yl}-1-[2-(4-fluorophenyl)-4-methyl-1,3-thiazol-5-yl]ethanol, (**5k**) reported good antifungal activity against *A. niger* with MIC 31.25-62.5 µg/mL. Most of the compounds showed moderate activity against bacterial strains. The antifungal activity of pyrazolyl-1,2,3-triazolyl-thiazolylethanol derivatives suggested that these derivatives could lead to compounds for treatment against fungal infection.

GRAPHICAL ABSTRACT



Introduction

Sulfur and nitrogen containing heterocyclic compounds exhibit a wide spectrum of biological activities.^[1-3] The biological significance of 1,2,3-triazole,^[4-14] pyrazole^[15-19] and thiazole^[20-30] are therefore striking target for new antimicrobial agents. Triazole alcohols are also important pharmacophore of the azole antifungal drugs.^[31-33] The clubbed heterocyclic rings derivatives are known to exhibit significant pharmacological activities.^[8,34-43] In continuation of our work on Ravuconazole and Isavuconazole derivatives

(Figure 1), we herein report the synthesis, characterization and antimicrobial screening of 2-{4-[3-aryl-1-phenylpyrazol-4-yl]-1,2,3-triazol-1-yl}-1-(4-methyl-2-aryl-1,3-thiazol-5-yl)ethanol derivatives.

Results and discussion

Chemistry

Scheme 1 presents the synthetic route for 2-{4-[3-aryl-1-phenylpyrazol-4-yl]-1,2,3-triazol-1-yl}-1-(4-methyl-2-aryl-1,3-thi

CONTACT Pravin C. Mhaske mhaskepc18@gmail.com Post-Graduate Department of Chemistry, S. P. Mandal's Sir Parashurambhau College, Tilak Road, Pune 411030, India.

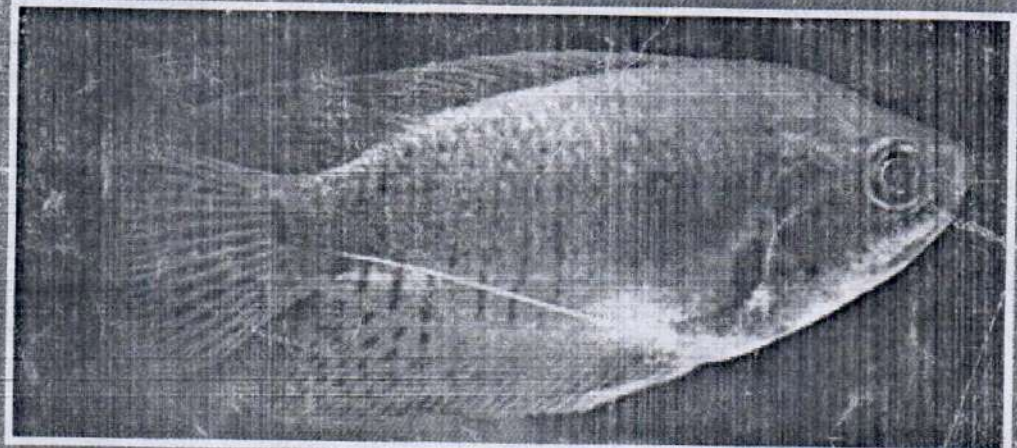
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EFFICACY OF FUNGICIDES ON *IN VITRO* GRWTH OF *FUSARIUM OXYSPORUM* CAUSING BULB ROT OF GARLIC (*ALLIUM SATIVUM* L.)

S. S. Patale and A. R. Kolte

Department of Botany
Smt. S.K. Gandhi Arts, Amolak Science and P.H Gandhi Commerce College, Kada, Tq. Ashti, Dist. Beed. 414202 (M.S.) India

Key words: Garlic, *Fusarium oxysporum*, Fungicides, Inhibition.

Present study was undertaken to find out inhibitory effect of various fungicides against *Fusarium oxysporum*, a pathogen causing bulb rot of garlic. For this purpose infected garlic bulbs were brought into the laboratory and cut down into small pieces. Those were surface sterilized with 0.1% mercuric chloride and washed with distilled water. The pieces were transferred to potato dextrose agar medium (PDA) and incubated at $27 \pm 2^\circ$ C. The pathogen (*Fusarium oxysporum*) was identified, isolated and maintained on PDA slants.

The fungicides, Carbendazim, Mancozeb and Benomyl were assessed at different concentrations for their efficacy against *Fusarium oxysporum* by *in vitro*

poisoned food technique (Nene and Thapliyal, 1993) and per cent growth inhibition was calculated as described by Vincent (1947).

All fungicides inhibited growth of pathogenic fungi. In the present study Carbendazim showed maximum (97.2%) inhibition against *Fusarium oxysporum* followed by Mancozeb (90.13%) and Benomyl (87.53%)

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Nene Y. L. and Thapliyal P. N. (1993). *Fungicides in Plant Disease Control*. Oxford and IBH Publishing Company, pp. 691.

Vincent, J. M. (1947). *Nature* 15:850.

Low temperature synthesis and investigations of magnetic properties of cobalt ferrite nanoparticles

L B Jadhavar¹, G N Kakade², S V Rajmane³, R B Kavade², J M Bhandari⁴, R G Vidhate⁵

¹Dept. of Physics, Arts, Commerce and Science College, Kille Dharur, Beed, India

²Department of Physics, SSGM College Kopargaon, Ahemadnagar (M. S.), India

³Department of Physics, Jawahar College, Anadur, Tq. Tuljapur, Dsit. Osmanabad. India.

⁴Department of Physics, Gandhi College, Kada, Ashti, Beed. (M. S.), India

⁵Department of Physics, A.D. College Kada, Dist. Beed. (M. S.), India

Corresponding author e-mail : jadhavarlb70@gmail.com

Abstract. In the present study we report the synthesis of cobalt ferrite nanoparticles using one of the well-known wet chemical method i.e. sol-gel auto combustion technique. The synthesis was carried out at sufficiently low temperature of 100°C. Citric acid was used as a fuel in the synthesis process. The obtained nanoparticles were sintered at 550°C for 4 h and then used for structural and magnetic investigations. The phase pure nature and nano crystalline nature was investigated through X-ray diffraction technique. Room temperature X-ray diffraction pattern show well defined reflections oriented at different Bragg's angle corresponding to Miller indices (220), (311), (222), (400), (422), (511) and (440). All this reflections belongs to cubic spinel structure. Thus, XRD analysis confirms the formation of single phase compound. The particle size was obtained through Scherrer's equation and found to be 21 nm, indicating the nanocrystalline nature. The magnetic properties were investigated using pulse field hysteresis loop tracer at room temperature. The saturation magnetization show increased values as compared to the bulk cobalt ferrite. The coercivity found to be less which exhibits the superparamagnetic behaviour. The obtained structural and magnetic parameters are useful in biomedical applications.

1. Introduction

Over the past decades ferrites have proved a prominent magnetic material used in many applications due to their excellent magnetic as well as electrical properties [1, 2]. They have the applications in the field of antenna rods, transformer cores, magnetic data storage, high frequency devices etc [3, 4]. In the recent decades, ferrites in nanocrystalline form have attracted many researchers as these nanoparticles exhibit smaller size, large surface to volume ratio and superparamagnetic behaviour [5, 6]. These characteristics of nanoparticles are useful in targeted drug delivery, hyperthermia, magnetic sensors, catalyst and many other areas [7]. Ferrite crystallizes in cubic spinel structure, cubic garnet structure and hexagonal structure. Spinel ferrite structure is very much attractive and show better





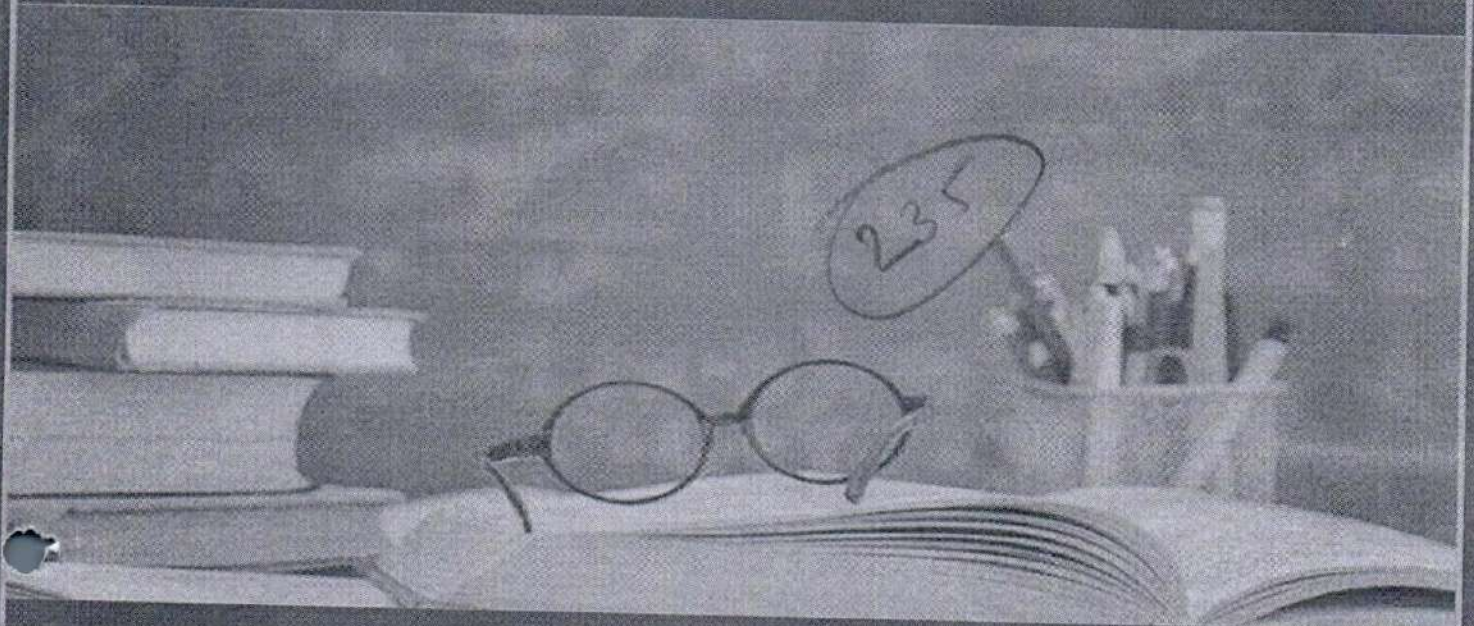
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Antagonistic activity of *Trichoderma* Spp. against Neck rot disease of Garlic (*Allium sativum* L.)

Kolte A.R. and S.S. Patale

Smt. S.K. Gandhi Arts, Amolak Science and P.H Gandhi Commerce College,
Kada, Tq. Ashti, Dist. Beed. 414202 (M.S.) India
Mb. 9823937501 Email- sspatale@rediffmail.com

Abstract:

Garlic (*Allium sativum* L.) is a most important vegetable, spice and medicinal crop produced on large scale throughout the world. In India garlic is most important commercial crop cultivated in various regions. There are number of fungal pathogens that attack on garlic crop throughout their development. The several fungi have been identified to be responsible for post-harvest decay of garlic bulbs during storage condition. These pathogens are responsible for to enormous loss of these bulbs not only in terms of quantity but also reduce its economic and nutritive value. The post-harvest diseases causes black mold, Soft rot, Purple rot, Brown rot, Neck rot, Basal rot, Internal rot and blue mold of garlic. The *Botrytis porri* is most important fungal pathogen which causes Neck Rot of garlic. In the present study tested *in vitro* antagonistic activity three species of *Trichoderma* i.e., *Trichoderma harzianum*, *Trichoderma viride* and *Trichoderma koningii* was tested against *Botrytis porri*. Out of these three *Trichoderma* species *Trichoderma viride* shows more effective inhibitory effect on *Botrytis porri* than *Trichoderma harzianum* and *Trichoderma koningii*.

Key words: Garlic, *Botrytis porri*, *Trichoderma* sp., Neck rot.

Introduction:

Garlic (*Allium sativum* L.) Is an herbaceous plant belonging to family Alliaceae grown for its edible bulbs and leaves. It is a most important vegetable, spice and medicinal crop produced on large scale throughout the world. It is used as a flavoring agent, food and medicine. Garlic is the second most widely cultivated vegetable next to the onion. Garlic is valued for its flavor and has commercial importance because of its wide medicinal value and application in food and pharmaceutical preparations (Sharma and Prasad 2001). Garlic (*Allium sativum* L.) is among the oldest of all cultivated plants. In traditional the Ayurveda, Islamic medicine, folklore medicine and Chinese medicine system, several herbs and spices including garlic are described to possess medicinal properties e.g. antihypertensive, anti-thrombotic and hypolipidemic (Makheja 1990 and Moyers 1996). It has been used as a food, spice and folklore medicine for over 4000 years, and is the most widely researched medicinal plant (Milner 1996).

Garlic is most important vegetable and spice crop all over the world. And it attacks by several pathogens. Many soil borne fungi play a major role in causing several diseases such as bulb rot, root wilt, damping-off, root rot, collar rot, crown rot etc. Garlic is affected by various diseases caused by different types of microorganisms of which fungi are the most important pathogens. *Botrytis alli*, *Fusarium oxysporum*, *Aspergillus flavus*, *Aspergillus niger*, *Penicillium corymbiferum*, *Macrophomina Phaseolina*, *Rhizopus stolonifer*, *Chaetomium globosum* are reported on garlic bulbs from storage (Ghangaonkar 2013). The most important fungal pathogens of stored

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Optical Traits of Thiourea Metal Complex (TMC) on Potassium Dihydrogen Phosphate (KDP) Crystal for NLO Applications

Y.B. Rasal^a, M. D. Shirsat^b, S.S. Hussaini^{c*}

^aSmt. S. K. Gandhi Arts, Amolak Science, P. H. Gandhi Commerce College Kada, Tal. Ashti, Dist. Beed - 414202, Maharashtra, India,

^bRUSA Centre for Advanced Sensor Technology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad - 431005, Maharashtra, India

^cCrystal Growth Laboratory, Department of Physics, Milliya Arts, Science and Management Science College, Beed - 431122, Maharashtra, India,

*Correspondence Author: Dr. S. S. Hussaini,

Abstract

Present research work exhibit perfect reinforcing in different optical parameters of thiourea metal complex (TMC) on potassium dihydrogen phosphate (KDP) crystal. The pure and TMC doped KDP crystals were grown by slow evaporation solution technique. The optical traits of the doped crystal have been systematically examined by UV-visible spectral analysis within the wavelength range of 200-800 nm. This investigation presents the detail study of optical properties transmittance, band gap, refractive index, reflectance, extinction coefficient, optical conductivity, real dielectric constant and imaginary dielectric constant of TMC doped KDP crystal. The Kurtz-Perry powder test has been employed to determine the enhancing effect of thiourea metal complex on the second harmonic generation (SHG) efficiency of KDP crystal and it found to be 1.78 times reference material.

Keywords: Slow evaporation method; Non linear optics; optical studies; TMO.

Date of Submission: 27-11-2020

Date of Acceptance: 11-12-2020

I. Introduction

The interaction of light with crystal is explained by phenomenon non linear optical (NLO) showing interest from last few decades by the researchers. The optical traits are optical storage, optical computing, optical information processing, optical power limiting, optical switching, antireflection coating, image manipulation and processes. The rapidly growing field in laser technologies, frequency conversion devices, holographic memory, electro-optics modulation and photonics by second and third-order effects in crystals has fulfilled many more needs of today's industry and society [1-4]. The organometallic crystals have attracted the attention of researchers due to superior optical, dielectric and mechanical properties. The large dipole moments, the ability to form metal ligands through hydrogen bonding effectively works to improve optical properties and acts as matrix modifier [5]. The higher transmittance of the crystal is a key factor to enhance the optical properties achieved by the co-ordination of thiourea molecules with inorganic bits. The researchers are attracted to the derivatives formed by hygroscopic, centro symmetric thiourea compound and metals to provoke frequency conversion properties [6]. Literature evidences that TMC have interesting results in the optical storage industry due to its low UV cut off wavelength and high NLO properties. The zinc thiourea sulphate (ZTS) is found to be an interesting organometallic NLO crystal which orients with orthorhombic structure [7]. In recent years, these materials were doped in KDP so as to achieve higher transmittance and SHG efficiency [8-14].

In current investigation an inventive report is put forward which deals to explore the most improving optical properties of ZTS doped KDP crystal. This investigation presents the detail study of optical properties transmittance, band gap, refractive index, reflectance, extinction coefficient, optical conductivity, real dielectric constant and imaginary dielectric constant of ZTSKDP crystal.

II. Experimental procedure

To synthesize the thiourea (tris) Zinc Sulphahte doed KDP (ZTSKDP) complex initially material thiourea and zinc sulphate were dissolved in double distilled water whose conductivity is less than 1.0 μ mhos in 3:1 M ratio to produce thiourea (tris) zinc sulphahte. After stirring the mixture for four hours homogeneous solution was filtered and kept for slow evaporation. The ZTS crystal was found according to reaction



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Growth Rate of Rural Population: A Talukawise Geographical Study of Ahmednagar District

Dr. Shinde S.M.

Gandhi College, Kada,
Tal: Ashti, Dist. Beed.

INTRODUCTION:-

Geographers and historians have long been interested in human settlements. Particularly geographers focus their attention on the analysis of spatial structure. Geographers are also interested in the study of dynamic character of rural settlements. In the present study attempt has been made to find out the growth in number of rural settlements during the last six decades. Further attempt has been made to study the growth of rural population, growth of individual settlements and their classwise growth rate.

The dynamics of rural growth is related to various geographical factors and changing economic situation. Sometimes negative trend of growth in the population as well as in the number of rural settlements is observed. It happens so when the settlements are shifted from their locations. In the previous chapter, we have discussed the factors of the distribution of rural settlements several of those factors are also responsible for the varying growth of rural settlements. The region, where resources are limited, land under cultivation is poor and physiography is rugged, in such areas the growth rate of rural settlements is poor, at the same time very few new settlements develop in these areas. On the other hand, in the plain area, where land is fertile, irrigation is developed and agriculture is found in prosperous stage, the rural settlements grow at a higher rate and several new settlements also emerge in the landscape.

Objectives :-

The main objective of the present paper is to examine and analyze the changes of Talukawise population growth rate in Ahmednagar District.

Database & Methodology :-

The present paper is based on secondary data. Secondary data has been obtained from social-economic abstract, District census handbook district Gazetteers, district statistical department and census of India.

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Abstract

In modern Era every thing is prevalence new technology as well as modern sources. Education is strong medium of knowledge and information and Libraries are the basic component of academic area it is an important source of knowledge it is an original part of academic institution there for Libraries are converted into the latest and digitalized libraries. Library and Information Science education moves into the 21st century changing society where changes occur due to the emergence and advancement in Information and Communications Technologies which requires the Library and Information Science professionals to acquire new IT skills for survival to brace up for this challenging situation. The influence of Information and Communication Technologies is now manifested in every sphere of human endeavor including the Library and Information Science field. there is no doubt that the technology in particular computers and ICTs have made the most impact on libraries in areas that require the rapid and accurate storage and processing of structured data the ability to operate for 24 hours a day, seven days a week and world wide connectivity and communication. Accessibility of information sources is an important recurring theme in the libraries

Keywords: Use of information sources, Accessibility in Libraries etc

Introduction

In modern Era every thing is prevalence new technology as well as modern sources. Education is strong medium of knowledge and information and Libraries are the basic component of academic area it is an important source of knowledge it is an original part of academic institution there for Libraries are converted into the latest and digitalized libraries. Library and Information Science education moves into the 21st century changing society where changes occur due to the emergence and advancement in Information and Communications Technologies which requires the Library and Information Science professionals to acquire new IT skills for survival to brace up for this challenging situation. The influence of Information and Communication Technologies is now manifested in every sphere of human endeavor including the Library and Information Science field. This trend required reeducation of library and systems staff, which added significant cost to libraries. Changes followed different library application providers more powerful technologies, and software application and networking configuration that were no longer developed in-house. library and information centres of all type began utilizing new application systems to automate resource sharing. Union catalogs and Inter-Library Loan modules were developed to allowing cooperating institution to combine their catalogues and allow patrons or one library to request and barrow materials from linked Institutions. These technologies fostered the growth of library consortia and the extension offering libraries and computing centres were tacking communications. Relational databases, and information distribution challenges. It become key for Universities. Research organizations and information centres to provide their campuses with communication technologies to libraries, classroom, laboratories, dormitories. Networking of such Institutions were prerequisite for accessing local Internal Internet database resource Internets provided campus connectivity using communications standards. therefore to study of use and Accessibility of information sources in Libraries I choose this topic for research paper.

Objectives of research:

To overview on academic libraries functions. To study types of E-Resources. To study of use of E-resources in Academic libraries. In the modern period academic Libraries are consists of many types of Academic materials therefore, to provide actual and fast service use of E-Resources is necessary in the academic Library following E-Resources are used.

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Analytical Study of Coding for Z- Channel and Optical Compression

Aruna Madhukar Kulkarni

Department of Mathematics
SAJVPMS Gandhi college, Kadat(Maharashtra)
abhlarud@gmail.com

Abstract: A brute force method of increasing reliability is to transmit a message with more power, but this can be impractical in terms of energy required. Another approach to achieving more reliable communication comes in the form of repetition: send the intended message n times in a row. In this way, the receiver can determine the original message with high probability by a simple majority vote. This method can improve reliability, but it does so by sacrificing the rate at which information is transmitted. To accomplish this, codes were introduced. In the broadest sense, a code is a subset of all possible messages. By transmitting code words, the information rate of communication system is reduced. However, this restriction can be thought of as adding a certain amount of redundancy to a message, much as was illustrated earlier with a repetition scheme. Each of these three codes simulated on the BSC and on the BEGN channels, and the Reed-Muller code was also simulated on the binary asymmetric channel and on the Z-channel. The output of the generalized Omura decoder was sampled at various iterations to see how the number of iterations affected performance.

Keywords: Iteration, performance, codes, compatibility, Z-channel

I. INTRODUCTION

All communication channels have some level of unreliability: storms interfere with radio signals, memory discs get scratched and packets of information sent over the internet get lost or destroyed. A brute-force method of increasing reliability is to transmit a message with more power, but this can be impractical in terms of the energy required. What sort of redundancy should be added to the original message? Shannon [24] handles the first question in a remarkable yet non-constructive manner: by considering a probability distribution on ensembles of codes, he proves that "good" codes must exist.

The search for concrete examples of these good codes can be regarded as the question of codes can be regarded as the question of code design, an area that continues to prove both fruitful and surprising.

The second question is that of the decoding problem: once a code has been chosen, how can the redundancy of that code be used by the decoder form a reliable estimate of the transmitted codeword? Assuming that all messages are equally likely to be transmitted, the optimal decoder with respect to word-error rate is the maximum likelihood (ML) decoder.

Maximum-likelihood decoding is very costly to implement in a general setting and in certain situations the decision problem corresponding to ML decoding is known to be NP-complete [4].

The linear programming decoder is then defined as a linear programming relaxation of the ML integer program. The linear programming decoder is provably suboptimal, but the source of this sub-optimality is known to be the presence of non-integer extreme points in the underlying polytope, which are known as nontrivial pseudocode-words. In this dissertation, we present a new characterization of these pseudo code-words for the family of cycle codes.

This characterization is in terms of the normal graph of the code, and the techniques used in this specific situation show promise of shedding light on the general case. One of the most fundamental concepts of coding theory is that of a channel, i.e., a medium over which information is transmitted.

Examples of channels in physical systems include telephone lines, Ethernet cables, compact discs and even the



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CONTROL OF *FUSARIUM OXYSPORUM* CAUSING BULB ROT OF GARLIC (*ALLIUM SATIVUM* L.) BY USING FUNGICIDES

Mr. Patale S. S.

Department of Botany
Smt. S.K. Gandhi Arts, Amolak Science and
P.H Gandhi Commerce College, Kada, Tq. Ashti,
Dist. Beed. 414202 (M.S.) India
Email- sspatale@rediffmail.com

Abstract

Garlic (*Allium sativum* L.) is a most important vegetable, spice and medicinal crop produced on large scale throughout the world. In India garlic is most important commercial crop cultivated in various regions. There are number of fungal pathogens that attack on garlic crop throughout their development. The *Fusarium oxysporum* is most important fungal pathogen which causes Bulb Rot of garlic. *Fusarium oxysporum* is a soil born fungal pathogen and it is attack on several crops and caused diseases. In the present study tested *in vitro* potential of three different fungicides i.e., Carbendazim, Mancozeb and Benomyl was evaluated against *Fusarium oxysporum*. Out of these three fungicides Carbendazim shows more effective inhibitory effect on *Fusarium oxysporum* than Mancozeb and Benomyl.

Key words: Garlic, *Fusarium oxysporum*, Fungicides, Inhibition.

Introduction:

Garlic (*Allium sativum* L.) Is an herbaceous plant belonging to family Alliaceae grown for its edible bulbs and leaves. It is a most important vegetable, spice and medicinal crop produced on large scale throughout the world. It is used as a flavoring agent, food and medicine. Garlic is the second most widely cultivated vegetable next to the onion. Garlic (*Allium sativum* L.) is among the oldest of all cultivated plants. It has been used as a food, spice and folklore medicine for over 4000 years, and is the most widely researched medicinal plant (Milner 1996). In traditional the Ayurveda, Islamic medicine, folklore medicine and Chinese medicine system, several herbs and spices including garlic are described to possess medicinal properties e.g. antihypertensive, anti-thrombotic and hypolipidemic (Makheja 1990 and Moyers 1996).

02

Impact of Irrigation on an Agricultural Productivity in Beed District of Maharashtra

Dr. Udhav Eknath Chavan

Gandhi College Kada, Tq. Ashti, Dist. Beed

Abstract: Irrigation is acknowledged as a significant factor in Indian agriculture. High inequality and inadequacy of rainfall. Irrigation is become mandatory for successful agriculture. Typically in the area, where rainfall is insufficient, unreliable, and irregular. These areas are disposed to drought and famine situation due to partial failure and belated arrival or early withdrawal of monsoon. Prominence of irrigation has substantively increased after the implementation of High yielding varieties (HYV) in developing countries. Irrigation is basic elements of Agriculture because its insufficiencies are the most powerful limitations an increase of Agricultural production. In the study area the disparity of an annual rainfall from year to year is equitably large. The rainfall is irregular and uncertain in the Study area. There is an agriculture becomes gamble with monsoon. If rainfall is scare it results into crop failure. For the assure agriculture production irrigation is most important element. Therefore effort is made to study the influence of irrigation on agriculture productivity in Beed district.

Key words: Agriculture productivity, Irrigation intensity, spatial pattern, Index of co-efficient.

1. Introduction:

The concept of irrigation implies the existence of source of water supply within a reasonable distance and an arrangement to regulate the supply of water according to the day to

day needs of the crops raised in the fields. Naturally therefore all areas which are cultivated under purely rain fed conditions are treated as unirrigated lands (Census of India, 1991). Spatial pattern of changes in net irrigated area to net sown area, along with a discussion of sources wise trends in irrigated area. The prominence is on to focus the spatial distribution of Irrigation pattern in Washim district. Geographical and cultural factors have considerable impact on agriculture. But all of them are not equally significant in affecting the area variation and gradual development of agriculture in area. Water is probably the most important input besides fertilizers, insecticides, high yield variety (HYV) seeds and modern technology is useful for agricultural development.

The Beed District is located in drought prone area, and so Rainfall is low. Hence irrigation plays a vital role in agriculture. In 2004/05 the total area from all sources of irrigation is 288736 hectares the spatial pattern of irrigation is however, uneven and has been characterized by the changes over time.

2. Study Area:

Beed District is situated at the Central West of the Aurangabad. The geographical location is 18.28 North to 19.28 North latitude and longitudinal extension is 74.54 east to 76.57 east. Beed is situated in the Deccan black basalt stone, ranges of Balaghat that constitutes main range from Ahmednagar in the west, to the border of district Beed in the East. This range divides the district into two parts. The plain area in the North is called as Gangathadi (bank of Ganga-Godavari) and the higher part is called as Balaghat.

The total area of Beed district is 10615.3 Sq.Kms and it is 3.44% of Maharashtra State. Further division of area is 234.9 Sq.Kms (2.2%) in urban parts and 10380.4 Sq.Kms i.e. 97.79% in rural area. Most of the land of the district is full of rocks and thin layers of Soil except Georal and Majalgaon where the land consists of rich



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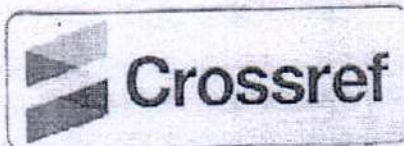
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To Solve Problems in Economics- Maxima and Minima Approach

Dr. Aruna Madhukar Kulkarni

Department of Mathematics
SAJVPMS Gandhi College, Kada, Dist. Beed, Maharashtra

Abstract: Thomas Simpson is still an icon for maxima and minima. The purpose of this article is just to provide additional information about the concepts of maxima and minima in business economics. Companies often want to minimize production cost or maximize revenue. It is often desirable to minimize the amount of material used to package a product with a certain volume. The basic idea of the optimization problems that follow is the same we have a particular quantity that we are interested in maximizing or minimizing. Here some problems are solved.

Keywords: Economics, Maxima, Minima, Critical point.

I. INTRODUCTION

In economics, problems are solved by optimization. In any manufacturing business profit is express as function of the number of units sold. The terms maxima and minima refer to extreme values of a function. Maximum means largest possible quantity. Finding maximum for the function means the maximizing profits.

A) Preliminaries

Definition:

The function $f(x)$ will have maximum value at $x = c$ if $f(x)$ is increasing function for $c - \delta < x < c$ and decreasing for $c < x < c + \delta$ for small number $\delta > 0$.

First Derivative Test: A function $y = f(x)$ is said to have maximum value at $x = c$, if the following three conditions are satisfied

- $f'(c) = 0$
- $f'(c-h) > 0$
- $f'(c+h) < 0$ where h is small positive number.

Second Derivative Test: A function $y = f(x)$ is said to have a maximum value at $x = c$ if $f'(c) = 0$ and $f''(c) < 0$.

Remark: if $f''(c) = 0$ then seconde derivative test fails.

Critical Point: A critical point on function $f(x)$ occurs at x_0 if and only if either $f'(x_0)$ is zero or the derivative doesn't exist.

Example:

When a ship is sailing, the fuel cost is proportional to the square of its speed relative to water. Besides that, there are fixed costs which do not depend on the speed and are equal to α (\$/hour). At what speed the total cost per 1 mile will be lowest?

Solution

According to the problem description

$$q \propto v^2$$

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Amberlite IR-120 Catalyzed Green and Efficient One-Pot Synthesis of Benzylpyrazolyl Coumarin in Aqueous Medium

Ashishkumar P. Katariya¹, Satish U. Deshmukh¹, Sunil U. Tekale¹, Maya V. Katariya^{1*}, Rajendra P. Pawar^{1*}

¹ Department of Chemistry, Deogiri College, Aurangabad 431 005, Maharashtra, India

* Correspondence: rppawar@yahoo.com;

Scopus Author ID 7003738785

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Abstract: An efficient, green, and cost-effective synthesis of benzylpyrazolyl coumarin by one-pot four-component condensation of hydrazine hydrate or phenyl hydrazine, ethyl acetoacetate, aromatic aldehyde, and 4-hydroxycoumarin in the presence of Amberlite IR-120 as a catalyst in an aqueous medium has been reported. Shorter reaction time, operation simplicity, low cost of catalyst, and aqueous medium are key advantages of this method for synthesizing benzylpyrazolyl coumarin in moderate to high yield.

Keywords: benzylpyrazolyl coumarin; Amberlite IR-120; cost-effective; aqueous medium.

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1. Introduction

In the era of Science and Technology, the development of new routes for the synthesis of bioactive heterocyclic compounds that minimize pollution and loss of the environment has become a challenging task in organic synthesis. Green Chemistry is emerging as a powerful technique that avoids the generation and use of hazardous material and introduces powerful synthetic methods. It includes the synthesis of heterocyclic compounds with more economically and environmentally benign approaches [1-2].

Multicomponent reaction (MCR) is one of the finest techniques in organic synthesis. Three or more reactants are united together in a single vessel to form a complex heterocyclic molecule without isolating intermediate. These reactions minimize the cost and time of the reaction [3]. The use of water as a reaction medium is another green technique in organic synthesis. Water is an environmentally benign solvent that is readily available, non-toxic, inexpensive, and highly polar solvent [4]. Heterogeneous catalysis also contributes to the principle of green chemistry. It has several advantages such as reusability, operational simplicity, non-toxicity, and ease of separation from the reaction [5]. In this context, aqua mediated heterogeneously catalyzed multicomponent reactions have emerged as a powerful strategy that obeys most of Green Chemistry principles.

3-Substituted coumarin, particularly 3-benzyl substituted 4-hydroxy coumarin is an important class of oxygen-containing heterocycles present in many natural and synthetic pharmaceutical moieties, Mainly it is included in compounds like warfarin, coumatetralyl,

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THE GROWTH PATTERN OF RURAL SETTLEMENTS IN THE AHMEDNAGAR DISTRICT.

Dr. Shinde S.M.

Gandhi College, Kada,

Tal:Ashti, Dist. -Beed-414202

Introduction:-

Geographers and historians have long been interested in human settlements. Particularly geographers focus their attention on the analysis of spatial structure. Geographers are also interested in the study of dynamic character of rural settlements. In the present study attempt has been made to find out the growth in number of rural settlements during the last six decades. Further attempt has been made to study the growth of rural settlements.

The dynamics of rural growth is related to various geographical factors and changing economic situation. Sometimes negative trend of growth in the population as well as in the number of rural settlements is observed. It happens so when the settlement are shifted from their locations. In the previous study we have discussed the factors of the distribution of rural settlements several of those factors are also responsible for the varying growth of rural settlements. The region, where resources are limited, land under cultivation is poor and physiography is rugged, in such areas the growth rate of rural settlements is poor, at the same time very few new settlements develop in these areas. On the other hand, in the plain area, where land is fertile irrigation is developed and agriculture is found in prosperous stage, the rural settlements grow at a higher rate and several new settlements also emerge in the land scape.

- **Objectives:** -The main objective of present paper is to examine and analyze the changes in rural settlements and growth pattern in Ahmednagar District.

- **Data base & Methodology :-**

The present paper is based on secondary data. Secondary data has been obtained from social-economic abstract, District census handbook district Gazetteers, district statistical department and census of India.

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OCCURRENCE OF GENUS SPIROGYRA AT BANGANGAWATER RESERVOIR

Prakash B. Jadhavar

Dept. of Botany, Smt. S.K. Gandhi Arts, Amolak Science and P.H. Gandhi Commerce College, Kada, Tq. Ashti, Dist. Beed-414202

Abstract:

Osmanabad district forms part of Godavari River Basin in Maharashtra. Whereas Manjra, Sina, Terna, Bori, Benitura and Banganga are the main rivers which are flowing through the district. Author has earlier described the algal taxa belonging to chlorophyceae, and cyanophyceae from Banganga project of Osmanabad district in Maharashtra. Present paper deals with the occurrence of genus *Spirogyra* from the study area. During the present study total eleven species were noted from the study area and presented in the present communication.

Key Words: Chlorophyceae, *Spirogyra*, Banganga, Reservoir

INTRODUCTION

The Banganga Project is built up on Banganga River near Songiri and Bhongiri village of Bhoom tehsil in Osmanabad district. It is mainly used for irrigation and drinking water purpose. The study of algal flora of water reservoir was carried out from October 2017 to December 2019 to explore the diversity of algae of the water reservoir. The algal structure ranges from unicellular mucilaginous colonies to multicellular compact forms which show considerable diversity in form and adaptation to their distinctive environment (Krishnamurthy, 2000). During present study, the chlorophyceae algal taxa were observed.

MATERIALS AND METHODS

Random sampling technique has been used for collection of algal samples. Sample collections from different locations were made during the period of November 2016 to December 2017 at monthly intervals. The algal samples were taken to laboratory. The Samples were preserved in 4% formalin for further taxonomic investigations. Temporary Mounts of algal specimen were prepared with suitable stains and observed under compound microscope. Identification of taxa was carried out by using Das and Adhikary (2012), Kumar and Rai (2005), Kumar and Sahu (2012), Prescott (1951), Prasad and Misra (1992), Randhawa, (1959), Sen and Naskar (2003) and other relevant monographs and available literature.

EXPERIMENT AND RESULT

Order: Zygnematales

Family: Zygnemataceae

Genus: *Spirogyra* Link

Filaments simple, unbranched, with short or very long cylindrical cells; vegetative cells longer than broad with plane, colligate, semi-replicate, replicate or unduliseptate septa; chloroplast 1 to 16, parietal ribbon like, spirals or rarely nearly straight with numerous prominent pyrenoids; nucleus centrally situated in a protoplasmic strand; reproduction by fragmentation, aplanospores, parthenospores, akinetes, zygospores; sexuality by generally scalariform, some times lateral conjugation, tubes formed by both or one of the gametangia; zygospores usually ellipsoid but may be ovoid or lenticular; median spore wall smooth or ornamented and of various colours.

1) *Spirogyra borgeana* Transeau

Prescott, 1951, p 311, pl 77, f 8

Filaments of cylindrical cells, 27.5 μ in diameter, and 175 μ long, with plane end walls. Chloroplast solitary, making 1 $\frac{1}{2}$ to 5 turns. Conjugation scalariform; sporangia inflated only on the outer side.

2) *S. collinsii* (Lewis) Printz

Prescott, 1951, p.312, pl.77, f 6

Filaments of rather slender cells, 20 μ in diameter and 105 μ long, with plane end walls. Chloroplast solitary. Conjugation scalariform and lateral, the tube formed by male gametangium only; sporangia inflated slightly on both sides to contain the spores. Zygospores ellipsoid; median wall coarsely punctate.

**MYSTICAL ELEMENTS IN CHITRA BANERJEE DIVAKARUNI'S
MISTRESS OF SPICES****MR. KARALE N.G. & DR. KALYANKAR A. S.**S. K. Gandhi Arts, Amolak Science & P. H. Gandhi Commerce College,
Kada, Tal. Ashti, Dist. Beed - 414202**ABSTRACT**

The novel The Mistress of Spices depicts the representations of different worlds filled with myth, magic, and history related to spices. It evaluates the importance of spices in socio-cultural perspective in the life of protagonist. The writer Chitra Banerjee Divakaruni has given reality a new definition in her novel – the reality mixes together the science and the supernatural. It expands and to categorize the real so as to encompass myth, magic and the other extraordinary phenomenon in nature or experience. Chitra Banerjee Divakaruni presents a world which is familiar with her own cultural and psychological point of view. She prefers mysticism as a literary mode to convey the problems that exists between disparate cultures. The novel is the narrative which interweaves the supernatural with ordinary daily events. The novelist fills the gap of the forgotten history through mysticism. Here, mythical, historical, political and social elements play a greater role in the novel. The Mistress of Spices is a universal immigrant story told through mystic world.

Literature and mysticism are interlinked with each other. It offers the readers to be a part of mystic world and to have the magical experience. It creates mystical atmosphere and increases the curiosity of the readers. Mysticism is used as an important theme in various kinds of literature in different way. An overview of ancient literature to the writings of present day authors reflects mysticism as a powerful tool. Some of the well-known mystic writers of the world are Shakespeare, S.T. Coleridge, Carlos Fuentes, Gunter Grass, Isabel Allende; Salman Rushdie, Ben Okri etc. They have followed the use of mysticism presented through supernatural and symbolic elements. Mysticism is one of the most important literary modes from twentieth century. It has become highly fashionable and disparaging during the last decades of twentieth century. Chitra Banerjee Divakaruni also used mysticism effectively in her novel *Mistress of Spices*. Divakaruni comments, *I wrote the book in a spirit of play, collapsing the divisions between the realistic world of twentieth century America and the timeless one of myth in my attempt to create a modern fable.*

Divakaruni by crossing the boundary of interdisciplinary has created a new magical world. Dream is used as a major technique to project the magical elements in her novels. The mysticism in her novel unfolds the magical occurrence in one's life such as dream, telepathy and intuition which foreshadows the future events. The novel is as an exploration of the immigrant experience heavier on myth and magic. The novel is blended with fantasy, myth, reality, imagination, beliefs, the past and the present. Magical elements are blended into a realistic atmosphere to access a deeper understanding of reality. Mysticism intermingles magic and reality with the use and aid of folk tales, fairy tales, fables, mythologies, epics

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Fitzgerald's Depiction of female Characters in *The Great Gatsby*

Kalyankar A. S. & Karale N.G.

Dept. of English, Gandhi College, Kada, Tq. Ashti, Dist. Beed

Fitzgerald has acutely observed the greatest change in moral standards in the history of a modern nation. It is difficult to ignore revolt against Puritannical Purity and Victorian tradition in his fiction. According to Fitzgerald, *The Jazz Age* began in May 1919, with the May Day riots and plummeted in October 1929. Historians have stated it could not have had such a definite beginning, but the great crash of the stock market on Black Friday, October 29, 1929, brought it to a sudden end. It was a time whose courses, trends, and movements are difficult to analyze into usual patterns. It was 'a mordant, light-hearted, serious-minded, complex and seminal time.'¹ Barrett describes it further: "It was an interesting, colourful, bewildering, disagreeable time, when retreat into a cozy past was cut off, and ahead, the angle of slope down which the world was sliding grew even dizzier."²

The listing of factors contributing to these descriptive titles of the age as well as to its development has not been an easy task for the writers of history. Rapid technological change, the failure of idealism, urbanization, the shock of the war, and the lack of a charted future are among the many causes resulting revolt against the past. This was period distinguished by change, perhaps the most notable change was in the attitude of the American people toward morals. An open revolt against the Puritannical code of the American conscience became evident soon after the close of World War I. The historian has stated it as people were tired: tired of noble purposes, of lifeless religion, parties. The War had contributed to the emotional rebellion. Many of the returning young men and woman were disillusioned by the kind of war it had been. American girls, as nurses and other war workers were influenced by the continental standards or the lack of them. Before America's entry into the War, the moral standards had been set principally by the family, the local church and perhaps the outstanding families in the small town. The authority of the family was most often sufficient and final in the enforcement of these moral standards. Social activity was largely limited to the circumference of the home and church and on special holidays to a 'whole town' celebration.

The new society of urban life, with new inventions -- particularly of

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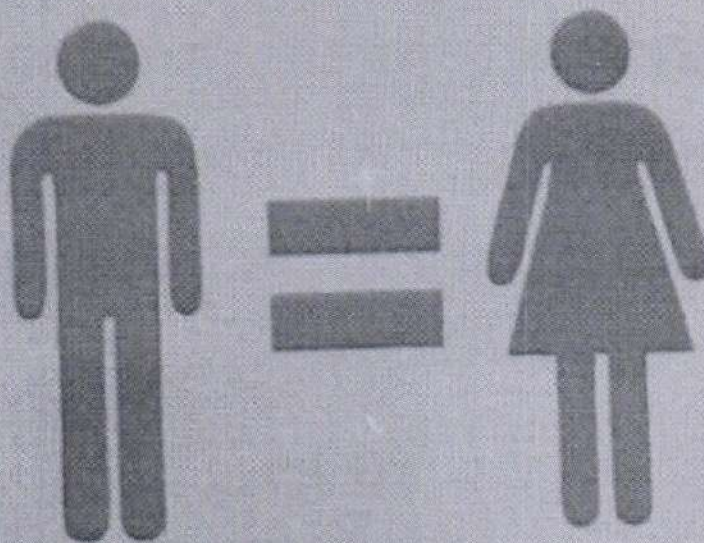
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Problems of Working Women

Mr. Karale N.G. & Mr. Kalyankar A. S.

S. K. Gandhi Arts, Amolak Science & P. H. Gandhi Commerce
College, Kada, Tal. Ashti, Dist. Beed - 414202

In Puranas, woman power is worshiped. The women's strength, bravery, wisdom are known to all. Therefore, women's empowerment is not only modern but also mythical. However in the changing circumstances, the role of a woman is changed. Beyond the role as a mentor of daughter, daughter-in-law, wife, mother, she is an officer, scientist, teacher, employee, owner, in many forms. There are many aspects of her life. She has brightened the duties by her devotion to work. She has given a new direction to her intellect and self-esteem. There is no area in today's world where there is no woman. In each field she is ahead of men but she still has a lot to try. The development has already taken place but not exhaustive. Some sections of society have gone too far, but, some classes are lagging behind that did not develop. Mahatma Gandhi in his *Experiments with Truth* argued that *it is libel to call woman a weaker sex, it is man's injustice to woman*. Many women are still in the bondage of illiteracy, superstitions, beatings of their husbands, dowry etc. They are helpless for the direction to change. Their day begins before the hens arrive and ends at night. Today, many women doctors, engineers, teachers, leaders, actresses, ministers, even in the top positions in the country. At the same time, many women in the village die while giving birth to children, they are burnt due to lack of dowry but they are not getting justice. Their news does not even appear in the newspapers. There is no agitation for their rights.

The term 'Empowerment' may be described as a process which helps people to assert their control over the factors which affect their lives. Batliwala (1974) defines empowerment as "the process of challenging existing power relation and of gaining greater control over the source of power". Empowerment of women means developing them as more aware individuals, who are politically active, economically productive and independent and are able to make intelligent discussion in matters that affect them. Woman empowerment is seen as the process and the result of the process of: challenging the ideology of male domination and women's subordinations. Empowered women maintain equal mindset as compare to men. They act out roles that challenge patriarchal society. While stating the condition of 20th century, Shashi

**MYSTICAL ELEMENTS IN CHITRA BANERJEE DIVAKARUNI'S
MISTRESS OF SPICES****MR. KARALE N.G. & DR. KALYANKAR A. S.**S. K. Gandhi Arts, Amolak Science & P. H. Gandhi Commerce College,
Kada, Tal. Ashti, Dist. Beed - 414202**ABSTRACT**

The novel The Mistress of Spices depicts the representations of different worlds filled with myth, magic, and history related to spices. It evaluates the importance of spices in socio-cultural perspective in the life of protagonist. The writer Chitra Banerjee Divakaruni has given reality a new definition in her novel – the reality mixes together the science and the supernatural. It expands and to categorize the real so as to encompass myth, magic and the other extraordinary phenomenon in nature or experience. Chitra Banerjee Divakaruni presents a world which is familiar with her own cultural and psychological point of view. She prefers mysticism as a literary mode to convey the problems that exists between disparate cultures. The novel is the narrative which interweaves the supernatural with ordinary daily events. The novelist fills the gap of the forgotten history through mysticism. Here, mythical, historical, political and social elements play a greater role in the novel. The Mistress of Spices is a universal immigrant story told through mystic world.

Literature and mysticism are interlinked with each other. It offers the readers to be a part of mystic world and to have the magical experience. It creates mystical atmosphere and increases the curiosity of the readers. Mysticism is used as an important theme in various kinds of literature in different way. An overview of ancient literature to the writings of present day authors reflects mysticism as a powerful tool. Some of the well-known mystic writers of the world are Shakespeare, S.T. Coleridge, Carlos Fuentes, Gunter Grass, Isabell Allende; Salman Rushdie, Ben Okri etc. They have followed the use of mysticism presented through supernatural and symbolic elements. Mysticism is one of the most important literary modes from twentieth century. It has become highly fashionable and disparaging during the last decades of twentieth century. Chitra Banerjee Divakaruni also used mysticism effectively in her novel *Mistress of Spices*. Divakaruni comments, *I wrote the book in a spirit of play, collapsing the divisions between the realistic world of twentieth century America and the timeless one of myth in my attempt to create a modern fable.*

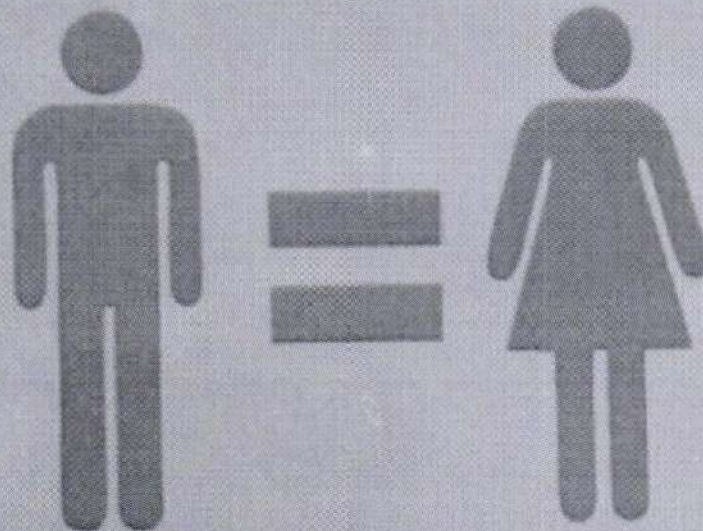
Divakaruni by crossing the boundary of interdisciplinary has created a new magical world. Dream is used as a major technique to project the magical elements in her novels. The mysticism in her novel unfolds the magical occurrence in one's life such as dream, telepathy and intuition which foreshadows the future events. The novel is as an exploration of the immigrant experience heavier on myth and magic. The novel is blended with fantasy, myth, reality, imagination, beliefs, the past and the present. Magical elements are blended into a realistic atmosphere to access a deeper understanding of reality. Mysticism intermingles magic and reality with the use and aid of folk tales, fairy tales, fables, mythologies, epics

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SPECIAL ISSUE ON
GENDER EQUITY IN HIGHER EDUCATION

(Book I)



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Fitzgerald's Depiction of female Characters in *The Great Gatsby*

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Kalyankar A. S. & Karale N.G.

Dept. of English, Gandhi College, Kada, Tq. Ashti, Dist. Beed

Fitzgerald has acutely observed the greatest change in moral standards in the history of a modern nation. It is difficult to ignore revolt against Puritannical Purity and Victorian tradition in his fiction. According to Fitzgerald, *The Jazz Age* began in May 1919, with the May Day riots and plummeted in October 1929. Historians have stated it could not have had such a definite beginning, but the great crash of the stock market on Black Friday, October 29, 1929, brought it to a sudden end. It was a time whose courses, trends, and movements are difficult to analyze into usual patterns. It was 'a mordant, light-hearted, serious-minded, complex and seminal time.'¹ Barrett describes it further: "It was an interesting, colourful, bewildering, disagreeable time, when retreat into a cozy past was cut off, and ahead, the angle of slope down which the world was sliding grew even dizzier."²

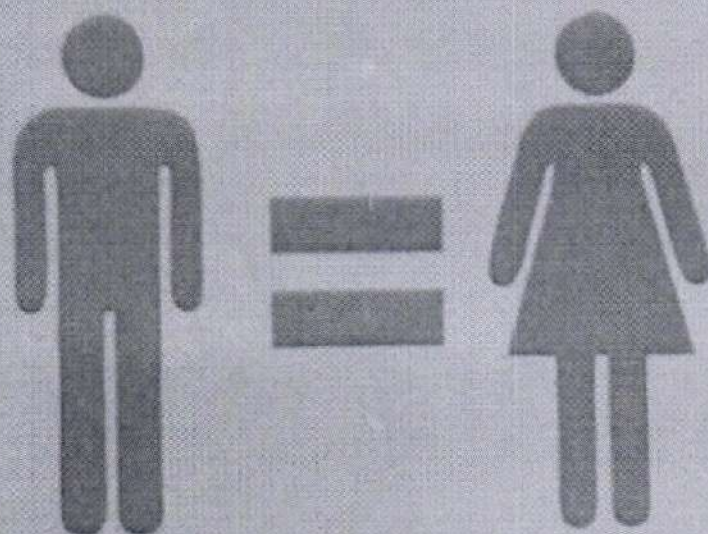
The listing of factors contributing to these descriptive titles of the age as well as to its development has not been an easy task for the writers of history. Rapid technological change, the failure of idealism, urbanization, the shock of the war, and the lack of a charted future are among the many causes resulting revolt against the past. This was period distinguished by change, perhaps the most notable change was in the attitude of the American people toward morals. An open revolt against the Puritannical code of the American conscience became evident soon after the close of World War I. The historian has stated it as people were tired: tired of noble purposes, of lifeless religion, parties. The War had contributed to the emotional rebellion. Many of the returning young men and woman were disillusioned by the kind of war it had been. American girls, as nurses and other war workers were influenced by the continental standards or the lack of them. Before America's entry into the War, the moral standards had been set principally by the family, the local church and perhaps the outstanding families in the small town. The authority of the family was most often sufficient and final in the enforcement of these moral standards. Social activity was largely limited to the circumference of the home and church and on special holidays to a 'whole town' celebration.

The new society of urban life, with new inventions - particularly of

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Problems of Working Women

Mr. Karale N.G. & Mr. Kalyankar A. S.

S. K. Gandhi Arts, Amolak Science & P. H. Gandhi Commerce College, Kada, Tal. Ashti, Dist. Beed - 414202

In Puranas, woman power is worshiped. The women's strength, bravery, wisdom are known to all. Therefore, women's empowerment is not only modern but also mythical. However in the changing circumstances, the role of a woman is changed. Beyond the role as a mentor of daughter, daughter-in-law, wife, mother, she is an officer, scientist, teacher, employee, owner, in many forms. There are many aspects of her life. She has brightened the duties by her devotion to work. She has given a new direction to her intellect and self-esteem. There is no area in today's world where there is no woman. In each field she is ahead of men but she still has a lot to try. The development has already taken place but not exhaustive. Some sections of society have gone too far, but, some classes are lagging behind that did not develop. Mahatma Gandhi in his *Experiments with Truth* argued that *it is libel to call woman a weaker sex, it is man's injustice to woman*. Many women are still in the bondage of illiteracy, superstitions, beatings of their husbands, dowry etc. They are helpless for the direction to change. Their day begins before the hens arrive and ends at night. Today, many women doctors, engineers, teachers, leaders, actresses, ministers, even in the top positions in the country. At the same time, many women in the village die while giving birth to children, they are burnt due to lack of dowry but they are not getting justice. Their news does not even appear in the newspapers. There is no agitation for their rights.

The term 'Empowerment' may be described as a process which helps people to assert their control over the factors which affect their lives. Batliwala (1974) defines empowerment as "the process of challenging existing power relation and of gaining greater control over the source of power". Empowerment of women means developing them as more aware individuals, who are politically active, economically productive and independent and are able to make intelligent discussion in matters that affect them. Woman empowerment is seen as the process and the result of the process of challenging the ideology of male domination and women's subordinations. Empowered women maintain equal mindset as compare to men. They act out roles that challenge patriarchal society. While stating the condition of 20th century, Shashi

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Keyword Based Speech Recognition Technique Using Python for C#

Somnath Hase

Department of CS

Smt. S. K. Gandhi Arts, Amolak Science &
P. H. Gandhi Commerce College, Kada,
(MS), India.

Dr. Sunil Nimbhore

Department of CS & IT

Dr. Babasaheb Ambedkar Marathwada
University, Aurangabad,
(MS), India.

Abstract:

The Programming Language is text-oriented to develop software, with a keyboard for input and as of typing program source code. This content-arranged nature of programming dialects is a barrier to people experiencing arms handicap. A person with sound knowledge, splendid brain, and potential for programming aptitudes also experiences arm wounds or being fragile couldn't turn into a good software engineer. In case, if the programmer memorizes the syntax and keywords of the programming language then he will be a good programmer. In the proposed research programmer will speak in English like a statement and code in C# language will be written accordingly.

Keyword:

Text to Speech, SAPI, ASR, RSI, C#

Introduction

The software development process is comprised of reasonably text-intensive tasks such as program composition, editing, and navigation. Apart from this, the tools that are used for the programming environment are also text oriented. All these results in long hours of RSI – worsen the situation for the programmer. Repetitive Strain Injury (RSI) is a potentially adverse condition resulting from overuse of the hands to perform a repetitive task, like typing, clicking a mouse, or writing. The person often using a computer regularly is at risk and should know about RSI. Unfortunately, most people are not

aware and lacking what RSI is or how serious it can be.

Braille, gives the idea that no development has empowered visually impaired and outwardly disabled individuals for contributing assistive innovations that have made Computers and the Internet accessible. In a programming language, a visually impaired programmer takes more time to find syntactic errors than a sighted programmer. Novice programmer takes more time as it has to learn syntax as well as programming skills simultaneously. The text editor is an essential instrument for writing computer programs. The text Editors are manipulated entirely via keyboard and mouse. Nowadays most people use Integrated Development Environment (IDE) that enables not only writing code but help to compile and debug a program. This is usually for any programming language. While Text editors only allow editing files, but they are not based on a particular language, but on any sort of files.

Speech Recognition is a boon for programmers suffering from RSI because it allows doing work without using injured hands. "One of the goals of speech recognition is to allow natural communication between humans and computers via speech, where natural implies similarity to the ways humans interact with each other" [1]. Speech recognition is the ability to recognize and comprehend the spoken words of any machine or electronic device. The words

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ICT: A Major Crux for Rural Development

Somnath R. Hase

Department of Computer Science

Smt. S. K Gandhi, Amolak Science, & P.H. Gandhi Commerce College,
Kada (MS), India.

Abstract: - ICT (Information and Communication Technologies) is transforming our lives in every aspect. ICT has gained popularity in developing economies, especially in India. The integration of audio, video and data services provided by several service providers are referred to as ICT. ICT has a large influence on rural areas. In rural areas, ICT plays a crucial role, especially in the agricultural sector. One of the main reasons for the inequitable distribution of economic gains between the urban and the rural population is the gap in access to information. ICT plays a major role in the reduction of the poverty level. Farmers can get access to knowledge to improve their products and even get better prices for their products using a variety of ICT systems. This paper aims to show how ICT is useful in different areas of rural development.

Keywords: Rural Development, E-education, E-Governance, ICT

I) Introduction

The major concern for every developing nation is always been rural development and India is no exception. Information and Communication Technologies have transformed lives across the globe. The census of 2011 reveals that 68.84% of the population of India is from rural areas whereas 31.16% is urban. This indicates that India still breathes in villages. Illiteracy, hunger, and backwardness in all forms continue to plague rural India even after more than 70 years of independence. Information and communication technologies are the keys to rural India's growth. These are an important part of the information flow that is catalyzing rural India's growth efforts. ICTs have several options for achieving sustainable rural development. ICTs are playing a critical role in providing rural India with technology to achieve long-term development goals. Several government initiatives have been initiated to achieve universal access to ICTs in India. Realizing the importance of ICTs in rural development, the initiatives are primarily aimed at bridging the digital divide between India's urban and rural areas. The need to narrow this gap comes partly from the fact that in India, rural areas lag behind urban areas in terms of education, health, and infrastructure and resulting in disparities in services and opportunities for the rural population, preventing them from contributing to the country's growth. This type of rural isolation can have a negative effect on growth and, as a result, on the country's long-term development. ICT will assist in addressing various infrastructure constraints. People from rural areas can easily interact with the local, regional, and national economies by using ICT. They can use banking services as well as a variety of career opportunities unavailable to them. ICT will help to raise awareness of new agricultural technology among the rural population and enabling them to contribute to the country's GDP. Bridging the digital divide is not only bridging the infrastructure gap but also taking the rural population to the forefront. The explosion of ICT, especially cell phone technology has changed the development landscape dramatically. By bringing historically isolated people into economies and politics, this technology has changed the lives of rural people. It is discovered that a country's economic development is related to the growth of ICTs. According to a study based on data from 113 countries over 20 years, 1% increase in ICT resulted in an increase of 0.03% in the GDP. For mobile networks, the relationship is more prominent with 1% growth in mobile networks leading to an increase of 5% in the per-capita GDP. According to studies, the widespread the use of ICTs within a society, the lower is the poverty rate. Radio and



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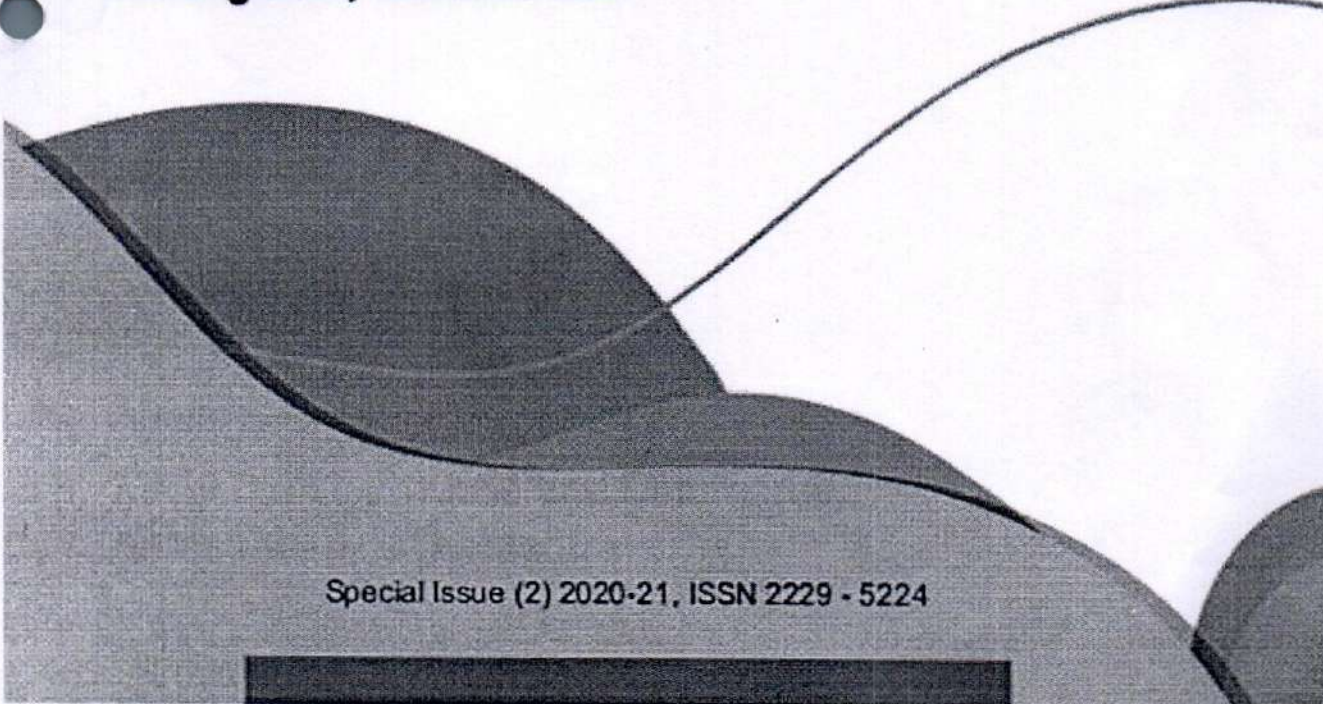
The Research Journal

विशेषांक
साहित्य, सिनेमा और फिल्मांकन

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**SBES College of Arts and Commerce,
Aurangabad, Maharashtra**



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साहित्य, सिनेमा तथा समाज

डॉ. विष्णु गव्हाणे

बीड, महाराष्ट्र

साहित्य जीवन और जगत के विविध पहलुओं को चित्रित करनेवाला सबसे समृद्ध तथा सशक्त साधन है। सामाजिक सभ्यता तथा संस्कृति का ज्ञान साहित्य से ही होता है। इसी कारण से हिंदी सिनेमा साहित्य कि और अधिक आकृष्ट हुआ। जिस प्रकार हिंदी सिनेमा निर्माता को साहित्य का आकर्षण रहा है उसी प्रकार हिंदी साहित्यकारों को भी हिंदी सिनेमा का आकर्षण रहा है। हिंदी के अनेक साहित्यकारों ने उत्कृष्ट कथा-लेखन, सवांद-लेखन, गीत-संगीत आदि रूपों में हिंदी सिनेमा को अपना योगदान दिया है।

सिनेमा जनसंचार मनोरंजन का एक लोकप्रिय माध्यम रहा है। जिस प्रकार साहित्य समाज का दर्पण होता है, उसी प्रकार सिनेमा भी समाज को प्रतिबिंबित करता है। भारतीय युवाओं में प्रेम के प्रति आकर्षण निर्माण करने की बात हो या सिनेमा के कलाकारों के पहनावे के अनुरूप फैशन का प्रचलन हो, यह सब सिनेमा का समाज पर प्रभाव दृष्टीगत होता है। हिंदी सिनेमा का स्थान समाज की दृष्टि से अत्यंत महत्त्वपूर्ण रहा है। भारतीय साहित्य, समाज, संस्कृति इन पर आधारित रचनात्मक रूप हिंदी सिनेमा पर इन सब का सामाजिक प्रभाव भारी रहा है। लेकिन कुछ लोगों का मानना है कि सिनेमा समाज के लिए अहितकार है तथा इसके कारण संस्कृति का ढहास होता है। समाज में फिल्मों के प्रभाव से फैली अश्लीलता तथा फैशन के नाम पर नंगेपण को, इसके उदाहरण के रूप में प्रस्तुत किया जाता है, किंतु सिनेमा के बारे में यह कहना केवल, बुराई फैलाता है, सिनेमा के साथ अन्याय करने जैसा होगा। सिनेमा देखकर उसके जो अच्छे विचार हो उन्हें ही आत्मसात करना है और बुराई को त्यागना।

सिनेमा का समाज पर बड़ा प्रभाव होता है। इसलिये इसे जन जागरूकता पैदा करने के लिए एक प्रमुख उपकरण के रूप में इस्तेमाल किया जा सकता है। एक सिनेमा हमेशा एक अच्छा मनोरंजन होता है।

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Importance of Research in the Development of India

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Complexometric Studies of Interaction Of Eriochrome Cyanine R(ECR) With Sodium Lauryl Sulphate SLS

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Dr. Suparna Deshmukh

Head, Dept. of Chemistry,
S.K.Gandhi College Of Arts Commerce and Science,
Kada, Dist. Beed.
suparna.deshmukh@gmail.com

ABSTRACT

There is a growing tendency to employ organic colored reagents for analytical purposes, specifically triphenylmethane dyes, which are found more sensitive in the presence of micelle forming surfactants. A modified reagent, i.e Dye- surfactant complex, shows a hypsochromic effect on addition of surfactant Sodium Lauryl Sulphate, SLS to TPM dye Eriochrome Cyanine R. Complexation properties of reagents of Tri-Phenyl Methane dyes, (TPM dye), get modified by the addition of micelle forming surfactants. Spectral and complexometric studies of Dye-Surfactant complexation has been studied spectrophotometrically (1-2).. TPM Dye- surfactant complex, also known as modified reagent, shows a hypsochromic effect on addition of micelle forming surfactant to it. In the present studies, complexation of Eriochrome Cyanine R, ECR is used as a Triphenylmethane Dye, while SLS is used as a neutral Surfactant. Composition of these binary complexes of Eriochrome Cyanine R, ECR and , has been determined . Analytical aspects like effect of time, order of addition of reagents, effect of temperature as well as studies in stoichiometry, sensitivity and molar absorptivities has proved the utility of modified reagent under study.

Keywords: Eriochrome Cyanine R, Surfactant, Sodium Lauryl Sulphate, Hypsochromic Effect, Sensitivity.

INTRODUCTION

Studies on Complexation properties of reagents of TPM dyes revealed that, the intermolecular forces that predominantly exists in the interactions of dye molecules with surfactant aggregates are hydrophobic interactions, electrostatic interactions, hydrogen bonds, π - π stacking (3) and Van-derWaals forces (4-6). The mechanism for dye- surfactant interactions have shown to exist binding forces in aqueous micelles (7) dye molecules in micelles. The formation of dye- surfactant ion pair is a consequence of mutual influences of long range electrostatic forces and short range hydrophobic interactions(8-10). Associations between dyes and surfactants depends principally on the chemical structure of the compounds(11). Ion association complexes due to interaction of surfactant monomers and dye in the pre- micellar region while the dye molecules are likely to be localized at the micelle surface in the post micellar region. The changes in position and intensity of absorption band in electronic spectra is the result of these interactions (12-13). The aggregation of surfactant and dye takes place at surfactant concentrations far below critical micelle concentration of individual surfactant. Aggregations with TPM dyes shows hypsochromic shifts with a decrease in the intensity of absorption bands.

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मानव अधिकार आणि संवैधानिक तरतुदींचा अभ्यास

प्रा.डॉ.चंद्रशेखर काशिनाथ तळेकर

राज्यशास्त्र विभाग,

एस.के.गांधी महाविद्यालय कडा,ता.आष्टी, जि.बीड

प्रस्तावना :-

मानवाधिकाराची संकल्पना सर्वत्र गतीमानतेने रुढ झाली आहे. या संकल्पनेचे महत्व भारतीयांच्या दृष्टीने विशेष अधोरेखित करण्यासारखे आहे कारण भारताने 200 वर्ष गुलामगिरीत काढल्यामुळे व्यक्ती स्वातंत्र्याचे महत्व अधिक स्पष्ट पणे जाणले त्यामुळे प्रत्येक व्यक्तीस काही मुलभूत हक्क प्रदान करण्यात आले. ते अगदी मानव अधिकाराशी तंतोतंत साधर्म्य असणारे आहेत. या दृष्टीकोणातून मानव अधिकार विषयक संविधानातील तरतुदींचा समावेश अधिक महत्वपूर्ण ठरतो. मानवाच्या विकासासाठी अत्यावश्यक समजल्या जाणाऱ्या बाबीला संविधानाच्या माध्यमातून करण्यात आलेल्या तरतुदी अन्वये एक प्रकारचे संरक्षण प्रदान करण्यात आली आहे. मानवी जीवनात व्यक्ती स्वातंत्र्य, समता, धर्मीक स्वातंत्र्य, शोषणापासून मुक्ती तसेच शिक्षणविषयक अधिकार, सांस्कृतीक अधिकार, घटनात्मक उपाय योजना करण्याचा अधिकार, यांचे महत्वपूर्ण स्थान असते. अशा प्रकारच्या हक्काशिवाय मानवास आपला व्यक्तीमत्त्व विकास तसेच मुक्त पणे जीवन जगण्या विषयीची कल्पनाही केली जावू शकत नाही. या दृष्टीकोनातून मानाधिकाराविषयक तरतुदींना संवैधानिक संरक्षण प्रदान करण्यात आले आहे. प्रत्येक नागरीकाचे स्वातंत्र्य अबाधित ठेवून त्यास आर्थिक, सामाजिक, सांस्कृती, शैक्षणिक, राजकीय अधिकार प्रदान करण्यात येत असतात. याच दृष्टीकोनातून मानवाधिकार विषयक संवैधानिक तरतुदींवर प्रकाश टाकण्याच्या हेतुने हा शोधनिबंध प्रस्तुत करण्यात आला आहे.

शोधनिबंधाचे उद्देश :-

- 1) मानवी अधिकारांची अर्थ, व्याख्या स्पष्ट करणे.
- 2) मानवी अधिकार विषयक संवैधानिक तरतुदींचे अध्ययन करणे.
- 3) भारतीय संविधान आणि मानवी अधिकारांची संकल्पना यांतील प्रमुख घटकांचा परामर्श घेणे.

मानवी अधिकारांची संकल्पना :-

मानवी समाजातील स्त्री असो अथवा पुरुष दोन्ही प्रकारच्या मानवी घटकांचा मानव अधिकार जन्मजात प्राप्त झालेले असतात. मानवाच्या जन्मानंतर त्याला आपले जीवन व्यतित करण्यासाठी काही साधनांची गरज असते. त्या प्रमाणेच त्यास व्यक्तीमत्त्व विकासाची देखील आवश्यकता असते. अशा घटकांसाठी त्यास आवश्यक असणारे मानव अधिकार त्याच्या जन्मासोबतच त्यास प्राप्त होत असतात. मानव अधिकाराच्या व्याख्या करण्याचा प्रयत्न अनेक विचारवंतांनी केला आहे.

1) मॅकफरलेन :-

मानव अधिकार हे असे नैसर्गिक अधिकार आहेत जे प्रत्येक स्त्री आणि पुरुषाला समान प्राप्त झाले आहेत.

2) सन 1993 चा मानव अधिकार संरक्षण कायदा :-

या कायद्यातिल मानव अधिकाराचा अर्थ अशा प्रकारे स्पष्ट केला आहे की मानव अधिकार म्हणजे व्यक्तीचे स्वातंत्र्य, जिवन आणि समतेशी निघडीत असे मुलभूत अधिकार ही ज्यांच्या संरक्षणाची हामी राज्य घटनेने दिली आहे.

3) हेरॉल्ड लास्की :-

ज्या परिस्थितीच्या हक्काशिवाय व्यक्तीला आपली सर्वांगीन प्रगती साध्य करता येत नाही त्या परिस्थितीच्या घटकांना मानवी अधिकार असे म्हणतात.

Isolated Marathi Word Recognition using Deep Convolutional Neural Network (DCNN)

Somnath Hase^{#1}, Sidharth More^{#2}, Dr. Sunil Nimbhore^{*1}

^{#1,2}Department of CS & IT, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (MS), India.
¹hasesir2009@gmail.com ¹nimbhoress@gmail.com ²msiddharth717@gmail.com

Abstract — In the decade of more than 50 years, ambitious speech research had a machine to interpret the fluently spoken word. Automatic Speech Recognition (ASR) allows us to convert speech signals into a sequence of words utilizing an algorithm implemented as a computer program. The major focus of this paper to develop such a system for the Indian language. Hidden Markov Model (HMM) and Gaussian Mixture Models (GMM) is used for many years by acoustic modeling. For calculating probabilities GMM use assumption near the data distribution. A Deep Neural Network is a feed-forward neural network. It is a multilayer perceptron network means each neuron in one layer is connected to all neurons in the next layer. Now day different types of speech recognition systems are available for different purposes. In this work, the Mel frequency Cepstrum coefficients (MFCC) feature is used. The performance of a system is based on Word Error Rate. For the above research work, it shows 11.65% WER.

Keywords: - Marathi, Isolated, Mel Frequency Cepstral Coefficients, Hidden Markov Model, Word Error Rate, Acoustic Model.

I. INTRODUCTION

The human body is an amazing "design" that can show us a lot about our way of life. Every human being has different characteristics that include fingerprint, iris, speech, gait, gesture. A mixture of these features can be used to create a model that is used to classify individuals. Speech signals consist of important information like age, gender. It is useful for speaker verification. Spoof detection. We can also get information about the health conditions of a person. Speech-based password is emerging area for ATM System.

There are several approaches to deal with speech recognition. The Acoustic-Phonetic Approach deals with finding the speech sound and assigning proper labels to these sounds. The Pattern Recognition Approach has two-step namely pattern training and pattern comparison. The templates-based Approach is the oldest approach that consists of reference pattern (R) and Test Pattern (T). Dynamic Time Warping is useful to find the similarity between two sequences that calculates optimal warping between two data. The hidden Markov model is known as the stochastic model that used a probabilistic model to deal with incomplete information. A lot of research is going on for isolated digits and continuous speech in the speech recognition field. Forward neural networks, feedback neural networks, recurrent neural networks are the three main types of neural networks. The performance of the speech recognition system can be enhanced, when we go deeper into the neural network. Deep neural networks are used in speech recognition for classification which is a feed-forward, multilayer neural network. The proposed work consists of identifying Marathi's flower name. The paper is organized into a different section, Section 2 describes the system overview, Section 3 explains different pre-processing and post-processing steps involved, Section 4 deals with Deep Neural Network Models and Experimental results and finally, the conclusion is summarized in section 5.

II. LITERATURE SURVEY

A deep neural network is like the human brain that consists of a processing element call neuron. The Hidden Markov Model with an artificial neural network is used for speech recognition technology. The primary contributions of this work are the development of a context-dependent, pre-trained, deep neural network HMM hybrid acoustic model (CD-DNN-HMM); a description of our recipe for applying this sort of model to LVSR problems; and an analysis of our results which show substantial improvements in recognition accuracy for a difficult LVSR task over discriminatively-trained pure

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Influence of Thiourea Metal Complex on Potassium Dihydrogen Phosphate for Optoelectronic Applications

Y B Rasal¹

¹Smt. S. K. Gandhi Arts, Amolak Science and P. H. Gandhi Commerce College Kada, Dist. Beed, Maharashtra, India

Abstract. Influence of 0.1 mole % Bis Thiourea Zinc Sulphate (BTZS) exhibits concrete reinforcing in optical and dielectric properties of Potassium Dihydrogen Phosphate (KDP). The pure and BTZS influenced KDP crystals have been grown by slow evaporation solution technique at room temperature. The structural and vibrational studies of the grown crystals have been studied by single crystal XRD and FT-IR technique respectively. The optical traits of the doped crystal have been analyzed by UV-vis spectral analysis within the wavelength range of 200-800 nm. The Kurtz-Perry powder test has been employed to determine the bithiourea zinc sulphate on the second harmonic generation (SHG) efficiency of KDP crystal and it found to be 1.1 times higher than KDP. The dielectric and thermal behaviour has been analyzed for doped KDP crystal.

1. Introduction

The researcher and academicians were showing interest in the non linear optical (NLO) material from last few decades due to its fascinating materialistic properties. The NLO crystals study involves the interaction of light with the crystal resulted in the variation in the electromagnetic mechanism of the incident light. The most fascinating NLO applications of organic, inorganic and semi-organic crystals have a usage in the optical traits. These traits are optical storage, optical computing, optical information processing, optical power limiting, optical switching, antireflection coating, image manipulation and processes. The rapidly growing field in laser technologies, frequency conversion devices, holographic memory, electro-optics modulation and photonics by second order effects in crystals has fulfilled many more needs of today's industry and society [1-4]. The organometallic crystals have superior optical, dielectric and mechanical properties. The large dipole moments, the ability to form metal ligands through hydrogen bonding effectively works to improve optical properties [5]. The optical properties of the subjected crystal enhanced during chemical reaction and due to the bonding of the thiourea and zinc sulphate. The donor and acceptor electron system and formation of the hydrogen bonding throughout the crystal enhances second harmonic efficiency due to engagement of centrosymmetric thiourea compound and metal component [6]. The thiourea metal complexes have applications in optical phenomenon due to its low UV cut off wavelength and high NLO properties. In Literature, the NLO zinc thiourea sulphate (ZTS) is found to be a versatile organometallic crystal [7]. The potassium thiourea bromide (PTB), bis-thiourea cadmium acetate (BTCA), copper thiourea chloride (CTC), bis-thiourea zinc acetate (BTZA), zinc thiourea chloride (ZTC), bis-thiourea cadmium chloride (BTCC) are some thiourea metal complexes found in the

¹rasyog1975@gmail.com

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BIOCHEMICAL AND ANALYTICAL STUDIES ON SOME MOST COMMONLY SOLD FOODSTUFFS IN SAWEDI REGION

* Dr Suparna Deshmukh

S. K. Gandhi Arts, P. H. Gandhi Commerce , Amolak Science College, Kada, Dist. Beed

ABSTRACT

Many people prefers Street vending foods as readily available sources of meals but the biological safety and chemical contamination of such food is always in question. The aim of this study is to ascertain bacterial contamination and determine total counts of bacterial species, mainly *E. Coli*, responsible and also some common chemical components responsible for the contamination of the street vending food in Sawedi, a suburban region of Ahmednagar. This prospective study was conducted among street vending food at six bus terminals in Sawedi region of Ahmednagar. From August 2019, food samples comprising water of Pani Puri, were purchased and analyzed. The food samples were purchased and transported to the laboratory in sterile plastic bags and analyzed for bacterial and chemical contamination. Alongwith Bacterial analysis, heavy metals Pb(mg/kg), As(mg/kg), Hg(mg/kg), Sn(mg/kg), Cd(mg/kg), Cu(mg/kg) have been analysed. All collected samples of Pani-Puri water which are collected from different vendors from Sawedi region are acceptable. Trace metals like Pb, As, Hg, Sn, Cd and Cu are found to present within permissible limits as per FSSAI Specifications 2011.

INTRODUCTION :

Street foods contribute significantly to the diets of many people in the developing world, according to FAO, in addition to offering business opportunities for developing entrepreneurs; the sale of street foods can make a sizeable contribution to the economies of developing countries. Moreover, street foods play an important role in developing societies as they support the livelihoods of millions of the urban poor. However, street foods have in recent years become one of the most common risks associated with the increase in outbreaks of food-borne diseases in developing countries. There have been several documented cases of food poisoning outbreaks on consuming street foods. It was found out that Street foods were responsible for food poisoning outbreaks reported 691 cases and 49 deaths from 1983 to 1992 in Shangdong Province (China) In 1988, 14 deaths were reported in Malaysia because of food-borne diseases related to street foods. In the same year 300 people became ill in Hong Kong after consumption of street vended foods. In 1981 a cholera epidemic in Pune, India was linked to consumption of street vended juice, whilst an outbreak of cholera in Singapore in 1987 was attributed to the consumption of street foods (FAO, 1990). Outbreaks of food poisoning are mainly associated with contamination agents ranging from pathogens to chemical contaminants. According to studies conducted by Rane (2011), the poor knowledge and improper food handling of street vendors in basic food



Integrity in linear and nonlinear optical properties of L-tyrosine doped bis thiourea cadmium acetate single crystal

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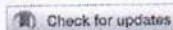
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Integrity in linear and nonlinear optical properties of L-tyrosine doped bis thiourea cadmium acetate single crystal

Siddique Aneesa-Fatema^a, Y. B. Rasal^a, R. N. Shaikh^a, M. D. Shirsat^b, S. S. Hussaini^a, and R. B. Kulkarni^b

^aCrystal Growth Laboratory, Department of Physics, Milliya Arts, Science and Management Science College, Beed, Maharashtra, India; ^bRUSA Centre for Advanced Sensor Technology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, Maharashtra, India

ABSTRACT

The slow evaporation technique was adopted for the growth of L-tyrosine doped Thiourea (Bis) Cadmium Acetate (CTA) single crystal. The doped crystals were characterized by powder X-ray diffraction, FT-IR analysis, SHG Studies, UV-vis and Vickers microhardness studies. The UV-visible absorption spectrum is found to have improved optical parameters than pure CTA. The optical study revealed that the doped CTA crystal has high transmission with low cut off wavelength of 290 nm. The optical band gap was found to be 4.14 eV. The Second harmonic generation efficiency measured using Nd-YAG laser is 3.64 times higher than pure CTA.

ARTICLE HISTORY

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KEYWORDS

Crystal growth; FT-IR; Kurtz-Perry powder technique; nonlinear optical materials

1. Introduction

The organic crystals are used in the crystal growth due to its crystalline structure and fascinating optical properties. The organic crystal plays important role to enhance the nonlinear optical (NLO) properties [1, 2]. The NLO property depends on the donor and acceptor properties of charges and delocalization among the crystal. The non-centrosymmetric is the fundamental technique to elaborate the NLO property. The thiourea produces non-centrosymmetric behavior in the crystals when combines with metal compounds. The large dipole moment and ability to form hydrogen bonding network of thiourea helps to improve nonlinearity in the crystal. The physicochemical stability and breaking of ligands into the crystal plays important role in improving NLO properties [3]. Now a day's different techniques developed to grow crystals with remarkable enhancement in different properties to be used in the technological application in optical communication mechanism [4–6]. The Semi organic material possesses high second and third order nonlinear intensity, integral laser damage threshold factor, better thermal stability and holds good microhardness coefficient [7]. L-tyrosine contains the proton donor carboxyl acid (COO) group and the proton acceptor amino (NH₂) group present in the amino acids improves linear and nonlinear scales of the crystal [8, 9]. In recent year amino acid doped in different materials enhances the second and third order properties and shows better electrical, photonic and thermal properties. The Effects of the addition of L-lysine monohydrochloride dihydrate on the growth and various properties of ADP single-crystal studied and grown crystal by using slow evaporation method have been studied. The effect of doping was

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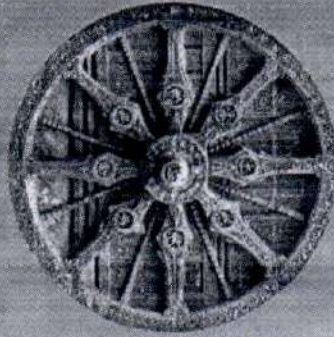


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“शिवकाल : मराठवाड्यातील स्थानीक लोकजीवनाचा ऐतिहासीक अभ्यास”

प्रा. डॉ. राधाकृष्ण ल. जोशी

गांधी महाविद्यालय,
कडा, जि.बीड.

प्रस्तावना :-

छत्रपती शिवाजी महाराजांनी महाराष्ट्रात स्वराज्याची स्थापना केली. स्वराज्याच्या चिंता मराठवाड्या पर्यंत पोहचल्या होत्या. स्वराज्यातील जनतेला लोककल्याणकारी राज्याचा अनुभव घेता आला. लोकांना आपला राजा, आपले राज्य अशा प्रकारची भावना तात्कालीन परिस्थिती अनुभवण्यास मिळाली. परंतु या परिस्थितीत मराठवाड्यातील लोकजीवन कश्या प्रकारचे होते. मराठवाड्यात सामाजिक जीवनाची कशी परिस्थिती होती. या बरोबरच मराठवाड्यातील लोकांचे आर्थिक जीवनमान, धार्मिक जीवनमान कश्या प्रकारचे होते. याचा अभ्यास ऐतिहासीक दृष्टिकोनातुक्त करण्याच्या उद्देशाने हा शोध निबंध प्रस्तुत करण्यात आला आहे.

मराठवाड्यातील मराठी जीवनमान तात्कालीन परिस्थिती खडतर अशा स्वरूपाची होती. परंतु छत्रपती शिवाजी महाराजांना स्वराज्य प्रस्थापनेत मराठवाड्यातील लोकांनी भरघोस समर्थन दिले. ज्या वेळी आग्रा हून परत येत असताना औरंगाबाद शहरात आले होते. त्यावेळी मराठवाड्यातील लोकांनी शिवाजी महाराजांना सहकार्याची भुमीका स्विकारली. त्यानंतरच्या पेशवाईच्या काळात देखील मराठवाड्यातील मराठी जनतेने स्वराज्याच्या रक्षणार्थ मोठ्या प्रमाणात समर्थन दिले. अशा परिस्थितीत मराठी जीवनमानाचा मागोवा घेण्याचा प्रयत्न या शोध निबंधाद्वारे घेण्यात आला आहे.

शोधनिबंधाचे उद्देश :

1. शिवकालीन मराठवाड्यातील जीवनमानाचा मागोवा घेणे.
2. मराठवाड्यातील तात्कालीन धार्मिक जीवनाचा अभ्यास करणे.
3. शिवकालीन मराठवाड्यातील सामाजिक व आर्थिक जीवनावर प्रकाश टाकणे.

• शिवकालीन सामाजिक जीवन :

स्वराज्याच्या काळातील परिस्थितीत मराठवाड्यातील सामाजिक जीवन मागासलेल्या स्वरूपाचे होते. समाजजीवनात जाती व्यवस्थेला स्थान होते. तात्कालीन परिस्थितीत संयुक्त कुटूंब पध्दती अस्तित्वात होती. समाज जीवन प्राचीन रूढी परंपरा, चालीरीती, अंधश्रद्धा यांनी भरलेले होते. या सोबतच बारा बलुतेदार यांना समाजव्यवस्थेत स्थान होते. बलुतेदार हे गावचे प्रतिष्ठित नागरीक होते. स्थानीक पंचायतीच्या कामकाजात ते मोठ्या उत्साहाने सहभागी होत असत. तर गावातील महत्वाची कामे करण्यासाठी देशमुख, देसाई, पाटिल, पटवारी, महाजन इत्यादी लोक असत. तात्कालीन परिस्थितीत शेती हा उदरनिर्वाहाचा मुख्य आधार असल्या कारणाने त्यावेळीही कृषीशी निगडित व्यावसाय चालत असत. शेतकऱ्यांना महसुल भरावा लागत असत. स्वराज्याकडून जाचक कर लावण्यात आलेले नव्हते. अशा स्वरूपाची सामाजिक परिस्थिती मराठवाड्यातील होती.

• मराठवाड्यातील आर्थिक जीवन :

तात्कालीन परिस्थितीत आर्थिक जीवनाचा मुख्य आधार शेती हा होता. व्यापार उद्योगाना दुय्यम दर्जाचे स्थान होते. शेती व शेतकरी दोन्ही निसर्गावर अवलंबून होते. सिंचनाच्या सोयी नव्हत्या, बारा बलुतेदार शेतीवर आधारीत व्यावसाय तसेच जीवन जगत असत. मराठवाड्यात त्या

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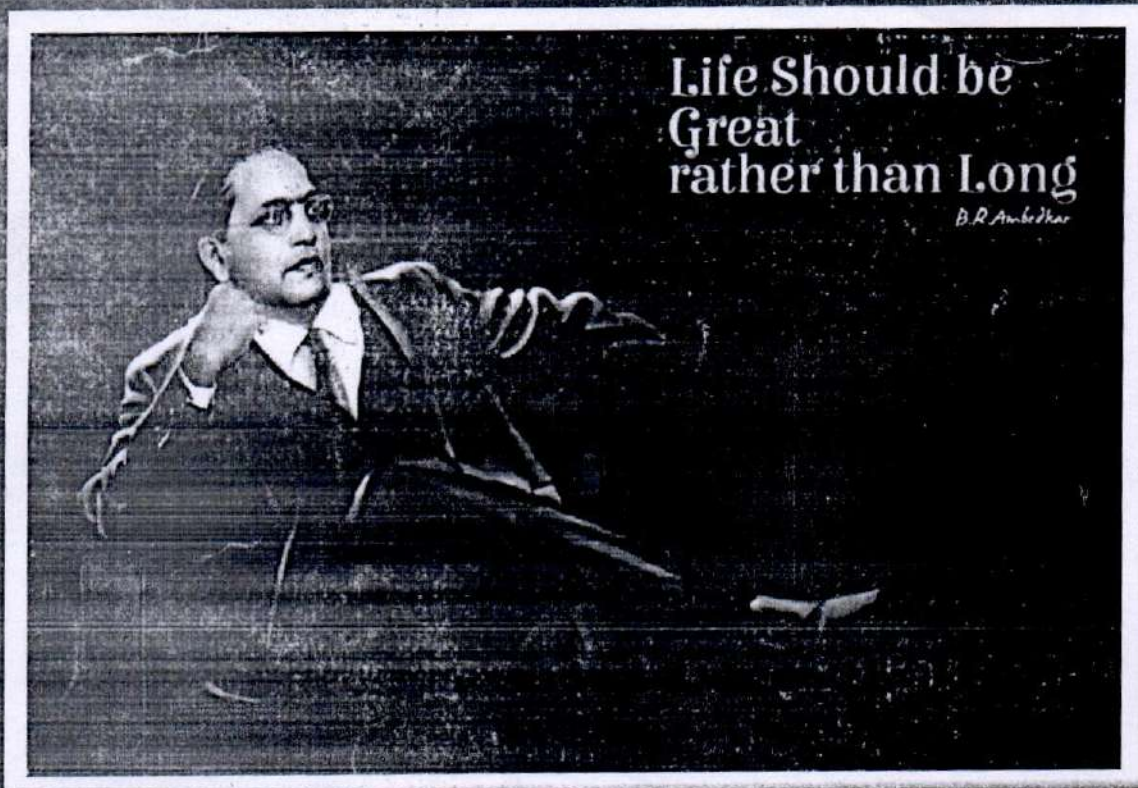
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डॉ.बाबासाहेब आंबेडकर आणि भारतीय शेती

प्रा.डॉ.राधाकृष्ण जोशी

गांधी महाविद्यालय, कडा, अध्यक्ष, इतिहास संकलन संस्था, महाराष्ट्र

प्रस्तावना :-

डॉ.बाबासाहेब आंबेडकरांनी देशाला मजबुत आणि प्रगतीशील बनविण्यासाठी महान कार्य केले आहे. डॉ.आंबेडकर हे अर्थशास्त्राचे मोठे व्यासंगी होते. त्यांच्या आर्थिक तत्त्वज्ञानाचा मूळ पाया सामाजिक समता, आत्मसन्मान, प्रतिष्ठेचे जीवन, एकसंध समाजाची निर्मिती, राष्ट्रवादी प्रेरणा, ऐहिक प्रगतीबरोबरच सांस्कृतिक उन्नयन आदि संकल्पनातच आढळतो. डॉ.आंबेडकरांचे स्थान भारतीय समाज जीवनात उच्च प्रतीचे आहे. म्हणूनच त्यांना एकविसाव्या शतकातले असामान्य, अतुलनीय, बुद्धिजीवी व्यक्तिमत्त्व म्हणून लौकिक प्राप्त झालेला आहे.

डॉ.आंबेडकरांच्या विचारसरणीत भारतीय अर्थव्यवस्थेला विकास प्रक्रियेकडे नेणे आक्वणात्मक आहे. त्यांच्या मते, समतेच्या वागणुकीशिवाय नैसर्गिक गुणांचा विकास होत नाही हे जसे खरे आहे तसेच समतेच्या वागणुकीशिवाय अंगी असलेल्या गुणांचेही चीज होत नाही. यास्तव आपला समाज समर्थ करावयाचा असेल तर चातुर्वर्ण्य व असमानता यांचे उच्चाटन करून समाजाची रचना एकवर्णत्व व समता या दोन तत्त्वांचा पायावर केली पाहिजे. डॉ.आंबेडकरांच्या मते भारताचा आर्थिक-सामाजिक विकास कूटित होण्यास देशातील स्थानिक पातळीवरील जटिल प्रश्न कारणीभूत आहेत. जोपर्यंत अशा जटिल प्रश्नांबाबत पूर्णतः समाज जागृती होत नाही तोपर्यंत विकासाचे आर्थिक तत्त्वज्ञान फलदायी ठरणार नाही.

भूमिहीन मजूर, लहान जमिनी, खोती पध्दती, सावकारशाही, महारवतन, सामुदायिक शेती, जमिन महसूल, उद्योगांचे राष्ट्रीयीकरण, धान्य-प्रश्न, समाजवाद तसेच सामाजिक समता आदी प्रश्नांबाबत त्यांनी विचार प्रकट केलेले आहेत.

डॉ.आंबेडकरांनी म्हटले आहे की, ब्रिटीशसत्ता स्थिरावल्यापासून भारतात गेल्या शतकात एकंदर ३१ दुष्काळ पडले व त्यात सुमारे २.५ ते ३ कोटी लोक भूकेने मेले. याचे कारण असे की, आपल्या देशात उद्योगधंदे व व्यापार यांची वाढ होऊ द्यायची नाही व हिंदुस्थानातील व्यापारीपेठ सदैव खुली रहावी असे ब्रिटीश राज्य सरकारचे बुध्दीपुरस्सर धोरण होते. ब्रिटीशांनी सुधारलेली विधीपध्दती आणि सुव्यवस्था यांची देणगी हिंदुस्थानास दिली ही गोष्ट खरी. तथापि मनुष्य केवळ विधीवर आणि सुव्यवस्थेवर जगत नाही तर ते अन्नावर जगतात. अशा प्रखर विचारांमधूनच डॉ.आंबेडकरांचे भारतीय शेती बाबतचे चिंतन व तत्त्वज्ञान हे महत्त्वाचे ठरले आहे.

शेतीविषयक प्रश्नांवर अतिशय सखोल चिंतन करून मार्मिक निष्कर्ष डॉ.आंबेडकरांनी काढलेले दिसतात. १९१८ साली त्यांनी भारतातील लहान धारण क्षेत्र आणि त्यावरील उपाय याविषयी लेख लिहिलेला होता. हा लेख शेती विषयक प्रश्नांवरील मुलभूत भाष्य करणारा होता. डॉ.आंबेडकरांनी भारतीय शेतीचा सखोल अभ्यास करून शेतीची उपयुक्तता देशाला सांगितली आहे. त्यांच्या चिंतनामधून, अध्ययनामधून भारतीय शेतीच्या संदर्भात खालील घटकांचा प्रकर्षाने उहापोह करता येईल.

शेती व्यवसायाचे वास्तव :-

डॉ.आंबेडकरांचा शेती प्रधान ग्रामीण जीवन आणि अर्थव्यवस्था हा चिंतनाचा विषय होता. शेत जमीनीचे जेवढे लहान तुकडे पडतात व विखुरतात तेवढे त्यांचे दुष्परिणाम होतात. असे दुष्परिणाम टाळण्यासाठी जमिनीचे एकत्रीकरण हा महत्त्वाचा उपाय त्यांनी सुचविला. पण एकत्रित आणलेल्या जमिनी जर आर्थिक दृष्टीने फलदायी नसतील तर त्यांचा काही उपयोग नसतो. असे त्यांना वाटत होते. योग्य तो खर्च दिल्यानंतर, स्वतःला व कुटूंबाला योग्य अशा सुखात राहण्यासाठी ज्या ठिकाणी उत्पन्न निघते हही नेहमीची आर्थिक दृष्टींनी फलदायी शेतजमीनीची व्याख्या त्यांनी मान्य केली नव्हती. त्यांच्या मते, ही व्याख्या उत्पादनावर अधिष्ठीत नसून उपभोगावर (Consumption) अधिष्ठीत असते. अशी टिका त्यांनी केली.

शेतजमीनीचा प्रश्न हा उत्पादनावर अधिष्ठीत पाहिजे व त्यासाठी उत्पादनाचे घटक योग्य त्या प्रमाणात एकत्र आणले पाहिजेत. तसेच शेतजमीनीच्या प्रश्नांकडे उत्पादनाचा धंदा म्हणूनच पाहिले पाहिजे असे त्यांना वाटत होते. यातील महत्त्वाचा मुद्दा म्हणजे जमीनीचा आकार परिणामकारकपणे उत्पादन वाढावे यासाठी निर्णायक बाब नसते. जमीनीचा लहान आकार हा उत्पादनाच्या आड येत असतो ही चुकीचे गृहितकृत्य असून भांडवल आणि भांडवली साधने वाढवणे महत्त्वाचे असल्याचे प्रतिपादन त्यांनी केले.

एकाच मालकाच्या नावाने जमिनीचे खाते ठेवणे, वारसा कायद्याप्रमाणे ते न फोडणे हेच आवश्यक असते. कारण त्यामुळे योग्य असा आदर्श आर्थिक शेतजमीनीचा तुकडा तयार होईल. यासाठी निराळा पाहणी क्रमांक आर्थिकदृष्ट्या स्वावलंबी अशा तुकड्यालाच मिळावा अशी धोरण डॉ.आंबेडकरांना प्रस्तावित केली होती. त्यामुळे शेतकऱ्यांचे एकत्रीकरण आणि ते विकण्याचे अर्थीय योजनेला आवश्यक असावे. याने त्यांच्या दुसऱ्यांचा विचार करता येत नसतो. कारण जरी हिश्यांचे एकत्रीकरण केले तर ते फुटू न देता टिकवणे हेच महत्त्वाचे कार्य ठरते.

खोती पध्दती व सावकारी :-

पूर्वीच्या मुंबई प्रांतात विशेषतः ठाणे, कुलाबा, रत्नागिरी या जिल्ह्यात कमी प्रतीच्या (कनिष्ठ) जमिनी कसणुकीची पध्दत होती तिलाच खोती पध्दती म्हटले जात होते. रयतवारी पध्दतीत जो जमीन कसतो त्याच्याकडूनच सरकार प्रत्यक्षपणे सारा (जमीन-महसूल) वसूल करते. पण खोती पध्दतीत जमीन-महसूल खोत गोळा करीत असे व तो सरकार दरबारी भरत असे. कुळे व सरकार यांचा प्रत्यक्ष संबंध येत नसे. छोट्या प्रमाणावर ही जमीनदारीच होती. शेतकऱ्यांचे दारिद्र्य व पिळवणूक हा त्या भागातील मोठा ज्वलंत प्रश्नच उभा राहिला होता. कमालीचे श्रम करून देखील मिळकतीचा भाग सावकार आणि सरकारला द्यावा लागतो. विपन्नावस्था हेच शेतकऱ्यांचे आयुष्य. खोती पध्दतीत पिळवटून निघालेला शेतकरी सांपत्तीक दुरावस्थेचा बळी ठरतो. या भिषणतेमुळेच डॉ.आंबेडकर खोती ही गुलामगिरी आहे, असे म्हणतात. अशा अवस्थेत शेतकऱ्यांचा आर्थिक उत्तर कसा घ्यायचा ? अथवा शेतकरी आणि शेतकऱ्यांवर यानीत संबंध शोधक आणि शोधित अशा स्वरूपाचे असल्यामुळे सामान्य शेतकऱ्यांला भवितव्य ते काय असणार ? खोत हा गावातील एक सुलतान असतो, शेतकऱ्याला त्याचा सर्व प्रकारचा छळ सहन करावा लागतो. कारण शेतकऱ्याच्या सर्व नाड्या त्यांच्या हातात असतात.

“Structural Properties of Vanadium Substituted Yttrium Iron Garnet”

*Vidhate R.G.¹, Bhandari J.M.², Kavade R.B.³ Jadhav K.M.⁴

¹ Anandrao Dhonde Alias Babaji Mahavidyalaya, Kada, Beed.

² Gandhi college Kada, Beed

³ Bhagwan Mahavidyalaya, Ashti, Beed.

⁴ Department of physics Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.

Author e-mail: ¹rgvidhate@rediffmail.com,

²jmbhandari_1969@yahoo.co.in, ³kavade.ramdas@gmail.com

Abstract

The garnet having the general formula $Y_3V_xFe_{5-x}O_{12}$ ($x = 0.0, 0.2$ and 0.4) were synthesized using double sintering ceramic technique. The samples were characterized by X-ray diffraction technique. The X-ray diffraction studies of compositions revealed the formation of single phase cubic structure with lattice constant ranging from 12.364 to 12.381 Å up $x=0.0$ to $x=0.4$.

The IR spectra of all samples are taken in the range of $300-800\text{cm}^{-1}$. IR spectra show typical absorption bands indicating the garnet nature of samples.

Keyword: Garnet, Vanadium, structural, IR study.

Introduction:

Yttrium iron garnet (YIG) $Y_3Fe_5O_{12}$ belongs to a group of magnetic oxides and has received a great deal of attention in laser, microwave devices and ultrasonic devices field. They are characterized by magnetic and magneto-optical properties. Yttrium iron garnet (YIG) is a microwave ferrite, which in polycrystalline form has specific characteristics.

Garnets are cubic oxides with space group O_h^{10} and they are characterized by the chemical formula $\{A_3\}[B_2]X(C_3)O_{12}$, where the different brackets reflect the various oxygen coordination of the A cations while the [] and () indicate six fold and four fold coordination of the B and C cations, respectively. A can be one of the fourteen well known rare earth ions or Yttrium while B and C are the cations like Al, Ga, Cr, etc [1]. Yttrium iron garnet is one of the well known family of ferrimagnetic oxide magnetic materials. In the present study, we report our results on the structural properties of vanadium substituted yttrium iron garnet ($Y_3Fe_{5-x}V_xO_{12}$) ($x = 0.0 - 0.4$) through X-ray diffraction, infrared spectroscopy.

Pure and substituted yttrium iron garnet has been studied intensively by several researches with a view to understand their basic properties. Substituted yttrium iron garnets have been extensively used in wide band non reciprocal devices [2,3]. Non-magnetic substitutions in yttrium iron garnet have provoked great interest for scientific studies of the effects caused by the magnetic dilutions [4,5]. In general, non-magnetic cations occupy two non-equivalence sites with more or less pronounced preference for one site [6]. Non-magnetic ions usually occupy octahedral or tetrahedral site.

Structural and Magnetic Studies of Copper Substituted Nickel ferrite

J. M. Bhandari^{1*}, R. B. Kavade², R. G. Vidhate³, K. M. Jadhav⁴

¹Smt. S. K. Gandhi Arts, Amolak Science and P. H. Gandhi Commerce College Kada, Dist. Beed, Maharashtra, India.

²Bhagwan Mahavidyalaya, Ashti, Beed, Maharashtra, India.

³Anandrao Dhonde Alias Babaji Mahavidyalaya, Kada, Beed, Maharashtra, India.

⁴Department of physics Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, India.

*jmbhandari_1969@yahoo.co.in

Abstract

In this present work, compositions of copper substituted nickel spinel ferrites samples with the general formula $Ni_{1-x}Cu_xFe_2O_4$ (with $x = 0.0, 0.4, \text{ and } 0.8$) prepared by standard ceramic technique is investigated. The structural properties of these ferrite samples have been studied using X-ray diffraction technique. X-ray diffraction studies of compositions revealed the formation of single phase cubic structure. Magnetization measurements were carried out using pulse-field hysteresis loop technique at room temperature. The saturation magnetization (M_s), magneton number (n_B), and coercivity (H_c) obtained from pulse field magnetization technique decreases with Cu substitution x .

Keywords -XRD, lattice constant, x-ray density, magnetization.

1. Introduction

In recent years, nano-sized spinel ferrite particles have attracted considerable attention of scientists and technologists due to their interesting and unusual properties both from the fundamental and academic point of view which is altogether different from their bulk counterpart [1]-[3]. The ability to produce nano-sized particles has opened new applications for magnetic materials, such as magnetic media, high density recording, drug delivery, magneto caloric refrigeration etc. [4]-[6].

Among the different spinel ferrites, nickel ferrite ($NiFe_2O_4$) is a well-known soft magnetic material and having inverse spinel structure, whose degree of inversion depends on the thermal heat treatment. The high electrical resistivity and moderate magnetic properties makes nickel ferrite an excellent core material for various applications in electronic and telecommunication. Nickel ferrite has been successfully synthesized by various methods and studied for its structural and magnetic properties by many researchers [7]-[11]. Copper ferrite ($CuFe_2O_4$) is a distinguished among other spinel ferrites by fact that it undergoes structural phase transition accompanied by reduction crystal symmetry to tetragonal due to cooperative Jahn-Teller effect. However there are differences about the phase transition temperature of $CuFe_2O_4$ [12], [13]. In this work we report our results on structural and magnetic properties of mixed Ni-Cu spinel ferrites.

The Influence of Substitution of Jahn-Teller Cu^{2+} Ions on the Structural and Magnetic Properties of Nickel Ferrite.

R.B. Kavade^{*1}, J.M. Bandari², R.V. Vidhate³, C.M. Kale⁴, S.J. Shukla⁵

¹Bhagwan Mahavidyalaya, Ashti, Dist. Beed, 414203, M.S., India.

²S.K. Gandhi College, Kada, Beed, M.S., India.

³Anandrao Dhonde Alias Babaji, College, Kada, Beed, M.S., India.

⁴Indraraj Art's, Commerce and Science college, Sillod, M.S., India.

⁵P.G. Department of Physics and Research center, Deogiri College, Aurangabad, M.S., India.

^{*}kavade.ramdas@gmail.com

Abstract

The polycrystalline samples of copper substituted nickel ferrite having the generic formula $\text{Ni}_{1-x}\text{Cu}_x\text{Fe}_2\text{O}_4$ ($x = 0.0, 0.2, 0.4, 0.6, 0.8$ and 1.0) have been synthesized by standard double sintering ceramic method using AR grade oxides. The formation of mono phase cubic spinel structure of all the samples under investigation have been carried out using X-ray diffraction technique at room temperature. The lattice constant, X-ray density, bulk density and porosity were obtained as a function of copper content. It is found that lattice constant increases with copper content x . The variation in lattice constant has been explained on the basis of difference in ionic radii. The magnetic properties like saturation magnetization (M_s), magneton number (n_B), coercivity etc. of mixed Ni-Cu ferrite were obtained from magnetization (M) versus applied magnetic field (H) plots. The saturation magnetization decreases from 54.725 emu/gm to 37.14 emu/gm. The values of structural and magnetic parameters of mixed Ni-Cu spinel ferrite shows strong influence of Jahn Teller Cu^{2+} ion.

Keywords: Ni-Cu spinel ferrite, Jahn-Teller ion (Cu^{2+}), magnetic properties.

1. Introduction:

Spinel ferrites are commercially important materials because of their excellent electrical and magnetic properties. Interesting physical and chemical properties of ferrites arises from ability of these compounds to distribute cations amongst the available tetrahedral A-site and octahedral B-site and magnetic A-A, B-B and A-B interactions. Ferrites fulfill the wide range of applications from microwave to radio frequencies and are of importance from both fundamental and applied research point of view. [1,2]. The twin property of electrical insulator and magnetic conductor makes ferrites useful in many devices such as transformer cores, antenna rod, and memory chips, microwave devices, magnetic recording etc. Compared to other magnetic materials ferrites can be easily prepared, low cost and highly stable. The important electrical and magnetic properties of ferrites depend on various factors which include method of preparation, type, nature and number of dopants etc. [3, 4].

The mixed ferrites are studied by number of workers because they have low eddy current loss, high resistivity good magnetic property and therefore they are more important commercially. Nickel ferrite (NiFe_2O_4) has been an important spinel ferrite material due to its high Curie temperature, low microwave loss, low magnetic anisotropy and low magnetostriction. According literature nickel ferrite is a inverse spinel ferrite whose degree of inversion depends on sintering temperature and other processing parameters. Copper ferrite (CuFe_2O_4) is a distinguished among other spinel ferrites by fact that it under goes structural phase transition accompanied by a reduction crystal symmetry to tetragonal due to cooperative Jahn-Teller effect. However, there are differences about the phase transition temperature of CuFe_2O_4 [5, 6]. The mixed ferrite of nickel and copper has not been studied for its structural and

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INFLUENCE OF CLIMATIC CONDITION ON DENGUE FEVER IN DISTRICT NASHIK, M.S., INDIA

SUVARNA DESHPANDE* AND RAMESH ABDAR

Department of Zoology, Shri Amolak Jain's Vidya Prasarak Mandal's

Smt. S. K Gandhi Art's, Amolak Science, and P. H Gandhi Commerce, College Kada Tal, Ashti Dist., Beed, M.S., India

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Key words : *Aedes aegypti*, Protozoan, Viral diseases, Nashik, India

Abstract – Mosquitoes have a worldwide distribution, mostly through tropical and temperate regions. They can be found in a variety of habitats with fresh or impure water. Infectious vector-borne diseases like malaria and dengue fever infect half of the world population. Dengue is a serious health issue in India and other parts of the world. As the outbreak of dengue fever, it is very important to know details about the cause of dengue. Prevalence of microorganisms in the viral strain, disease severity pattern, early detection of the virus, and early management of the disease are essential. The study carried out the correlation with the Dengue fever and Environmental factors for the current year, i.e. from January 2019 to October 2019. The study shows the exact Correlation between dengue fever patients and environmental conditions. The study is still going on and it will help in the management program to carry out vector control and source reduction in the present study during study period data of a total of 4143 patient's data were collected from which 1043 are dengue patients, Elisa positive which is confirmatory with very low platelets, high fever, and nausea vomiting, raised Creatinine SGPT, SGOT. The climatic condition is always correlated with dengue fever. The monsoon is prolonged till November accordingly dengue cases increase. *Aedes* mosquito source of development must be reduced. The program manages to apply the control measures along with source reduction.

INTRODUCTION

Mosquitoes have almost worldwide distribution being found throughout the tropic and temperate regions. They are absent on a few islands and Antarctica. They can develop vigorously in a variety of habitats with freshwater or any water (clear turbid or polluted) except in marine habitat because of high salt concentration. *Aedes aegypti* and *A albopictus* are the main vectors responsible for the transmission of many viral pathogens possesses a serious threat to human health and has proven to be very difficult to control due to their remarkable ability to adapt to various environments. Their close contact with human and their reproductive biology.

Dengue is a serious health issue in India and other parts of the world. As the mention of dengue fever, it is important to know the details about the causes of dengue Prevalence of microorganisms in the viral strain, disease severity and detection

pattern of viruses with early management of the disease is essential. Environmental conditions such as temperature humidity and precipitation also play an important role in dengue resurgence. High level of precipitation and the suitable local temperature is strongly associated with rain and humidity and they are related to the poor urban area and urban area are always associated with higher risk. Climatic changes resulting in heavy and prolonged rainfall and may be due to global warming and increased dengue incidence and outbreak risk (www.sciencedirect.com/science/ar). The World Health Organization considers dengue to be the most important vector-borne viral disease, potentially affecting 2.5 billion people in tropical and subtropical countries throughout the world (WHO, 1999; Rigau-Pérez *et al.*, 1998) (www.medbox.org/dengue).

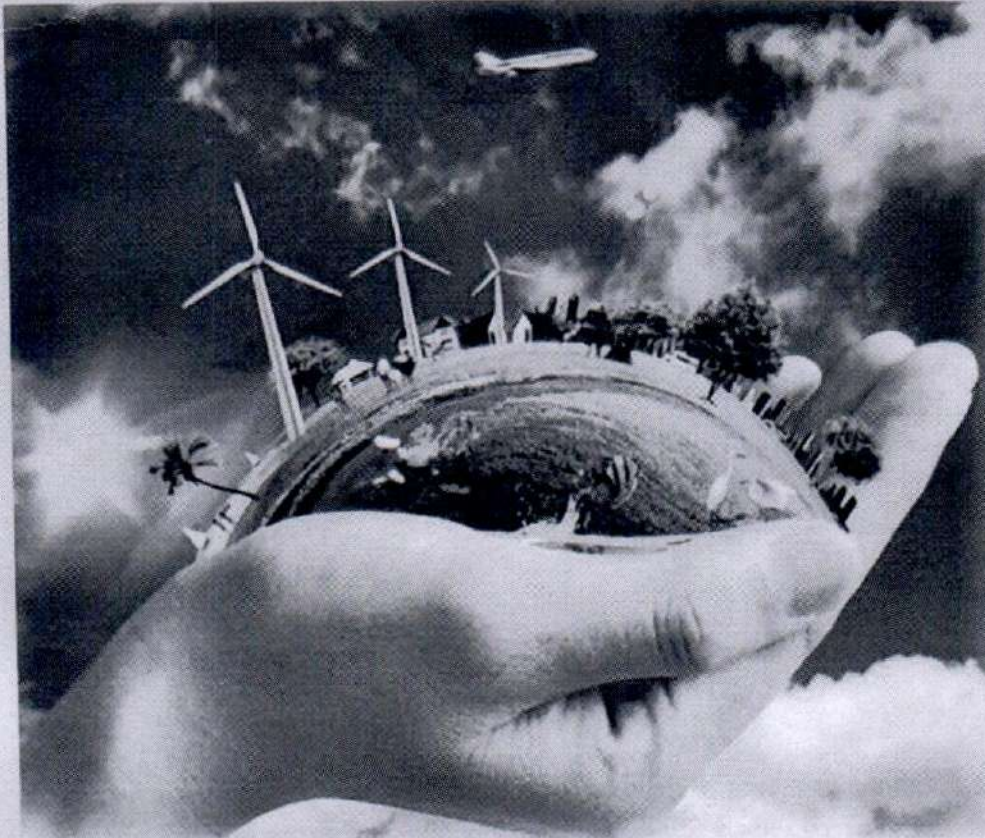
Prevention and control of dengue depend on controlling the vector *Aedes aegypti* is closely

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Address for Correspondence

Mrs. Pallavi Laxman Shete

Editor in Chief : Worldwide International Inter Disciplinary Research Journal (A Peer Reviewed Referred)
Principal, Sanskriti Public School, Nanded (MH, India) Email : shrishprakashan2009@gmail.com

Dr. Rajesh G. Umbarkar

House No. 624 - Belanagar, Near Maruti Temple, Taroda (Kh.) Nanded - 431605 (India - Maharashtra)
Email - umbarkar.rajesh@yahoo.com, shrishprakashan2009@gmail.com Mob. No. 9623979067

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INDIAN HEALTHCARE SECTOR AT A GLANCE

Dr. Magar S. R.

Smt. S. K. Gandhi College, Kada.

ABSTRACT:

“Indian healthcare sector is an adverse in nature, this is because of huge burden of population on it. From independence to till date so many improvement in the healthcare sector in India. In this sector effective leadership is necessary for shaping organizational culture and driving the implementation of reforms in healthcare sector. Indian government is committed to ensure the highest possible level of health and well-being of all Government of India has provide finance every year to healthcare sector in country, under the provision of various schemes and programs in budged. The people in nation are not aware about healthcare insurance, most of the people spent their own many for healthcare in private hospitals”

KEY WORDS: Healthcare, Finance, Expenditure,

AIM OF THE STUDY:

To know about Indian healthcare system, Health Expenditure and Health Financing Indicators.

SCOPE OF THE STUDY:

This paper focus on only Indian healthcare sector and its allied services.

METHODOLOGY:

In this study secondary data used, the secondary data has been collected mainly from various publications of Government of India, Reports of various international organizations, Journals, News Papers and web etc.

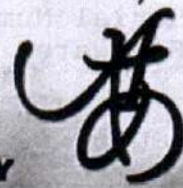
INTRODUCTION:

Healthcare is a crucial issue in India, Indian healthcare model is mostly administrated by the state government rather than central government. The first National health Policy was introduced in 1983 by the government of India. This policy mainly focused on provision of primary health care to all by 2020. After that in 2002 and 2017 some improvement in the National Health Policy. A good health is an important for human happiness and wellbeing healthy population are more important for productivity and economic activities of the country. According to world health organization a well-functioning health care system requires a financing mechanism a well-trained and adequately paid workforce, reliable information on which to base decision and policies and well maintained health facilities to deliver quality medicines and technologies¹.



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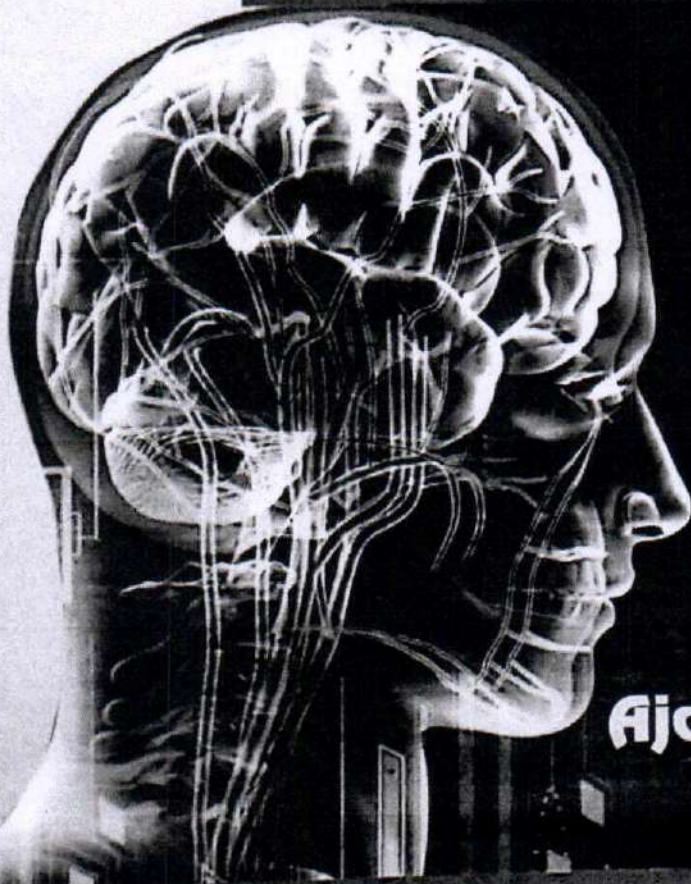
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26. Electrochemistry

Jagdale A. N.

Associate Professor, Department of Chemistry, R.B.N.B. College, Shrirampur, Maharashtra.

Dr. Kishore NabajiKoinkar

Assit. Prof. Department of Chemistry, Gandhi College Kada, Tal Ashti, Dist Beed, Maharashtra.

Email : kishorekoinakr@gmail.com

Abstract

Understanding of electrical matters began within the sixteenth century. Throughout this century, and somebody William Gilbert spent seventeen years experiment with magnetism and, to a lesser extent, electricity. For his work on magnets, Gilbert became referred to as the "Father of Magnetism." He exposed varied ways for manufacturing and strengthening magnets.

Electrochemistry is that the branch of chemical science that studies the connection between electricity, as a measurable and quantitative development, and recognizable action, with either electricity thought-about Associate in outcome of a selected action or the other way around. These reactions involve electrical charges moving between electrodes Associate in solution (or ionic species in an exceedingly solution). Therefore chemistry deals with the interaction between current and action.

Introduction

When a chemical change is caused by Associate in Nursing outwardly equipped current, as in electrolysis, or if an electrical current is created by an unprepared chemical change as in an exceedingly battery, it's referred to as Associate in Nursing chemistry reaction. Chemical reactions wherever electrons area unit transferred directly between molecules and/or atoms area unit referred to as oxidoreduction or (redox) reactions. In general, chemistry describes the reactions once individual reaction reactions area unit separate however connected by Associate in peripheral electrical circuit Associate in an intervening solution.

The term "redox" stands for reduction-oxidation. It refers to chemistry processes involving lepton transfer to or from a molecule or particle dynamical its number. This reaction will occur from starting to finish the appliance of Associate in nursing external voltage or through the discharge of energy. Reaction and reduction describe the modification of number that takes place within the atoms, ions or molecules concerned in Associate in nursing chemistry reaction. Formally, number is that the hypothetic charge that Associate in nursing atom would



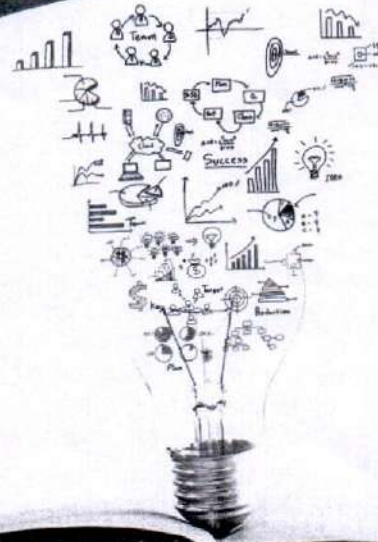
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'बारोमास' आणि 'तहान' कादंबऱ्यातील जीवनजाणिव्या

श्रीमती आशा शंकरराव पालवे

बाबुजी आव्हाड महाविद्यालय, पाथर्डी

डॉ. अनिल गर्जे

गांधी महाविद्यालय, कडा.

प्रास्ताविक :

मराठी कृषिसाहित्यामध्ये बदलत्या कृषिजीवनाचा वेध घेण्याच्या प्रेरणेतून ज्या काही कादंबऱ्या लिहिल्या गेल्या त्यामध्ये सदानंद देशमुख यांच्या 'तहान' व 'बारोमास' या कादंबऱ्या कृषिकेंद्रीत कृषिजीवनाचे वास्तव व कलात्मक चित्रण करणाऱ्या कादंबऱ्या आहेत. खेडे, शेती, शेतीतील पीकपाणी, शेतमजूर, गुरेदोरे, पशू-पक्षी, ग्रामीण बोलीभाषा असे विविध घटक कृषिजीवनाचे निदर्शक आहेत. 'तहान' आणि 'बारोमास' या कादंबऱ्या कृषिसंस्कृतीचा कलात्मक अविष्कार चित्रित करणाऱ्या महत्त्वपूर्ण कलाकृती आहेत. वर्षभरातले ऋतुचक्र आणि त्याच्याशी निगडित असे कृषी जीवन अत्यंत सूक्ष्मपणे सदानंद देशमुखांनी सामान्य शेतकऱ्यांच्या जन्मजात दुःखाचे यथार्थ चित्रण केलेले आहे. 'बारोमास' या कादंबरीत सदानंद देशमुखांनी सामान्य शेतकऱ्यांच्या जन्मजात दुःखाचे यथार्थ चित्रण केलेले आहे. खेड्यातील अभावग्रस्त माणसं, संकटाच्या दाढेत सापडलेला शेती व्यवसाय, नव्याजुन्या पिढीतील भावनिक ताण-तणाव, परंपरा आणि नव्या आशा यांच्यातील संघर्ष, संस्कारी मनं आणि शिक्षित मनं यांच्यातील भावनिक, सांस्कृतिक आणि कौटुंबिक कलहांचे चित्रण लेखकाने या कादंबरीत केले आहे.^१ उत्तम बावस्करांनी मांडलेले मरत शस्त्र व योग्य वाटते कारण एकूणच समग्र कृषिजीवन वास्तव बारोमास कादंबरीने कवेत घेतले आहे. नव्या अर्थव्यवस्थेच्या ओझ्याखाली भरडून निघालेल्या शेतकऱ्यांच्या आयुष्याची शोकात्म व्यथा व करुण कहाणी या कादंबरीतून आढळते. नवी अर्थव्यवस्था, सुशिक्षित पदवीधरांचे शोषण, शिक्षणाचे बाजारीकरण, भ्रष्टाचार, कर्जांमुळे आत्महत्या करणारे शेतकरी, कृषि व नागर संस्कृतीतील संघर्ष, ग्रामवास्तव, राजकारण, कृषिसंस्कृती आणि खाऊजा संस्कृतीमुळे शेतकऱ्यांचे ढासळणारे भावविश्व याची शोकात्म संवेदना विविध जीवनजाणिवेसह 'बारोमास' व 'तहान' कादंबरीतून प्रतीत होते. या सद्भर्तात विजय चोरमारे म्हणतात, "सदानंद देशमुख यांच्या कथा आणि कादंबऱ्यांमधून कृषिजीवनाचे खोल चित्रण येते. ज्यांचे सर्वस्व शेतीवर अवलंबून आहे, अशा माणसांच्या कृषिनिष्ठमूल्यजाणिव्या त्यांच्या साहित्यातून व्यक्त होतात."^२ विजय चोरमारे यांच्या मतानुसार अखंडपणे बारा महिने उन्हातान्हात राबणारा कष्टकरी शेतकरी हा सदानंद देशमुखांच्या सगळ्याच लेखनाचा केंद्रबिंदू आहे. जगण्याच्या विविध स्तरावर कास्तकऱ्यांना, कुणब्यांच्या नव्या जुन्या पिढ्यांच्या प्रातिनिधिक पात्रांना बदलत्या वास्तवाशी जुळवून घेताना करावा लागणारा संघर्ष, होणारी फरफट या लेखनाची सूत्रे म्हणून सांगता येतील. या सद्भर्तात तानाजी पाटील म्हणतात, "ही कादंबरीच दुःख, कष्ट, वेदना आणि दारिद्र्य याचे भीषण चित्रण करणारी आहे. तिच्यातून व्यक्त होणारी वेदनाच दीर्घकाल मनावर ओरखडे उमटविते. दुःखाच्या गडद जाणिवेत माणस बुडून जातो. इतके समर्थ चित्रण या कादंबरीत व्यक्त झाले आहे."^३ तानाजी पाटील म्हणतात ते योग्यच आहे कारण बारोमास कष्ट करणे आपले जीवन व्यथित करणे एवढेच सध्याच्या परिस्थितीत शेतकऱ्यांच्या हाती राहिले आहे. कारण शेती आणि शेतकऱ्यांच्या विरोधीच आजची सगळी धोरणे असलेली दिसून येतात.

'बारोमास' आणि 'तहान' मधील कृषिनिष्ठ जीवनजाणिव्या :

'बारोमास' आणि 'तहान' ग्रामीण कृषिजीवनाचे दाहक वास्तव मांडतात. नव्वदोत्तरी सामाजिक, सांस्कृतिक परिवर्तनाचा वेध घेणाऱ्या या कादंबऱ्या आपल्या वेगळ्या वैशिष्ट्यांमुळे मराठी साहित्यात वेगळा ठसा उमटविणाऱ्या ठरल्या आहेत. ग्रामीण सुशिक्षित तरुणाची हतबलता, नियती, संघर्ष त्याचप्रमाणे शेतकरी, शेती समस्या, शेतकरी चळवळ, बदलते राजकारण, जागतिकीकरण, गुंडगिरी, भांडणतंटे, दुष्काळ, संकटे, बी-दियाणातील भ्रष्टाचार, शासकीय अधिकाऱ्यांकडून होणारी लूट, शोषण, हमीभावाची समस्या, पिण्याच्या पाण्याची समस्या अशा विविध जाणिव्यांचा वेध सदानंद देशमुख सूक्ष्मपणे घेतात.

बारोमास कादंबरीचा नायक एकनाथ, मधू, अलका, शेवंता, सुभानराव या मुख्य व्यक्तिरेखांच्या माध्यमातून 'बारोमास'चे आशयसूत्र उलगडत जाते. एकनाथच्या व्यक्तिरेखेतून सदानंद देशमुख शेतकऱ्यांचे कधीही न संपणारे दुःख मांडतात. निसर्गाच्या लहरीपणावर अवलंबून असणारी शेती कधी खूप पाऊस तर कधी सलग दोन ते तीन दुष्काळ या अस्मानी सुलतानी संकटामुळे करावा लागणारा जिवघेणा संघर्ष व त्यातून निर्माण होणारी अस्थिरता याचे चित्र 'बारोमास' कादंबरीत साकारले आहे. एकनाथ हा मोठ्या जिद्दीने, मेहनतीने उच्च शिक्षण घेतो. पण समाजातील शिक्षणक्षेत्रातील भ्रष्टाचारामुळे त्याला नोकरी मिळत नाही. त्यामुळे त्याला परंपरागत असणाऱ्या शेती व्यवसायाकडे

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AURANGABAD**

A STUDY OF LEADERSHIP VISION AND QUALITIES FOR LIBRARIANS

Dr.Thorwe.R.H.

Librarian

Gandhi Mahavidhyalaya,Kada,Tq.Ashti.Dist.Beed.

Introduction

The Library is a valuable Resource Centre for learning and experience helping the users to find information, gather knowledge and create content for access and posterity. Tremendous impact of ICT and users information consciousness towards access to timely information, calls for value added services in libraries. Leadership is one of the key competencies for librarians in managing the academic and research libraries for better productivity, visibility and development of functional and innovative libraries. Williamson, Pemberton and Lounsbury identified traits of functional and innovative libraries. Williamson, Pemberton and Lounsbury identified traits measured by personality style inventory traits of person-oriented librarians i.e. adaptability, assertiveness, autonomy, conscientiousness, customer service orientation, emotional resilience, extraversion, openness, optimism, teamwork, tough-mindedness, visionary/operational work style, work drive and differentiated them from technique oriented librarians in terms of logic, impersonal analysis and decision making. Therefore Leadership vision and Qualities for Librarians is must essential.

Research Methodology:

For the purpose of this study used social science research methodology to study the research topic. Used scientifically analysis. In this method used secondary data tools. In this secondary data tool used reference books. Research articles, newspapers, journals, published and unpublished materials and also taken help of internet facilities. In the modern period academic Libraries are consists of many types of Academic materials therefore, to provide actual and fast service use of E-Resources is necessary in the academic Library following E-Resources are used.

Objectives of research:

- 1) To overview on role of academic libraries in education.
- 2) To study of Leadership vision for Librarians.
- 3) To study of Qualities for Librarians.

Sensitivity

The high descriptors for sensitive personality are aestheticism and tender-mindedness. This trait of the librarians should include the sensitivity of their nature and actively looking for ways to help people.

Be Visionary

Vision is a quality administrators felt involves having a clear idea of what one wants to accomplish within the context of the bigger picture and the library's mission and overall vision of the organization. the mark of a good leader is one who can articulate a vision for his or her organization and then motivate others to share and accomplish that vision. Peter Drucker described it this way: Leadership is not magnetic personality that can just as well be a glib tongue. It is not 'making friends and influencing people, that is flattery. Leadership is lifting a person's vision to higher sights, the raising of a person's performance to a higher standard, the building of a personality beyond its normal limitations.



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Bertle Priya, Nandhini Priya. M, Muthu kumar. R, Nayana Thomas, Muthamizh Selvi. F, VMCON, Puducherry, VMRF (DU), Salem.

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<https://doi.org/10.37896/sr8.4/001> (<https://drive.google.com/file/d/1dl0bkmzVGsz7eFz90MTqnWuXUBRkUQz/view?usp=sharing>)

Obligations of the parties in the lease chain contract (https://drive.google.com/file/d/1sp14YmWwJTdAfhfDo2plsaUN_PQoSv1V/view?usp=sharing)

Behrooz Mohammadi Mehr, Islamic Azad University, Arak, Iran

Dr. Mohammad Hassan Asadi, Dr. Feizollah Jafari, Bu Ali Sina Hmadan University, Iran

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<https://doi.org/10.37896/sr8.4/002> (https://drive.google.com/file/d/1sp14YmWwJTdAfhfDo2plsaUN_PQoSv1V/view?usp=sharing)

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Suhas Kale, R.R.Bhambare, PREC Loni, Savitribai Phule Pune University

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Nidhi Singh, Mahima Khawale, Niranjana Dubule, Dr. Sandeep M. Chaware, Marathwada Mitra Mandal's College of Engineering, Pune, Maharashtra, India

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CHEMICAL & ANALYTICAL STUDIES ON SOME POPULAR FOODSTUFFS AT KADA, Tal. Ashti, Dist. Beed

* Dr Suparna Deshmukh

S. K. Gandhi Arts, P. H. Gandhi Commerce , Amolak Science College, Kada, Dist. Beed

Email id : suparna.deshmukh@gmail.com

ABSTRACT

With growing urbanization food habits are certainly changing in small towns too. The aim of this study is to ascertain bacterial contamination and determine total counts of bacterial species, mainly E. Coli, responsible and also some common chemical components responsible for the contamination of the street vending food at major places at Kada. This prospective study was conducted among street vending food at 4 crowded regions at Kada. Food samples comprising water of Pani Puri, were purchased and analyzed. The food samples were purchased and transported to the laboratory in sterile plastic bags and analyzed for bacterial and chemical contamination. Alongwith Bacterial analysis, heavy metals Pb(mg/kg), As(mg/kg), Hg(mg/kg), Sn(mg/kg), Cd(mg/kg), Cu(mg/kg) have been analysed. Among 4 collected samples of Pani-Puri water which are collected from different vendors one found contaminated with presence of E,Coli and other with Total Coliforms. These vendors are suggested to improve the quality of their food by reporting these studies. Trace metals like Pb, As, Hg, Sn, Cd and Cu are found to present within permissible limits as per FSSAI Specifications 2011.

KEYWORDS : Food Hygiene, Total Coliforms, Bacterial and Chemical Contamination

INTRODUCTION :

Coliform bacteria are the organisms that are present in the environment and in the feces of all warm blooded animals and humans. Coliform bacteria will not likely cause illness, however their presence in drinking water indicates that disease causing organisms i.e pathogens are present in the water sample. Testing drinking water for all pathogens is quite complex, time consuming and expensive too. Easiest and inexpensive way is to test for coliform bacteria and if found, then to know the source of contamination. With this aim, present studies are carried out for analyzing presence of Total Coliforms in food water.

Street foods play an important role in developing societies including rural regions as they support the livelihoods of millions of the urban poor. However, street foods have in recent years become one of the most common risks associated with the increase in outbreaks of food-borne diseases in developing countries. There have been several documented cases of food poisoning outbreaks on consuming street foods. It was found out that Street foods were responsible for food poisoning

Complexometric Studies On Binary Complex Of Eriochrome Cyanine R(ECR) With Surfactant, CTAB

***Dr. Suparna Deshmukh**

Head, Dept. Of Chemistry,

S.K.Gandhi College Of Arts Commerce and Science, Kada, Dist. Beed.

suparna.deshmukh@gmail.com

ABSTRACT

Complexation properties of reagents of Tri-Phenyl Methane dyes , (TPM dye), get modified by the addition of micelle forming surfactants. Spectral and complexometric studies of Dye-Surfactant complexation has been studied spectrophotometrically (1-2). There is a growing tendency to employ organic colored reagents for analytical purposes, specifically triphenylmethane dyes, which are found more sensitive in the presence of micelle forming surfactants. TPM Dye- surfactant complex, also known as modified reagent, shows a hypsochromic effect on addition of micelle forming surfactant to it. In the present studies, complexation of Eriochrome Cyanine R, ECR is used as a Triphenylmethane Dye, while Cetyl Trimethyl Ammonium Bromide, CTAB is used as a Surfactant. Composition of these binary complexes of Eriochrome Cyanine R, ECR and Cetyl Trimethyl Ammonium Bromide, CTAB, has been determined . Analytical aspects like effect of time, order of addition of reagents, effect of temperature as well as studies in stoichiometry, sensitivity and molar absorptivities has proved the utility of modified reagent under study.

Key Words : Eriochrome Cyanine R, Surfactant viz. CTAB, Hypsochromic Effect, Sensitivity.

INTRODUCTION

Studies on Complexation properties of reagents of TPM dyes revealed that, the intermolecular forces that predominantly exists in the interactions of dye molecules with surfactant aggregates are hydrophobic interactions, electrostatic interactions, hydrogen bonds, π - π stacking (3) and Van-derWaals forces (4-6). The mechanism for dye- surfactant interactions have shown to exist binding forces in aqueous micelles (7) dye molecules in micelles. The formation of dye- surfactant ion pair is a consequence of mutual influences of long range electrostatic forces and short range hydrophobic interactions(8-10). Associations between dyes and surfactants depends principally on the chemical structure of the compounds(11). Ion association complexes due to interaction of surfactant monomers and dye in the pre- micellar region while the dye molecules are likely to be localized at the micelle surface in the post micellar region. The changes in position and intensity of absorption band in electronic spectra is the result of these interactions (12-13). The aggregation of surfactant and dye takes place at surfactant concentrations far below critical

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ROLE OF THE TEACHER AS CURRICULUM DEVELOPER OF SPORTS CURRICULUM

Dr. Sayed Zameer Shabbir

H.O.D. Physical Education

Gandhi College Kada, Ta- Ashti, Dist. Beed.

Introduction

Curriculum development is intellectual and research activity. It needs the programmers for planning, developing, designing, implementing, evaluation and imp phase. Teachers know the needs of all stakeholders of teacher education. Teacher understand the psychology of the learner. Teachers are aware about the teaching method teaching strategies. Teachers also play the role as evaluator for the assessment of le outcomes. Teacher can be worked as planner, designer, manager, programmer, implen coordinator, decision maker, evaluator, researcher etc. so teachers can play important role process of curriculum development for physical education.

Objectives of the study

1. To overview on Concept and process of curriculum development.
2. To explain the role of the teacher as curriculum developer.

Research methodology

The purpose of the study of Role of Teacher in Curriculum Development for Ph Education and Sports is used by teacher, sports performers, coaches and officials to improve performance of teaching. For this paper researcher is used descriptive re methodology. The researcher is used secondary data form reference books, research a newspapers, journals, published and unpublished materials and also taken intimate facilities

Curriculum development

A Curriculum is broadly speaking outlined because the totality of student exper that occur within the academic method. The term usually refers specifically to a pl sequence of instruction, or to a read of the student's experiences in terms of the educat faculties tutorial goals. Curriculum development may be a method of raising the info. V approaches are employed in developing curricula. Ordinarily used approaches incor analysis, design, choosing formation and review.

Challenges of Curriculum development

The following challenges can dramatically influence the context of info and instr within the faculties and university. These challenges area unit demographic changes, 1 changes, rising technologies, economic process, expatriate and immigration problems, le your time for coming up with, heap of work, performance pressure from faculty dire equalisation numerous learning desires, handle too several masters, get go bad simply, le correct funding and limitations of standardized testing. The college-university taken becau subject faces many challenges such as: the non-substitution of learning rather than educ incomplete identification of the \$64000 desires of scholars and society and non-revision th to suit the dynamic desires.

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Dept. of Public Administration
SPP College, Sirsala, Dist. Beed.
Email - dr.kumbharikarnn@gmail.com

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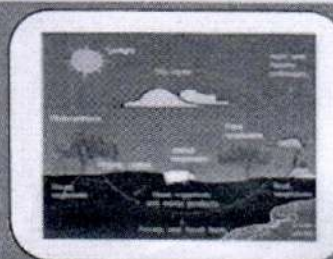
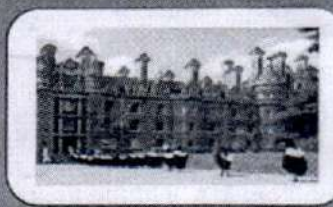
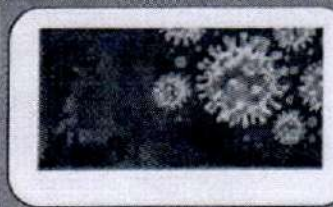
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Methods of Water Management

Dr. Magar S. R.

Associate Professor, Smt. S. K. Gandhi College, Kada.

Email: Shrim15@gmail.com

Abstract

"Water is essential for living things without water no one can survive. Globally day by day water use are increasing but water resources are limited. Every country facing water challenge during the 4 to 6 month in an every year. Water management is a need of hour for safe our future. Domestic, industrial and agriculture sector generate a huge amount of waste water, most of the time these waste water are contaminated by various chemicals and this contaminated water directly pour into the river, ponds and oceans. This is a horrible situation for mankind, waste water need to treat and reuse it. There are so many methods of water management out of them water harvesting, groundwater recharge, waste water recycle, desalination, careful use of water, drip irrigation and aquifer storage and recovery are the most important methods".

Introduction:

Water is play an important role in our life, without water we cannot imagine life. Water is essential for every action in day today life. Water use has been increases in every sector. In the last century globally water uses increase more than twice the growth rate of population. Water use has been increasing due to the development of industry, agriculture and new constructions. Water resources are not increases but water demand is increasing. Water is essential for human consumption, agriculture, industry development and energy generation. Earth makes about 71% of earth surface and 29% consists of continents and islands. Of all the water that exists on our planet, roughly 97% is saltwater and less than 3% is freshwater. Most of Earth's freshwater is frozen in glaciers, ice caps, or is deep underground in aquifers. Less than 1% of Earth's water is fresh water that is easily accessible to us to meet our needs, and most of that water is replenished by precipitation a vital component of the water cycle, affecting every living thing on Earth¹. Water is a precious natural resource we cannot make it, due to the climate change water security is a top priority of us. In every year each country facing water crisis, to change this scenario water management is required in each level. The planet is facing a 40% shortfall in water supply by 2030, unless we dramatically improve the management of this precious resource. This is the unavoidable conclusion reached in the 2015 United Nations World Water Development Report, "Water for a Sustainable World", to be launched on 20 March in New Delhi (India), in time for World Water Day on 22 March². At world level 31 countries are facing shortage of water and by 2025 there will be 48 countries facing serious water shortages. The United Nations has estimated that by the year 2050, 4 billion people will be seriously affected by water shortages³. India is facing the water crisis in every year, currently 600 million people in the country are face high to extreme water stress and every year about two lakh people are die due to inadequate access of safe water. The crisis is only going to get worse By 2030, the country's water demand is projected to be twice the available supply, implying severe water scarcity for hundreds of millions of people and an eventual ~6% loss in the country's GDP². As per the report of National Commission for Integrated Water Resource Development of ministry of water resources, the water requirement by 2050 in high use scenario is likely to be a milder 1,180 BCM, whereas the present-day availability is 695 BCM. The total availability of water possible in country is still lower than this projected demand at 1,137 BCM⁴. Thus, the water management is required for to meet this huge demand.

Global Scenario:

Water security is a top global priority today it has multiple dimensions, among which water availability has traditionally been the most in focus. Rapid population growth, coupled with unsustainable water withdrawals, poor infrastructure and governance is resulting in sub-optimal water supplied in many parts of the world. Approximately 700 million people in 43 countries are currently suffering from water stress and scarcity. Furthermore, about 4 billion people experience severe water scarcity during at least one month of the year⁵. Below table shows the trends of global risk ranking.

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Natural Resources and their Conservation**Dr. Magar S. R.**

Associate Professor

Smt. S. K. Gandhi College, Kada.

Email. Shrim15@gmail.com**Abstract:**

"Natural resources are that resources which is play an important role in human life. Natural resources occur naturally on earth surface, we cannot make it in industries. Natural resources are classified into many categories but mainly it divided into two types one is renewable and another is nonrenewable. Day today's use of natural resources are increasing for development purpose, this results the ecological imbalance. For better future of our generation everyone need to conserve the natural resources in a planned manner. Alternative resources are used for nonrenewable resources to maintain them."

Introduction:

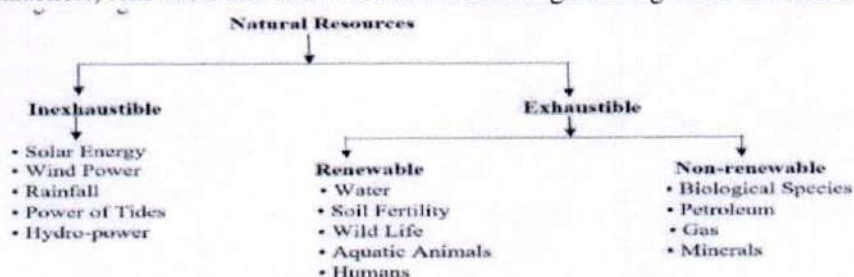
Natural resources are the precious resources on the earth. Natural resources play an important role in human life, without natural resources we cannot develop. Natural resources are that resources which is naturally occur on earth without interference of mankind. Air, water, sunlight, coal, minerals, forest and animals are the natural resources. These resources are useful for daily life as well as development of human beings. Natural resources are divided into two main types one is renewable and another is nonrenewable. These two types are divided according to their use. Natural resources are also classified into two types one is biotic and another is abiotic. Biotic resources are obtained from organic material and abiotic resources are obtained from non-organic material. Natural resources are used for to make food, fuel, goods production and raw material¹. Natural resources are used to meet people needs. The development of country is depend on natural resources, the country rich with natural resources has chance to develop their economic activates as well as country enrichment.

Natural resources are important for us, day today the usage of natural resources are increased for development of every sector. This more use of natural resources are the alarm of human being, we need to conserve the natural resources for future life. Conservation means to prevent, preserve, protect and manage the natural resources. Conservation is the careful upkeep and maintain and preserve natural resources to secure it from disappearing. We need to use natural resources wisely for conservation of it², if we could not use carefully then it would be harmful for our environment.

Conservation of natural resource are importance for our next generation as well as maintain the health of environment. Natural resources are very important for all kinds of development activities. Population of the world is increasing at very high rate and this impact on natural resources reduction, so our prime duty to conserve the natural resources through various practices. If we cannot conserve the natural resources then we face drought, flood, climate change, global warming and other related crisis. Everyone need to more use of renewable natural resources and reduce the use of nonrenewable resources³. Every people has prime duty to conserve the natural resources for our bright future.

Classification of Natural Resources:

Natural resources are very important for our environment, but these resources are available in various types. Some resources are need to manage wisely for our future generation. Natural resources are classified into inexhaustible, exhaustible, renewable and non-renewable. Below figure categorized the natural resources.





Stability Indicating Method for Known and Unknown Impurities Profiling for Cholecalciferol Tablets

Nitin Mahajan^{1*} Suparna Deshmukh² and Mazahar Farooqui¹

¹Post Graduate and Research Centre, Department of Chemistry, Maulana Azad College of Arts, Science and Commerce, Aurangabad, Maharashtra, India

²Department of Chemistry, S.K Gandhi college, Kada, Maharashtra, India

Abstract: The main objective of this research work was to develop and validate, a new gradient, highly sensitive, specific and stability indicating Reverse Phase HPLC method for quantitative determination of known, unknown impurities and degradant impurities profiling for Cholecalciferol tablets. No Pharmacopoeial method is available to quantify known, unknown impurities and degradants profiling for Cholecalciferol tablets. The impurities were separated on the Hypersil BDS column (150 mm x 4.6mm, 3µm) with a mobile phase of mixture of Trifluoroacetic acid buffer and acetonitrile with flow rate of 1.5 mL minute⁻¹. The column compartment was maintained at 40°C and the detection wavelength was at 265nm. Cholecalciferol, its known impurity and unknown impurities have been well resolved from each other. Recovery of the known and unknown impurities found between 80% to 120% as per ICH guideline. Method found linearity over the working concentration range with acceptance criteria of correlation coefficient greater than 0.99. Method precision and intermediate precision results found with percentage relative standard deviation of impurity content less than 10% for replicated analysis of test samples. A stress study was conducted with a drug product that was exposed to different conditions of acid, base, oxidation, heat, humidity and photolytic degradation. Cholecalciferol was found to degrade significantly under Photolytic, Thermal and Alkaline stress conditions. The degradation products were well resolved from Cholecalciferol and its impurities. For each stress condition, peak purity of Cholecalciferol was assessed using the Photodiode Array detector and found homogeneous in nature. The mass balance for stress study was found in between 95% and 105%. Thus, proving the stability indicating nature of the analytical method. The developed method was validated as per ICH guidelines. The method found accurate, precise, linear, robust, rugged, specific and stability indicating in nature.

Keyword: Cholecalciferol, Stability Indicating, Analytical Method Validation, Impurities profiling, ICH guidelines.

*Corresponding Author

Nitin Mahajan, Post Graduate and Research Centre,
Department of Chemistry, Maulana Azad College of Arts,
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TRACE METALS ANALYSIS IN COMMON FOOD STUFFS FROM ROAD SIDE VENDORS

*Dr Suparna R. Deshmukh

Head, Department Of Chemistry,

S. K. Gandhi College, Kada

ABSTRACT

The Food Safety and Standards Authority Of India (FSSAI) has been established under Food Safety and Standards Act 2006, which consolidated various acts. FSSAI has been created for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption. The important objectives behind regulation of Food Act is to collect and collate data regarding food consumption, incidence and prevalence of biological risk, contaminants in food, residues of various contaminants in food products, identification of emerging risks and introduction of rapid alert system. In Ahmednagar City, large number of people consumes Pani Puri sold by street vendors. Pani Puri provides the risk of food poisoning due to microbial contamination and thus causes threat to the human health. With this aim, studies on microbial and chemical analysis of Pani Puri from street vendors has been subjected for analysis. Three samples from most crowded places in Ahmednagar City has been undertaken for present studies. Along with Microbial analysis, heavy metals Pb(mg/kg), As(mg/kg), Hg(mg/kg), Sn(mg/kg), Cd(mg/kg), Cu(mg/kg) have also been detected. All collected samples of Pani-Puri water which are collected from different vendors in Ahmednagar City are excellent as Total Coliforms and Esherichia Coli are absent. Trace metals like Pb, As, Hg, Sn, Cd and Cu are present within permissible limits as per FSSAI Specifications 2011.

INTRODUCTION

Local authorities, International organizations and consumer associations are nowadays increasingly aware of socio-economic importance of street food and also risks associated with it. The main concern is food safety, although other problems do exist, including sanitation (accumulation of waste on streets and blocked drains), congestion obstructing pedestrians (occupancy of pavements by hawkers and traffic accidents). In Ahmednagar City, large number of people consumes Pani Puri sold by street vendors. Pani Puri provides the risk of food poisoning due to

Demand Analysis And Metal Analysis For Assessment Of Water Quality Index in Drinking Water Of Kada, Dist Beed

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Dr. Mrs. S. R. Deshmukh

Gandhi College of Arts, Commerce & Science
Kada, Dist. Beed.

ABSTRACT

The water quality characteristics of aquatic environments arise from multitude of physical, chemical and biological interactions. The water bodies, lakes and estuaries are continuously subject to a dynamic state of change with respect to their geological age and geochemical characteristics. The physico-chemical characteristics of the aqueous phase have direct influence on the types and distribution of aquatic biota as well as on the health of the human being. With this pace the present study is carried out for determination of indicator parameters, in the ground water bodies of Kada town. It is a strongly drought prone area. Demand analysis as Biological Oxygen Demand, Chemical Oxygen Demand, has been carried out which are found to be within permissible limits. Throughout the city, drinking water is supplied through metal pipelines, hence metal analysis in drinking water forms important aspect to study potability. Cu(II), Ni(II), Fe(II) are determined by Indian Standard methods, spectrophotometrically; which are found within permissible limits.

Key Words : Indicator parameters, Aquatic Environment, Demand Analysis

Introduction :

One of the most precious and important natural resource is water. It is essential for survival of all living beings from simplest herbs and microorganisms like bacteria, viruses upto complex systems of human body(1-3). Physico - Chemical analysis is the first consideration of water quality for its best usage i.e. for drinking, bathing, fishing, industrial processing and soon. Kada Town comes under draught prone area. The weather of the town is dry. It is found that because of the reckless use & misuse of ground water resources as well as surface water, the water have become dangerously impure. River in the city is being used as dust-bin for the disposal of city refuse as well as industrial effluents. Drainage system in the city is open drainage system. The untreated domestic water from human settlement find their way into the river through outfall, drain etc. This in turn results in organic, bacterial, pollution of natural water resources and its aggravation day by day. Water which is to be utilized for human consumption should be free from pathogens as it may create epidemics also it should be free from hazardous chemicals as are risky to health. Demand analysis includes demand of oxygen to oxidize organic matter present in water bodies as pollutant. Thus the main aim of present study is to estimate the extent of water pollution and thereby to assess the water quality status of Kada Town.

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Study on Effects of Dopamine, Serotonin, Oxytocin, Endorphin, Cortisol Hormones : A Review on Technique For Hormonal Balance

***Dr. Suparna R. Deshmukh**

Smt S. K. Gandhi College, Kada, Dist. Beed

Email id: suparna.deshmukh@gmail.com

ABSTRACT

Endogenic Factors and Exogenic Factors both types of factors are responsible for creating happiness swings in human body. Endogenic factors are Biological, ethical, cognitive and personality associated while exogenic factors includes behavioral, socio-cultural, and related with life events. Among all endogenic factors, biological sub-factors are the significant predictors of happiness. Neuroscience studies showed that some part of brain (e.g. amygdala, hippocamp and limbic system) and neurotransmitters (e.g. dopamine, serotonin, oxytocin and endorphin) play a role in control of happiness (1). All these 4 neurotransmitters are responsible for happy mood swings in human being and hence are named as happiness hormones. Serotonin and Oxytocin secreted from pituitary gland plays a dominating role in controlling happiness. The role of cortisol and adrenaline secreted from adrenal gland is responsible for stress or unhappiness. Large number of studies have been carried out for relief on Insomnia and stress, since last few decades. Sudarshan Kriya and its accompanying breathing techniques were found to give an extreme relief from Insomnia to the persons who practiced it regularly. Many studies have demonstrated about 67-73% success rate in relief from insomnia, regardless of the severity of depression. These results are experienced rapidly, often within 3-4 weeks. It was observed that, there was rapid uniform relief from depression with SKY practices, unlike any conventional treatments. The results were found to be independent upon time period for how long a person was being suffering from clinical depression or the degree to which brain dysfunctioning related with dopamine secretions was found in the depressed individual. Sudarshan Kriya is a natural rhythmic breathing technique which releases stress, tensions, and depression and also brings an effective control on emotions simultaneously by minimizing stress hormone, Cortisol level in blood. Present study focuses on effects of Sudarshan Kriya on Depression. This study aimed to consider biological factors that underlie happiness,

KEY WORDS : Insomnia, Dopamine, Serotonin, Oxytocin, Endorphin, Cortisol, Adrenaline, Sudarshan Kriya

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Binary Complex Of Eriochrome Cyanine R(ECR) With Neutral Surfactant TX-100 : A Spectrophotometric Study

*Dr. Suparna Deshmukh

Head, Dept. Of Chemistry,

S.K.Gandhi College Of Arts Commerce and Science, Kada, Dist. Beed.

ABSTRACT

There is a growing tendency to employ organic colored reagents for analytical purposes, specifically triphenylmethane dyes, which are found more sensitive in the presence of micelle forming surfactants. A modified reagent, i.e Dye- surfactant complex, shows a hypsochromic effect on addition of surfactant Triton X-100 to TPM dye Eriochrome Cyanine R. Complexation properties of reagents of Tri-Phenyl Methane dyes, (TPM dye), get modified by the addition of micelle forming surfactants. Spectral and complexometric studies of Dye-Surfactant complexation has been studied spectrophotometrically (1-2).. TPM Dye-surfactant complex, also known as modified reagent, shows a hypsochromic effect on addition of micelle forming surfactant to it. In the present studies, complexation of Eriochrome Cyanine R, ECR is used as a Triphenylmethane Dye, while Triton X- 100 is used as a neutral Surfactant. Composition of these binary complexes of Eriochrome Cyanine R, ECR and Triton X- 100, has been determined . Analytical aspects like effect of time, order of addition of reagents, effect of temperature as well as studies in stoichiometry, sensitivity and molar absorptivities has proved the utility of modified reagent under study.

Key Words : Eriochrome Cyanine R, Surfactant viz. TRITON X- 100, Hypsochromic Effect, Sensitivity.

INTRODUCTION

Studies on Complexation properties of reagents of TPM dyes revealed that, the intermolecular forces that predominantly exists in the interactions of dye molecules with surfactant aggregates are hydrophobic interactions, electrostatic interactions, hydrogen bonds, π - π stacking (3) and Van-derWaals forces (4-6). The mechanism for dye- surfactant interactions have shown to exist binding forces in aqueous micelles (7) dye molecules in micelles. The formation of dye- surfactant ion pair is a consequence of mutual influences of long range electrostatic forces and short range hydrophobic interactions(8-10). Associations between dyes and surfactants depends principally on the chemical structure of the compounds(11). Ion association complexes due to interaction of surfactant monomers and dye in the pre- micellar region while the dye molecules are likely to be localized at the micelle surface in the post micellar region. The changes in position and intensity of absorption band in electronic spectra is the result of these interactions (12-13). The aggregation of surfactant and dye takes place at surfactant concentrations far below critical

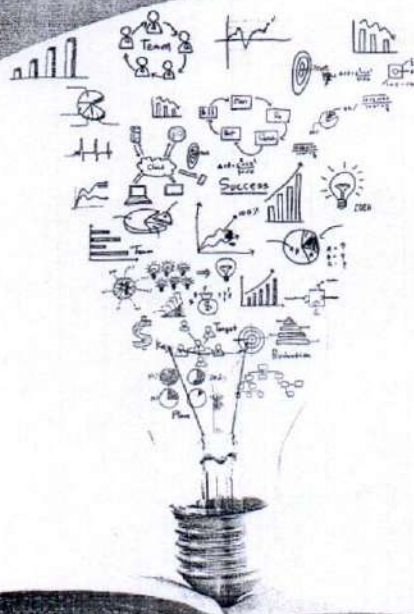


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मनोविश्लेषणात्मक कादंबऱ्याती मनोविश्लेषणाचे स्वरूप

प्रा.डॉ.आनंद माधवराव वाघ

सहयोगी प्राध्यापक

आजीवन शिक्षण व विस्तार विभाग,

डॉ.बा.आं.म.विद्यापीठ, औरंगाबाद

डॉ.अनिल गर्जे

मराठी विभाग प्रमुख

गांधी महाविद्यालय, कडा, ता.आष्टी जि.बीड

प्रास्ताविक :

कथा ही मानवी जीवनात फार अनादीकाळा पासून आलेली आहे. कथांचे अनेक प्रकार आहेत. उदा. सत्यकथा, दंतकथा, कल्पित कथा व आख्यायिका इ. सुरुवातीला ह्या कथा माणूस तोंडी सांगत होता व इतरांना ऐकवित होता. पद्यातील हा भाग पुढे गद्यात आला आणि त्याचे कादंबरीत रूपांतर झाले. १९ व्या शतकात पुढे मराठी कादंबरी आकारास आली. जगात औद्योगिक क्रांतीनंतर अनेक बदल झाले. मानवी जीवनाची गती वाढली. यंत्रामुळे मानवी जीवन यंत्रमय झाले व त्यातून एक जीवन पध्दती पर्यायाने नवीन संस्कृतीचा उदय झाला. सर्वसामान्यपणे मध्यम वर्गाचा उदय यातून झालेला आपणास दिसून येतो.

कादंबरीचा मूळ प्रकार हा युरोपीय देशातून आला. व त्यातूनच आपल्याकडे कादंबरीचा जन्म झाला. या संदर्भात हेगेल म्हणतो की, "कादंबरी म्हणजे मध्यम वर्गाचे महाकाव्य होय."^१ कादंबरीचे मुळ आपल्याला रामायण, महाभारत, एकनाथी भागवत आदी काव्यामध्ये दिसून येते. तसेच मानवी जीवनातील सुख-दुःखाचे विश्लेषण आपल्याला अनेक कादंबऱ्यातून दिसून येते. त्यामध्ये प्रामुख्याने स्त्री-यांचे दुःख, मनातील दबलेल्या भावनांचा कोंडमारा, पुरुषांविषयी मनात असणारी आसक्ती, पुरुषी संस्कृतीचा स्त्री जीवनावरील प्रभाव, सर्वसामान्य माणसांच्या वाट्याला आलेले जीवन त्यातूनच मानवी जीवनातील सुखांतिका व शोकांतिका हा कादंबऱ्याच्याद्वारे पुढे आल्या. मानवी जीवन जगत असताना निसर्गा बरोबरच तो समाजातील वाईट व्यक्ती व रुढी परंपरा यांच्या बरोबर देखील संघर्ष करत असतो. त्यातूनच दुष्काळ, रोगराई, महापूर, युध्दे, राजकीय अस्थिरता, खून, दरोडे, बलात्कार ह्या गोष्टींना त्यांना सामोरे जावे लागते आणि मग प्रत्येक वाईट गोष्टीचा परिणाम म्हणजे एका स्वतंत्र कादंबरीचा जन्म होतो. त्यातून मानवी मनाचे विश्लेषण समोर येते. ज्या गोष्टी आपण मर्यादामुळे बोलू शकत नाहीत त्या गोष्टी पात्रांच्या तोंडातून बाहेर पडतात, आणि कोंडलेल्या भावनांचे विरेचन होते. जीवनातील सुख दुःखाचे



Anil Garge
Principal

Sri Amolok (Jai Shri Ganesaraj Mandir)
Shrimati Shri. Kantilal Gandhi
Arts, Amolok Science, Panalal Hiralal
Gandhi College
Kada, Tal. Ashti, Dist. Beed

प्रतिबिंब आपल्या का
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