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LIST OF RESEARCH PAPERS PUBLISHED

ACADEMIC YEAR 2019-20

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1.	Sol-Gel Fabricated Transition Metal Cr ³⁺ , Co ²⁺ Doped Lanthanum Ferric Oxide (LFO-LaFeO ₃) Thin Film Sensors for the Detection of Toxic, Flammable Gases: A Comparative Study	Prof.Dr.K.H.Kapadnis	Chemistry	Material science research India	0973-3469
2.	Screen Print Fabricated In ³⁺ Decorated Perovskite Lanthanum Chromium Oxide (LaCrO ₃) Thick Film Sensors for Selective Detection of Volatile Petrol Vapors	Prof.Dr.K.H.Kapadnis	Chemistry	Journal of Inorganic and Organometallic Polymers and Materials	1574-1451
3.	UV-C Radiation Therapy against Pandemic Covid-19 for Equipments in Dry Confined Atmosphere	Prof.Dr.K.H.Kapadnis	Chemistry	International Journal for Research in Applied Science & Engineering Technology (IJRASET)	2321- 9653
4.	Investigation of Specific Interactions between the Constituent Molecules of Binary Liquid Mixtures of Methyl benzoate, Ethyl benzoate and Benzyl benzoate with 2-Pentanol at Different Temperatures	Prof.Dr.K.H.Kapadnis	Chemistry	ORIENTAL JOURNAL OF CHEMISTRY	0970-020 X
5.	A Survey on Epidemic Growth of Corona Virus-Covid-19 in Global world: Issues, Concern and Possible Remedial Parameters	Prof.Dr.K.H.Kapadnis	Chemistry	International Journal for Research in Applied Science & Engineering Technology	2321-9653

6.	Electrical and Structural Characterization of Fired SnO ₂ Thick Films by Screen Printing Technique	Prof.Dr.K.H.Kapadnis	Chemistry	International Journal for Research in Applied Science & Engineering Technology	2321-9653
7.	Innovative Nanomaterials in Emerging Basic Sciences and their applications: An Overview”	Prof.Dr.K.H.Kapadnis	Chemistry	International Journal for Research in Applied Science & Engineering Technology	2321-9653
8.	Role of National service scheme in enhancing Rational values in society	Prof.Dr.K.H.Kapadnis	Chemistry	International Journal for Research in Applied Science & Engineering Technology	2321-9653
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Sol-Gel Fabricated Transition Metal Cr³⁺, Co²⁺ Doped Lanthanum Ferric Oxide (LFO-LaFeO₃) Thin Film Sensors for the Detection of Toxic, Flammable Gases: A Comparative Study

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Abstract

In this investigation we are reporting the rapid preparation of Perovskite LaFeO₃ thin films prepared by sol-gel synthesis followed by spin coating method. The structural properties of the spin coated LaFeO₃ thin films measured by X-ray Diffractometer which confirms the formation of monophasic, orthorhombic, Perovskite LaFeO₃ material. The morphological features of the films were explored by the ease of scanning electron microscopy, where the crystalline LaFeO₃ nanoparticles were observed. Energy dispersive spectroscopy was utilized for the determination of elemental composition. The electrical properties were carried out to confirm the typical semiconducting behaviour of LaFeO₃ p-type semiconductor. The thin films were subjected for gas sensing study, the material was found to be very efficient gas sensors for LPG, petrol vapour, CO₂, methanol, ethanol, acetone gases. The main object was to discuss comparative study, means, what changes in parameters may be observed due to doping elements. Here undoped LFO sensor showed



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Screen Print Fabricated In³⁺ Decorated Perovskite Lanthanum Chromium Oxide (LaCrO₃) Thick Film Sensors for Selective Detection of Volatile Petrol Vapors

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[Chatur Pundlik Sawant](#), [Prashant Bhimrao Koli](#) & [Rajendra Popat Patil](#)

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Abstract

The present work deals with the fabrication of undoped lanthanum chromium oxide and indium doped lanthanum chromium oxide material by cost effective sol–gel method. The four sensors were fabricated by screen printing technique. The indium ion concentration was varied for LaCrO₃ material from 0.1 M% to 0.7 M% to access the comparative gas sensing results. All the prepared materials were characterized by XRD, SEM, EDAX, TEM and IR to confirm their structural and chemical composition. The prepared sensors viz. 0.1 M% In³⁺ doped

UV-C Radiation Therapy against Pandemic Covid-19 for Equipments in Dry Confined Atmosphere

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Abstract: It has been growing global alarm of corona disease Covid-19 and spreading everywhere in world pandemically around 215 countries. It is aroused in Wuhan at December 2019 and transmitted in human. Developed countries like Italy, America, Japan, Germany, France and China are much infected along with developing countries like India, Iran, Saudi, U.A.E and undeveloped countries. No vaccination is available for Covid-19. Efforts and clinical trials have been made in different countries for appropriate but uncertain route to cure patients affected from Covid-19 such as B. C. G vaccination or Hydroxyquinoline drug or alkaloid drugs or convalescent plasma therapy. Convalescent plasma therapy has been found much effective in America and Kerala in India. But still we should remind aphorism prevention is better than cure in our mind. Soaps and sanitizers are found to be more reliable in preventive measurements against covid-19. Flaviparavir heterocyclic drug compound is proven to useful for covid-19 patients into curable conditions. Multivitamins and vitamin C reached drug is also found to be sustainable for covid-19 and helpful to boost immune system among patients. This article imparts the contribution against covid-19 via dry route condition using ultraviolet radiations designed artificially at 100 nm to 280 nm for medical and household tools. This method of voltage gained in instruments using coils of wavelength in ultraviolet region are useful to protect against covid-19. It is necessary to kill covid-19 virus either in high temperature or using high voltage radiation therapy of UV-C so that the DNA material can be dry in dry conditions.

Keywords: Vaccination, ultraviolet, Covid-19, UV-C, Soap and sanitizer etc.

I. INTRODUCTION

Sun is most intense source of energy in terms of nuclear fusion chain reaction. It imparts visible, I. R. and ultraviolet radiation with wavelength 100 nm to 800 nm to earth surface. Visible light is utilized in food preparation through photosynthesis by green leaves of plants containing chlorophyll in visible wavelength 400 nm to 800 nm. Infra-red radiation with longer wavelength reflected back from earth surface increases the concentration of greenhouse gases with the help of Infra-red active molecule and major contributor among greenhouse gases such as carbon dioxide (CO₂) thereby heating up earth's atmosphere give rise to global warming around surface of earth notably called greenhouse effect.

Ultra-violet radiation covers a range of 100 nm to 400 nm coming from sun is divided according to CIE classification into three types mainly UV-A long wave (315-400 nm), UV-B medium wave (280-315 nm) and UV-C short wave (100-280 nm) category. 90% of the UV-B (280-315 nm) and 100 % of the UV-C (100-280 nm) radiation is absorbed by the ozone.

The remainder part of UV-A (315-400 nm) and small percentage of UV-B (280-315 nm) are component of UV radiation reaching to surface of earth.

Light therapy treatment uses ultraviolet light UV-B type with narrowband wavelength of 311 nm-313 nm well within the range of light at which UV light generates vitamin D in the human body. Ordinary light in the form of light bulb is exposed to infant and new born babies for maintaining the warm conditions. UV light is a higher frequency but lower wavelength. Though UV radiation comes from the sun, it can be created by artificial sources used in industry, commerce and recreation [1]. This type of radiation based therapy equipped with instruments and a source of UV-C light arc or tube is useful not only to monitor but also to disinfect the tools employed against pandemic Covid-19.

Pandemic Covid-19 is dangerous to human being with respect to economic, cultural, environmental and medical parameters are concerned. In these situations patients affected from Covid-19 are increasing exponentially day by day and masks, soaps, sanitizers and lockdown are not ways to be remaining to control Pandemic Covid-19. It is necessary to discover more sophisticated technologies to prevent and control Pandemic Covid-19.



Investigation of Specific Interactions between the Constituent Molecules of Binary Liquid Mixtures of Methyl Benzoate, Ethyl Benzoate and Benzyl Benzoate with 2-Pentanol at Different Temperatures

Volume 36, Number 3

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ABSTRACT:

The current work focuses on the understanding of viscosity, density and ultrasonic velocity and their deviation of binary liquid mixtures of Methyl benzoate, Ethyl benzoate and Benzyl benzoate with 2-Pentanol at temperature 298.15K and 308.15K. The composition of liquid mixtures is taken in terms of mole fraction from 0.1 to 1.0. From these data, excess molar volume, deviation in viscosity and isentropic compressibility have been calculated. These calculated quantities have been utilized in Redlich-Kister equation to get the coefficients and standard errors. These parameters for the liquid mixtures have been adopted in the study of the molecular interactions and the effects of methyl, ethyl and benzyl group of benzoates present on benzene ring.

KEYWORDS:

Deviation In Viscosity; Excess Molar Volume; Isentropic Compressibility; Molecular Interactions; Mole Fraction

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Introduction

Molecular interactions in binary liquid mixtures have been playing a crucial role in laboratory research since long back.¹⁻² 2-Pentanol is having many uses such as food additive, food additive flavour, antifreeze agent, cleaning agent, ion exchange agent, fuel, fuel additives, in industrial gas manufacturing and petroleum refineries. Methyl benzoate, ethyl benzoate and benzyl benzoate being polar solvents are utilized in many designing applications. Methyl and ethyl benzoate and benzyl benzoate have been broadly used in the flavouring, perfumery, artificial essences and cosmetics. Numerous works have been performed on the binary mixtures of above said esters recently¹⁷⁻²⁰ but no



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A Survey on Epidemic Growth of Corona Virus- Covid-19 in Global world: Issues, Concern and Possible Remedial Parameters

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Abstract: This survey paper deals with systematic study of covid-19 disease a severe acute respiratory syndrome for human health parameters. It studies the origin, spread and following nature of corona virus in atmosphere or environment, habitual growth and possible remedial analysis with respect to social, economic, medical and environmental corners. It gives possible information of covid-19 disease and virus through scientific approach. It put forward possible measurement how to stop covid-19 disease through good habits of health and hygiene of human.

Keywords: Corona, covid-19, virus, disease, health and hygiene etc.

I. INTRODUCTION

In the era of development of human being since last thousands of years, he has been facing a lot of challenges in nature. But still he has been making his growth in different ways with respect to his development associated with cultural, social, employment policies reformations and constructions of carriers. He has been lifted benefits for his owns. But he has removed and crossed many natural barriers while doing for his development. The natural calamity aroused in Wuhan china and spreaded multiplically and exponentially of covid-19 diseases in person to person through all over world-wide is example of human health worst condition [1]. The question of public health has been also coming front in front of many developed, developing and undeveloped countries. Till date there are total 185 countries that were affected from corona disease.

II. LITERATURE SURVEY

A virus is made up of RNA or DNA genetic code material covered with protein moiety. It is too much small that we can't see with naked eyes even in microscope. There are total 100 million corona viruses can accommodate on the tip of one pin. In the development of human history many dangerous diseases and natural calamities have been aroused like earthquake, epidemic diseases like plague, SARS, bird flu, elephantiasis (hathi rog) etc., floods, wars but the most noteworthy among all is corona disease raised in wuhan on December 2019[2]. It is so much dangerous to human life that no preventive medicine has recorded and discovered by scientist and researchers from the clinical field. So far to protect the life of affected persons clinical trials have been performing them like chloroquine, anti-aids preventive doses, anti-malarial drugs in different countries. But no medicine has effective till date and such type of a situation now raised to take preventive measurements. In 2020, Cao et al. reported that hospitalized adult patients with severe Covid-19, no benefit was observed with lopinavir-ritonavir beyond standard care with background of no therapeutics yet have been effective for the treatment of severe illness caused by SARS-CoV-2[3].

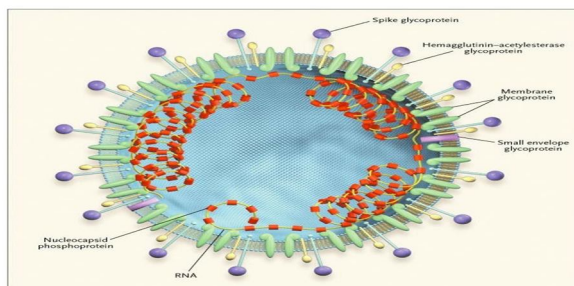


Fig 1. Structure of Coronavirus Virion (Adopted from NEJM sources- perspective SARS Associated coronavirus 2003)[4]

Electrical and Structural Characterization of Fired SnO₂ Thick Films by Screen Printing Technique

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Abstract: Thick films of SnO₂ were prepared by Standard Screen printing method on glass substrates and films are annealed at 450°C in air atmosphere. Electrical characterization was studied in static system. This paper revealed that SnO₂ is n-type semiconductor obeying negative temperature coefficient (NTC) characteristics. Thick films of SnO₂ were characterized by SEM, EDAX, XRD, FTIR and UV to study surface morphology, elemental analysis, crystalline Phases of films, vibrational and optical modes respectively.

Keywords: Thick Films, Screen printing method, XRD, SEM, EDAX.

I. INTRODUCTION

The air is a mixture of different pollutant gases. Nowadays in order to monitor these gases different techniques are used. Micro-sensors constructed with SnO₂ material is found to be more versatile because of its use in transistors, electrodes, gas sensors, liquid crystal displays, catalysts, photovoltaic devices, photo sensors, antistatic coatings, polishing and ceramic glazes [1]. Tin oxide is useful due to high degree of transparency in the visible spectrum, low operating temperature, strong thermal stability and more stable in higher oxidation state (+4) thereby a good oxidising agents in organic synthesis. Tin oxide is colourless, diamagnetic and amphoteric solid with n-type semiconductor having wide band gap 3.7 eV [2]. Krishnakumar. T. et. al., have reported that tin oxide exist as tetragonal (SnO₂) cassiterite oriented in most sharp XRD peak (110) in mineral form and rhomarchite (SnO) form oriented in most sharp XRD peak (101). Tin oxide semiconductor has space group P4₂/mmm and unit cell parameters are a=4.737 Å, c=3.185 Å [3]. In crystal lattice of SnO₂, Sn⁴⁺ ions are six co-ordinated octahedrally surrounded with three co-ordinated trigonal planer O²⁻ ions.

II. LITERATURE SURVEY

Tin element 50 hides everywhere in our nature often in movie relics: from *The Wizard of Oz*'s Tin Man to tin can radio often spotted in tree houses. It exist in crystalline β and brittle α form at low temperature, two other exist at high temperature and pressure [4]. Nanostructured material has been extensively applied in technological applications because of their novel characteristic electronic, optical and mechanical properties and unique shape [5]. Gas sensitive materials of metal oxide having porous structure of thick films have been extensively studied and implemented for their gas response to oxidising and reducing gases. Practical gas sensors are made up porous material such as SnO₂, ZnO, WO₃, In₂O₃ etc. Among all tin oxide (SnO₂) of tetragonal phase material is universally accepted gas sensor [6].

It provides a high surface volume ratio and exact mechanism of gas sensing based on adsorption-desorption phenomenon. Tin oxide blended with other metal oxide i.e. binary oxide solid mixtures are found be more versatile than doped with noble metal and single counterpart. Semiconductor based chemiresistors are mostly investigated known as chemiresistive gas sensors. These fabricated sensors have excellent sensitivity, very short response time and low cost [5-6].

III. EXPERIMENTAL

A. Preparation of SnO₂ Thick Films:

Tin-oxide thick films were prepared on glass substrate with particular dimension by using standard screen-printing technique [7-13]. The SnO₂ powder (99.99 %) of loba grade was weighed and dried in air at 450°C for 5 hr. The calcined SnO₂ powder was mixed and crushed thoroughly with glass frit acts as permanent binder and ethyl cellulose acts as a temporary binder. The mixture was then mixed with butyl carbitol acetate as organic vehicle to form the paste. The paste was then screen printed onto the surface of glass substrate. The details of the technique are described elsewhere [9]. After screen printing the films were dried under IR- lamp for 1 hr. and then fired at 450°C for 5 hrs. The thickness of the films was observed in the range of 20μm–30μm.

Innovative Nanomaterials in Emerging Basic Sciences and their applications: An Overview

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Abstract: Nanomaterials (NMs) are the materials set of substances where at least one dimension is less than approximately 100 nanometers. Some NMs are naturally blended with standard materials. The applications of NMs resides in insulation materials, low cost flat panel displays, elimination of pollutants, military goods materials, construction materials, water purification plants, controlling aquatic pollution, waste water treatment, drug delivery vehicles, energy and environment, electronics, health and medicine with the help of zero dimensional quantum dots, one dimensional nanotubes and two dimensional graphene. These materials with unique structures and features have expanded the field of nanomaterials. The NMs are useful in the manufacture of scratchproof eyeglasses, anti-graffiti coatings, stain fabrics, ceramic coatings for solar cells. NMs discover many applications in science and technology through preparation of methods like sol-gel synthesis, micro-emulsions, chemical co-precipitation, Inert-gas condensation, mechanical alloying or high energy ball milling, plasma synthesis, electro-deposition, template method, pulverization method.

Keywords: Nanomaterials, applications, science and technology, Methods etc

1. INTRODUCTION

Nanomaterials are the blocks of nanoscience and nanotechnology. NMs have been widely accepted in research and development through many applications. A nanometer is 100000 times smaller than human hair. At this scale optical, magnetic, electrical, and other properties come out and this properties discovers many applications in elimination of

pollutants, military goods materials, construction materials, water purification plants, controlling aquatic pollution, waste water treatment, drug delivery vehicles, energy and environment, electronics, health and medicine with the help of zero dimensional quantum dots, one dimensional nanotubes and two dimensional graphene [1]. The Materials of nanoscale titanium dioxide finds applications in cosmetics, sun-block

Role of National Service Scheme in Enhancing Rational Values in Society

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Abstract: National service scheme has been playing a vital role in improvement of human life through inculcating social, economic, cultural and ethical values in volunteers. Graduate students seeking their degree for three years along with their role of participation in national service scheme of two years must render better feedback and response for society rather than graduate students with their degree for three years without participation in national service scheme. In India there are 52 percent people come under youth category. Students are backbone of society. Role of youth students is to provide stability to society by participating in different schemes, jobs, administrative and academic bodies, counsellors and guides. They would become a responsible citizen in society. When such a youth students would have been the part of N.S.S in their graduate level education, the effectiveness of their role will be perked. If they are allowed to admit in national service scheme of universities and colleges in their graduation level, they will definitely play effective role becoming a crucial part of society. The current paper deals with N.S.S, structure of N.S.S, aims and objectives of N.S.S, what is result of N.S.S participation in colleges and universities for society on students.

Keywords: National service scheme, colleges and universities, citizen, students etc.

I. INTRODUCTION

As is said, service is to man is to service to god. Definitely there are different ways to commit service for society. National service scheme is one efficient route. The National Service Scheme has launched in Mahatma Gandhiji's centenary year 1969 with motto NOT ME BUT YOU. The national service scheme involved various types of schemes like tree plantation, Samarth bharat abhiyaan, special camp activities like watershed management CCTs, cleanliness of adopted village and regular activities like AIDS awareness program, educational human values, disaster management cell, Nirmal gram scheme, blood donation camp. N.S.S is a central sector of government of Indian ministry of youth affairs and sports. N.S.S provides at arousing social consciousness of the youth with an overall objective of personality development through community service. N.S.S renders students to participate in various programmes of social service and national development and to help the community. Students coming to complete graduate programme in different colleges and universities can easily registered. Minimum eligible candidate is 11th standard students. The program officer is the chief of National service scheme at college level and assistant to Programme Officer is given depending on the number of students at college level. A nodal officer is given at district and area level to communicate between directors of N.S.S at universities who is head at university level and P.O of different colleges [1]. National service scheme gives a platform and direction to youth movement and Indian student community [2-3]. The students in N.S.S are referred as volunteers.

A. Aims and objective of National Service Scheme Activities

- 1) To provide service to society and build up bridge between minor needs of society and human being whole studying in an educational institution.
- 2) To inculcate the rational values in society.
- 3) To establish platform between student and society.
- 4) To develop technocratic environment and to help underprivileged peoples in society.
- 5) To inculcate bond of patriotism, national integration, brotherhood, communal harmony among volunteers
- 6) To nurture social, ethical values in volunteers.
- 7) To provide the opportunities among students to work as differently and creatively with the community people.
- 8) To render services through use of hard and soft skills creating opportunities for the development of society
- 9) To comprehend the community in which volunteers work
- 10) To gain leadership qualities attitude of democracy [4, 8].

Synthesis, Molecular Structure, HOMO-LUMO and Spectroscopic Investigation of (*E*)-1-(2,4-Dichloro-5-fluorophenyl)-3-(2,6-dichlorophenyl)prop-2-en-1-one: A DFT Based Computational Exploration

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Thansing B. Pawar³, Babu S. Jagdale¹ and Kailas H. Kapadnis³

ABSTRACT

In present study, the synthesis, molecular structure, HOMO-LUMO and spectroscopic investigation of (*E*)-1-(2,4-dichloro-5-fluorophenyl)-3-(2,6-dichlorophenyl)prop-2-en-1-one (CFPCP) is reported. The structure of the title compound was affirmed based on FTIR, ¹H NMR & ¹³C NMR spectroscopic techniques. The computational examination has been performed by employing density functional theory (DFT) method at B3LYP/6-311G++(d,p) basis set. The geometry of the title molecule has been optimized and established at the same level of theory. The various structural and quantum chemical parameters have been investigated for the title molecule at the 6-311G++(d,p) basis set. To explore the electron distribution, Mulliken atomic charges and molecular electrostatic potential surface are discussed. Besides, vibrational assignments were made and the scaled frequencies have been compared with the experimental frequencies. For the investigation of the absorption wavelength, excitation energy and the oscillator strength TD-DFT method using B3LYP/6-311G++(d,p) basis set is used. Some thermochemical functions have also been investigated using harmonic vibrational frequencies.

KEYWORDS

(*E*)-1-(2,4-Dichloro-5-fluorophenyl)-3-(2,6-dichlorophenyl)prop-2-en-1-one, DFT, 6-311++G(d,p), FMO.

INTRODUCTION

Chalcones serve as versatile intermediates for the synthesis of a variety of heterocyclic compounds with the diverse pattern of pharmacological properties [1-4]. The chalcone route is the most common to synthesize vital pharmacological motifs like pyrazolines [5], benzodiazepines [6], benzothiazepines [7], pyrimidines [8], etc. Natural as well as synthetic chalcone and their analogs exhibit an excellent variety of pharmacological and biological impacts [9-14]. They are found to demonstrate significant anticancer [15], antimycobacterial [16], antibacterial [17], antifungal [18], antiviral [19,20], anti-inflammatory [21], antitumour [22], antihypertensive [23,24], antioxidant [25-27] and anticonvulsant properties [28]. Importantly, the halogen bearing chalcones have been studied as pharmaco-

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A Comprehensive Study on Petrol Vapours based Gas Sensors

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Abstract: There are different semiconducting metal oxide sensors (SMOs) have employed to detect parts per million concentration of inflammable gases like liquefied petroleum gas (L.P.G), Ethanol (C₂H₅OH), Methanol (CH₃OH), ammonia and Petrol vapours. Among all Petrol vapours are dangerous and Hazardous. Therefore a lot of attention has needful and necessary to build a proper type of sensors for Petrol vapours. This article is an effort in contribution of bringing attention and focus in the direction of what type of gas sensors are available for petrol vapours. It summarizes operating temperature, selectivity, response time and sensitivity of sensor materials for Petrol vapours.

Keywords: Petrol vapours, gas sensors, inflammable gases, response time etc.

I. INTRODUCTION

Nature is surrounded different types of gases with major to minor concentrations, as nitrogen present in atmosphere 97% to different gases like inert gases are in ppm level. But some gases are produced due to secondary reactions or result from primary source. In Earth crust, petroleum is present with its reservoir containing petrol, diesel and kerosene with higher number of saturated and unsaturated hydrocarbons. Generally reservoirs are composed of natural gas, crude oil and coal tar products. Petroleum is formed when large quantities of dead organisms especially zooplankton and algae are buried under sedimentary rock and subjected to intense high pressure and heat. When Colonel Edwin Drake drilled the first oil well in Titusville, Pennsylvania in 1859 discovered petrol first. In India the first petroleum dug was discovered in Digboi Assam state. Assam provides about 63% of the total contribution in India. Rajasthan and Gujarat contributes to 18% petroleum and oil ores. Quick Starting for cars, highly combustible and fast acceleration makes its use in vehicles for internal combustion engines. It is also used as solvent for oils and fats. The use of petroleum products causes global warming and ocean acidification. Petroleum engineering is a field of engineering concerned with the activities related to the production of hydrocarbons which can be crude oil or natural gas, its exploration and production. . Crude petroleum is a mixture of aliphatic, aromatic hydrocarbons and a variety of branched hydrocarbons of saturated and unsaturated linkages. Petrol is distilled from crude petroleum. A vapours obtained from evaporation of petrol is considered as petrol vapours [1]. Petrol vapours mainly contains the aliphatic chain of alkanes n-butane, n-pentane, n-hexane and n-octane with decreasing quantity with some negligible percentage of aromatic hydrocarbons [2-3]. Petrol vapours are regarded as reducing gases since it is mixture of carbon and hydrogen or hydrocarbons.

Table-1 Petroleum constituents in crude oil

Sr. No.	Name of the elements	Percentage
1	Carbon	93-97
2	Hydrogen	10-14
3	Nitrogen	0.1-2
4	Oxygen	01-0.5
5	Sulphur	0.5-0.6

Efficient Synthesis, Antibacterial, Antifungal, Antioxidant and Cytotoxicity Study of 2-(2-Hydrazineyl)thiazole Derivatives

Vishnu A. Adole ✉, Dr. Rahul A. More, Dr. Babu S. Jagdale, Dr. Thansing B. Pawar, Dr. Santosh S. Chobe

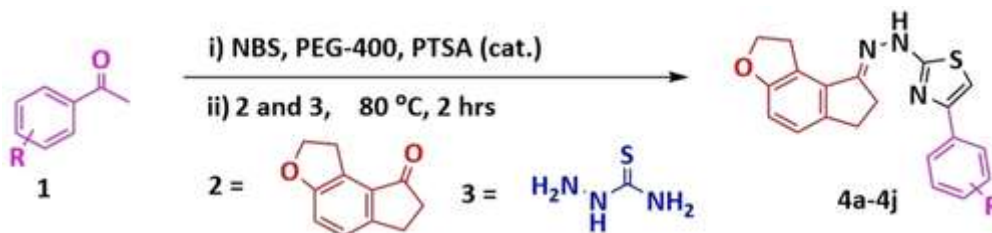
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Graphical Abstract

In the present research work, an economically and practically viable protocol for accessing novel 2-(2-hydrazineyl)thiazole derivatives using the green potential of PEG-400 solvent has been unveiled. The key highlights of the present green protocol are inexpensive reagents, non-hazardous solvent, ambient temperature, and good to the excellent yield of the products. The newly synthesized compounds were tested for their antimicrobial and antioxidant activities. The results revealed that these compounds show good activities compared with the standard.



Abstract

In the present investigation, an alluring green PEG-400 mediated one-pot synthesis of novel 2-(2-hydrazineyl)thiazole derivatives from 1,2,6,7-tetrahydro-8H-indeno[5,4-b]furan-8-one has been unveiled *via* a novel synthetic pathway. The application of PEG in organic reactions as a reaction media is one of the fantastic tools of green chemistry as reactions can be carried out under generous conditions limiting environmental peril and chemical waste. PEG-400 is recognized as a low-cost, non-flammable, environmentally benign, recyclable, and richly available green solvent. A series of novel 2-(2-hydrazineyl)thiazole derivatives have been synthesized in good to excellent yield by using the green capability of PEG-400 solvent. These newly synthesized compounds were tested for their antimicrobial and antioxidant activities. The results revealed that these compounds show good activities compared with

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RESEARCH ARTICLE






Ultrasound Promoted Stereoselective Synthesis of 2,3-Dihydrobenzofuran Appended Chalcones at Ambient Temperature

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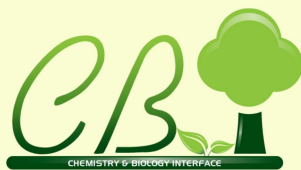
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ABSTRACT

In the present investigation, an ultrasound promoted the synthesis of a series of (E)-3-(2,3-dihydrobenzofuran 5-yl)-1-(aryl)prop-2-en-1-one derivatives from 2,3-dihydrobenzofuran-5-carbaldehyde and various aromatic ketones under clean conditions. The application of ultrasound irradiation in organic reactions is one of the incredible tools of green chemistry as reactions can be carried out rapidly under neat conditions. A library of a novel (E)-3-(2,3-dihydrobenzofuran-5-yl)-1-(aryl)prop-2-en-1-one chalcone derivatives were synthesized in good to excellent yield under ultrasonic irradiation. The structures of all synthesized chalcone derivatives synthesized in this study have been established by using FT-IR, ¹H NMR, ¹³C NMR, and HRMS techniques. The stereochemistry around C=C in the chalcones was shown to be *trans* by ¹H NMR (*J*_{ab} = 15.5 Hz). The benefits of the present synthesis include mild reaction conditions, high yield, purification by non-chromatographic strategy and short reaction times, demonstrating the significance of this protocol in terms of waste reduction and energy efficiency.

Keywords: 2,3-Dihydrobenzofuran-5-carbaldehyde, ultrasound irradiation, green chemistry, *trans* chalcone.

1. Introduction



CHEMISTRY & BIOLOGY INTERFACE

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Investigation of Structural and Spectroscopic Parameters of Ethyl 4-(4-isopropylphenyl)-6-methyl-2-oxo-1,2,3,4-tetrahydropyrimidine-5-carboxylate: a DFT Study

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Abstract: Dihydropyrimidinone is one of the most noteworthy organic structures because of its huge scope of biological properties. Several derivatives of pyrimidine have been used as medicinal agents such as sedatives and hypnotics. In this work, a biologically important ethyl 4-(4-isopropylphenyl)-6-methyl-2-oxo-1,2,3,4-tetrahydropyrimidine-5-carboxylate (IPPC) was synthesized; the structure of the compound was confirmed by using Fourier-transform infrared spectroscopy (FTIR), Proton nuclear magnetic resonance (¹H NMR), Carbon nuclear magnetic resonance (¹³C NMR), Distortionless Enhancement by Polarization Transfer (DEPT), and High-resolution mass spectrometry (HRMS) techniques. For an in-depth molecular structure description some quantum-chemical calculations have been accomplished by using density functional theory method with a basis set 6-311++G(d,p). The vibrational absorption bands were calculated and the scaled values are compared with the experimental FT-IR spectrum. Various structural and quantum chemical parameters have been computed and discussed for a better understanding of the electronic and chemical behaviour of IPPC. Furthermore, the molecular electrostatic potential (MEP) and some thermodynamic functions were also explored using theoretical calculations.

Keywords: DFT, 6-311++G(d,p), HOMO-LUMO, Molecular electrostatic potential, ethyl 4-(4-isopropylphenyl)-6-methyl-2-oxo-1,2,3,4-tetrahydropyrimidine-5-carboxylate



MOLECULAR STRUCTURE, FRONTIER MOLECULAR ORBITAL AND SPECTROSCOPIC EXAMINATION ON DIHYDROPYRIMIDINONES: A COMPARATIVE COMPUTATIONAL APPROACH

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ABSTRACT

Dihydropyrimidinones (DHPM's) have received a large amount of attention due to the interesting biological profile related to this heterocyclic system. In the past few years, DHPM's were explored as anti-cancer, anti-HIV, anti-tubercular, anti-inflammatory, antimicrobial, antihypertensive, analgesic, anticonvulsant, antioxidant and numerous others. In the present study, 5-acetyl-4-(4-chlorophenyl)-6-methyl-3,4-dihydropyrimidin-2(1H)-one (ACMD) and 1-(4-(4-chlorophenyl)-6-methyl-2-thioxo-1,2,3,4-tetrahydropyrimidin-5-yl)ethan-1-one (CMTT) have been studied and compared by using Density Functional Theory (DFT). Optimized geometry, frontier molecular orbital, global reactivity descriptors, and thermodynamic parameters have been computed for ACMD and CMTT. DFT/B3LYP method at basis set 6-311 G(d, p) has been employed for the computational study. Spectroscopic methods like Fourier-transform infrared spectroscopy (FTIR), Proton Magnetic Resonance (PMR), Carbon Magnetic Resonance (CMR) spectroscopic methods have been used for the structural analysis. Molecular electrostatic potential for ACMD and CMTT are plotted to investigate electrophilic and nucleophilic sites to apprehend the chemical behavior.

Keywords: DFT, 6-311G(d,p), HOMO-LUMO, Molecular electrostatic potential, 5-acetyl-4-(4-chlorophenyl)-6-methyl-3,4-dihydropyrimidin-2(1H)-one, 1-(4-(4-chlorophenyl)-6-methyl-2-thioxo-1,2,3,4-tetrahydropyrimidin-5-yl)ethan-1-one

1. INTRODUCTION

Heterocyclic chemistry has produced numerous pharmacologically essential motifs and has achieved its unique place in the medicinal chemistry. Heterocyclic compounds exhibit significant role in biological chemistry [1-4]. Many biologically effective synthetically and naturally derived natural compounds incorporate heterocyclic framework. Among all, DHPM's have been emerged as essential heterocyclic compounds and have gained considerable interest due to their excellent profile of pharmacological properties [5, 6]. The very essential aspect concerning pyrimidine is its presence in essential building blocks of nucleic acids as thymine, cytosine, and uracil. Due to this, many synthetic modifications have been made in terms of structure to derive newer biological properties. DHPM's and related derivatives have been studied for anti-cancer [7, 8], anti-HIV [9], anti-tubercular [10], anti-inflammatory [11],

antimicrobial [12], antihypertensive [13], analgesic [14], anticonvulsant [15], antioxidant [16, 17], and many other important biological activities [18-20]. Nifedipine(1), Monastrol (2), Piperastrol (3), MON-97 (4), Methylthiouracil (5), and 5-Fluorouracil (6) are some noteworthy examples of medicinal agent containing pyrimidine skeleton (**Fig.1**).

The theoretical calculations based on DFT have been successfully explored largely in past few years to determine various structural aspects of synthetically and pharmacologically vital organic motifs. Vitrally, DFT calculations can also provide easy and simple approach to derive correct reaction pathways. The two important previously synthesized [21] DHPM's have been studied to interpret structural and electronic aspects. To the best of our knowledge, this is the first report on the structural and spectral characteristics of the title molecules.

Green Synthetic Approaches in Organic Synthesis: A Short Review

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Abstract: The Green Chemistry principles were first detailed by Paul T. Anastas and John Warner and from that point forward various logical scientific disclosures and innovations have climbed through "Green Chemistry". The twelve green chemistry principles have given an unprecedented ladder for the production of new research in the zone of green chemistry. Green chemistry capably utilizes reasonable crude materials, lessens waste and avoids the use of hurtful and also hazardous reagents and solvents for the combination and use of synthetic products. Importantly, these twelve principles emphasize environmentally benign ideas from the planning of the desired product to its preparation, working, investigation, and its disposal after its use. New methodologies that are prepared for reducing the usage of perilous substances are the prime objective of green chemistry. Over the range of the most recent years, new approaches are developed that are less risky to human prosperity and the earth. This new procedure has gotten wide thought. This short review covers green synthetic methodologies which are developed in the recent two years.

Keywords: Green Chemistry, Organic synthesis, Nanoparticles, PEG-400, Water

I. INTRODUCTION

Green chemistry is the need of present and future research considering the present scenario and polluting factors. Paul T. Anastas and John Warner proposed the twelve green chemistry principles that principally focused on minimization of waste. These 12 principles (**Fig. 1**) guide us to use take necessary environmentally friendly actions to synthesize synthetic products [1]. These standards have given an answer for a few issues, for example, forestalling the utilization of unstable and harmful solvents, i.e. less dangerous chemical reactions, the amount and reusability of the catalyst and reagents utilized i.e. stoichiometric reagents, atom-economy synthetic strategies, energy-efficient, and benign reaction conditions, and prevent the chemical waste produced. With expanding attention towards green chemistry in organic synthesis the modification of old methods is the prime need. By considering these vital aspects of green chemistry researchers are continuously focussing on the development of green synthetic approaches for the synthesis of variety organic compounds.

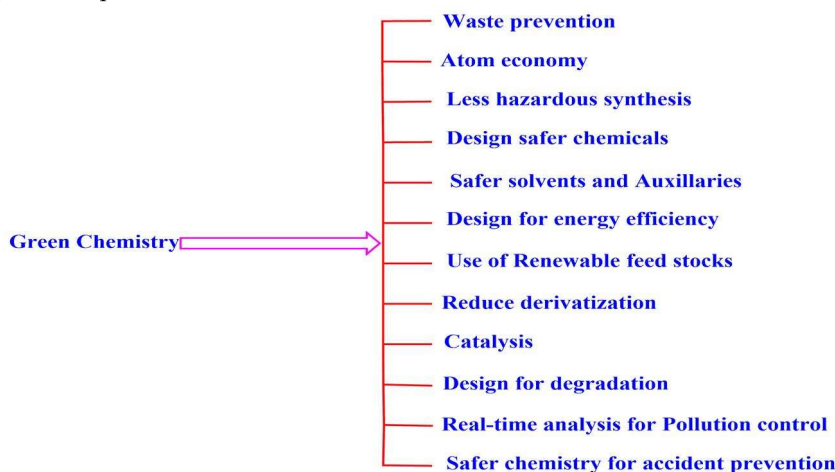


Fig. 1 12 Green chemistry principles

Experimental and theoretical exploration on single crystal, structural, and quantum chemical parameters of (*E*)-7-(arylidene)-1,2,6,7-tetrahydro-8*H*-indeno[5,4-*b*]furan-8-one derivatives: A comparative study

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Abstract

In the present research work, biologically important halogen-substituted (*E*)-7-(arylidene)-1,2,6,7-tetrahydro-8*H*-indeno[5,4-*b*]furan-8-one derivatives are studied from a structural investigation point of view. For a detailed molecular structure description, some quantum-chemical calculations were performed by using the density functional theory method with a basis set 6–311++G(d,p). The optimized molecular geometry, bond length, atomic charges, bond angle, and harmonic vibrational frequencies have been investigated. The quantum and structural entities such as total energy, electron density distribution in highest occupied molecular orbital and lowest unoccupied molecular orbital, charge distribution, electronegativity, absolute hardness (η), softness, electrophilicity, chemical potential, and charge transfer in molecules (ΔN_{\max}) have been computed using 6–311++G(d,p) basis set. Importantly, single-crystal analysis study for (*E*)-7-(2-chlorobenzylidene)-1,2,6,7-tetrahydro-8*H*-indeno[5,4-*b*]furan-8-one (CBIF) has been presented. The single-crystal examination reveals CBIF has triclinic crystal lattice with nonclassical intermolecular short contact interactions. The vibrational wavenumbers are calculated and the scaled values are compared with the experimental FT-IR spectrum. Furthermore, the molecular electrostatic potential (MEP) and some thermodynamic functions were also explored using computational work. The theoretical geometrical

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Research Article

Density and Viscosity Studies of Lithium Halides in Water–Methanol Mixtures at 308.15K.

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Abstract: The densities and viscosities of Lithium chloride (LiCl), Lithium bromide (LiBr) and Lithium iodide (LiI) have been measured in (0, 20, 40,50,60,80 and 100) mass % methanol + water at 308.15 K. From the density data of these mixtures, the apparent and limiting partial molar volumes of the electrolytes and ions have been evaluated. The viscosity data have been analysed with the help of Jones- Dole equation and the viscosity A and B- coefficients have been determined. The positive B - coefficients indicate structure making tendency of Lithium halides in these solvent mixtures.

Keywords: density, viscosity, Lithium halides, apparent molar volumes.

INTRODUCTION

The density, viscosity and ultrasonic velocity data of electrolyte solutions has proved to be very useful in elucidating the structural properties of the molecules ^[1,2]. The density and viscosity property is very important in many practical problems concerning energy transport, mass transport and fluid flow. In the present paper by using density property we report limiting partial molar volume (ϕ_v^0), and ionic partial molar volumes ($\phi_v^0 \pm$), of some Lithium halides namely Lithium chloride (LiCl), Lithium bromide (LiBr) and Lithium iodide (LiI) in methanol + water at 308.15 K. An attempt is made to

Assessment of Health status of Adolescent Girls for Futuristic Task

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Abstract

Adolescent constitute over 20.4% of the population in India. This Period needs special attention because of adolescence faces different stages of development, different circumstances, different needs and diverse problem. Unfortunately the assessment of health status of adolescent girls has been the least explored area of research. The objective of the research is to assess the health problem among adolescent girls, to aware the adolescent in future to suggest the recommendations based on the study findings.

Polycystic Ovary Syndrome characterized by hyperandrogenism and chronic anovulation is among the most common endocrine disorder affecting women of reproductive age. Information of weight, height, BMI, symptoms of PCOS was assessed the data was collected and analyzed the study conclude that the majority of the girl was found to be overweight and with PCOS symptoms. Adolescent are expected to enjoy a good health but this does not seen.

Keywords-Adolescent,BMI, PCOS

Introduction

Adolescent constitute over 20.4% of the population in India. This period needs special attention because of adolescent faces, different stages of development, different circumstances, different needs & diverse problems [1]. Unfortunately the assessment of health status of adolescent girls has been the least explored area of the research. Polycystic ovary Syndrome is one of the most common endocrine /metabolic disorders found in women. It is seen that the incidence of PCOS increasing in adolescent age group. The health status of this age group is poor due to high competition, need for recognition & self esteem.

Survey on pandemic contact disease and there comparison

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Abstract ; This Survey deals with Study of Pandemic disease like Plague, Swine flu, covid- 19 etc. it Studies about origin, infection rate and death rate of Pandemic disease. Most of the pandemic disease show similar symptoms and mostly pass through coughing or sneezing. Among most of the pandemic disease Covid -19 is more infectious than other disease and therefore everyone should protect and follow the good habits.

Keywords – Covid-19, SARS, Ebola, plague, smallpox, pandemic disease

Introduction

Communicable diseases have shaped human history and that they remain with us today. Because the new coronavirus spreads across China et al. round the globe, such infectious diseases are top of mind for several folks. Here's a glance at a number of the worst of those infections, from Ebola and plague to the newer SARS, the new coronavirus and Zika virus. Humans are battling viruses since before our species had even evolved into its modern form. For a few viral diseases, vaccines and antiviral drugs have allowed us to stay infections from spreading widely, and have Helped sick people recover. [1] For one disease— smallpox we've been ready to eradicate it, ridding the planet of latest cases. But we're an extended way from winning the fight against viruses. In recent decades, several viruses have jumped from animals to humans and triggered sizable outbreaks, claiming thousands of lives. [2] The viral strain that drove the 2014-2016 Ebola outbreak in West Africa kills up to 90% of the people it infects, making it the foremost lethal member of the Ebola family. But there are other viruses out there that are equally deadly, and a few that are even deadlier. Some viruses, including the novel coronavirus currently driving outbreaks round the globe, have lower fatality rates, but still pose a significant threat to public health as we do not yet have the means to combat them. [1]

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Polyethylene glycol (PEG) is found to be an inexpensive, environmentally friendly reaction medium for the synthesis of activated aromatic compounds by using I_2/HIO_3 to afford the corresponding products. The remarkable features of this protocol are high conversion, shorter reaction time, easy workup, high selectivity; simple practical procedure, cleaner reaction profile and Polyethylene glycol can be reused.

Keywords: I_2/HIO_3 , Arenes, PEG(400)- H_2O , Iodination

Green chemistry is becoming a central issue in both academic and industrial research in the 21st century [1], and the development of environmentally benign and clean synthetic procedures has become the goal of present day in organic synthesis. Organic reaction without the use of harmful organic solvents are now of great interest in organic synthesis [2]. More recently, attention has been drawn to the development of environmentally benign solvent such as ionic liquid [3], water [4] and Polyethylene glycol [5]. The significance of new solvent medium primarily tested on its environmental impact, the ease with which it can be recycled, low vapor pressure, non-flamibility and high polarity for solubilization. However in performing the majority of organic transformation, solvents play an





usually achieved by adding [9], KMnO_4 [10], iodine [11], chlorine [12], bis(Pyridine) [13], $\text{CF}_3\text{SO}_3\text{H}$ [13], diiodine [14]. These methods are hazardous, require hazardous reagents, require high reaction temperatures, and require a long reaction time.

It has been known for over 100 years that it can be used as an oxidant in direct iodination of arenes [5a]. The application of this method to the direct iodination of arenes, the most convenient method for the synthesis of diiodo derivatives from various arenes, has been receiving increasing emphasis at both the academic and industrial levels, keeping in view the



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NaOH/PEG-400: An eloquent system for the synthesis of new thienyl benzo[b]1,4-diazepines

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RESEARCH ARTICLE



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ABSTRACT

A simple and eloquent procedure for the synthesis of a new series of thienyl benzo[b]1,4-diazepines is reported. They were synthesized by the condensation of *o*-phenylenediamine (*o*-PDA) with distinct hetero chalcones using NaOH in polyethylene glycol (PEG-400) as green and alternative reaction solvent. The significances of this present method are shorter reaction time, easy work-up, high yields, and mild reaction conditions. Furthermore, this method is environment friendly and without use of an expensive catalyst. The all newly synthesized compounds are characterized by the spectroscopic methods.

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A mini review: imidazolium compounds and their potent biological applications

Author: Santosh S. Chobe., Nilesh J. Mali and Charushila K. Nerkar

Imidazole is a five-membered aromatic heterocyclic compound that occurs naturally in a variety of products. Its structure has a unique feature with electron-rich characteristics that are useful for imidazole and derivatives because they readily associate with enzymes and receptors in biological systems and have a wider range of bioactivities. Various imidazole derivatives are used in clinical practice to treat a variety of diseases with high therapeutic potency. This analysis covers the synthesis of imidazolebased derivatives and their applications as antibacterial, anticancer, antihypertensive, antimalarial, antifungal, antioxidant, antiviral, and analgesic agents, as well as their function in HIV-1 inhibitors, Alzheimer's disease treatment, and Chagas disease treatment.

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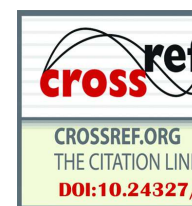
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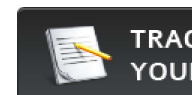
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RESEARCH ARTICLE

AN EFFICIENT SYNTHESIS OF 2-CINNAMOYL-BENZO [G] INDAZOLES USING PEG-400 AS GREEN REACTION SOLVENT

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ABSTRACT

A Simple and an efficient procedure for the synthesis of 2-cinnamoyl-benzo[g] indazoles are reported. A new series of 2-cinnamoyl- benzo[g] indazole derivatives were synthesized by the treatment of appropriate of 2-(Substitued arylidene)-1-tetralones with cinnamoyl hydrazide using catalytic amount of acetic acid in polyethylene glycol-400 as reaction solvent under mild reaction condition. The newly synthesized compounds were characterized by the spectral analysis. The advantage of this method is simple and efficient work up, shorter reaction time and use of inexpensive catalyst is reported.

Key Words:

PEG-400, Arylidene-1-tetralones,
Cinnamoyl hydrazide, benzo[g]
indazoles.

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INTRODUCTION

The chemistry of heterocyclic compound is the most interesting for its theoretical implication the diversity of its synthetic products and the physiological and industrial significance. The versatile applications of nitrogen-sulphur heterocyclic compounds were received considerable attention in recent years due to their wide physiological activity. Amongst various heterocyclic compounds, nitrogen-containing heterocycles are widely found as a core framework in the library of heterocycles molecules. Additionally, nitrogen-containing heterocycles have striking structural features and they are widely observed in natural products, for instance, vitamins, hormones and alkaloids (Srivastava, 2012 and Pai G, 2016). Indazoles derivatives display a wide-ranging variety of biological activities. Mainly because of their occurrence in drugs, there has been a sustained interest, in the past few years, for the discovery of new and efficient methods to prepare variously substituted 1*H*- and 2*H*-indazoles. The indazole nucleus is a pharmaceutically important structure that constitutes the key subunit in many drugs with a broad range of pharmacological activities. The 1,3,5-substituted indazoles have been studied as receptor antagonists of the peptide-leukotrienes (Srinivasan, 2008).

Most of the derivatives of Indazole are recognized to have effective pharmacological activity, for instance, anti-inflammatory, anti-tumor or HIV protease inhibition (Matassa, 1990 and James, 1996) and inhibition of protein kinase C-B/Akt inhibitors (Vicente, 2005). In actual fact, compounds with Indazole frame are notorious for their variety of biological activities (Bakr, 2014) such as high binding affinity for estrogen receptor (Woods, 2006), antifungal and antibacterial activity (Meri, 2005). On the other hand, cinnamic acid derivatives and especially those are combining the cinnamoyl moiety with hydroxyl groups, present strong free radical scavenging properties (Pontiki, 2014). Acids, esters, amides, hydrazides and related derivatives of cinnamic acid with such activities are reported in the literature for their health benefits (Sova, 2012 and Bernini, 2007). Keeping these biological observations of indazoles in mind along with social responsibilities and in continuation of our work on the synthesis of biologically active heterocyclic compounds [Dawane, 2010 and Konda, 2016], it was planned to synthesize some new series benzo[g] indazole heterocyclic compounds containing cinnamoyl moiety under mild condition.

MATERIALS AND METHODS

Melting points were determined by in an open capillary method and are uncorrected. The chemicals and solvents used for laboratory grade and were purified.

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ROLE OF PLANTS IN SUSTAINABLE AGRICULTURE AND INDUSTRY

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Abstract

Many records of Holocene period date early botanical knowledge as far back as 10,000 years ago (Delcourt,1986). This early unrecorded knowledge of plants was discovered in ancient sites of human occupation within which make up much of the land today. Plants are the tremendous important in lives of people as our three basic needs food, clothing and shelter is fulfilled by the plants. The needs are growing rapidly because of growing world population and urbanization. Plants not only provide foods but provide raw materials to pharmaceutical industries like coffee, tobacco and other drugs. To fulfill the nutritional needs of rapidly expanding worldwide population farmers has to enhance productivity by adapting disease resistant, high yielding improved production varieties. According to US census bureau world population is expected to be nine billion by the year 2050. The worlds most important crops are sugarcane, wheat, rice, corn, banana, orange, soya bean, potato sugar beet, and cassava beans peas. The industrial crops play an important role in national income. The present paper deals with the plants and their key role in sustainable agriculture.

Key words: Plants role, sustainable agriculture, industry.

Introduction:

Sustainable agriculture is farming in sustainable ways which means meeting society's food and textile needs, without compromising the ability for current or future generations to meet their own needs

(asi.ucdavis.edu.) The increased population has raised several questions on the sustainability of natural resources on the planet. At present environmental sustainability is the biggest issue faced by the mankind. Each and every part of the earth is touched by the effect of human activity and population. In addition to this urbanization, industrialization and modern agricultural practices have polluted the water resources, air & soil. The natural resources not only being over-exploited but also becoming contaminated with toxic chemicals making it difficult for the survival of future generations. Agriculture plays an important role to both human and economy of nation; it is the backbone of nation's economy. The every persons involved in the food system are the growers, food processors, distributors, retailers, consumers were play a role in ensuring a sustainable agricultural systems. Plants in addition to providing food and raw material, it also provides employment opportunities to very large percentage of the population. Plants provide us protein, fats, carbohydrates, oils & herbal medicines.

Materials and Methods.

There are various methods comes under sustainable agriculture, which includes diverse number of perennial crops in a single field, development of herbicide-resistant weeds, crop rotation intensification, soil nutrients management, food and agri employment, organic farming, traditional and alternative agriculture. Here an attempt has been made how the plants played an

Covid-19, Crisis and Immune Power Improvement through Yoga : A Perspective

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Abstract: A novel corona virus, currently designated as 2019-n CoV, was reported to be the cause of an outbreak of respiratory disease in Wuhan China in December, 2019. Billions of people are under corona virus lockdown, roughly half the world's population have been to isolate themselves in their homes to prevent the spread of corona virus; since quarantine measures are introduced. A strong immune system consists of cells, tissues, organs and proteins. Together these carry out bodily processes that can fight off viruses, bacteria, pathogens and foreign bodies that causes infection/diseases. The present paper deals with a decade experience of daily yoga practices, meditation and balanced diet to improve immune system to tackle the any viral infection in any and all directions possible

Key Words: Immune power – Yoga- exercises, meditation, plants ,balanced diet.

1. INTRODUCTION:

Today's alarming problem that we are going to face and everybody is sitting in home i.e 'CORONA'- the word came from Latin language-a crown (mukut) because this virus has pointed covering. Corona is a name of virus, the scientific name is 'Severe Acute Respiratory Syndrome' novel corona virus-2, novel means a new and the disease caused by the virus called covid-19. Corona virus can cause up to two millions of deaths in US, two scientists battled the virus, even by closing social movement, schools restaurants, public places (CBS news.com, www.covid.19 india.org, www.mohfw.gov.in). As per the John Hopkins university tracker the corona virus infected peoples are more than a lakh, even New York City is cool down, every 17 minutes there is a death. Here an attempt has been made how to improve immune power by doing some regular practice of yoga, by taking nutritious fruits, staple foods ,fasting-the master remedy, the walking breathing exercise, meditation etc which improves our immune system. There are five main areas in which one can do something to keep your body in good health: a balanced diet, exercise, avoidance of stress, watching the weight, and practicing our weight. The author studied & experienced the Pranayama practices as well as some healthy plants and fruits to build immune power.

2. METHODOLOGY ADAPTED:

The goal of life is self realization; all systems of Indian philosophy have one goal in view: the salvation of the soul through the achievement of perfection). Doing daily **Yoga** (the health mantra- begins best under expert guidance) practices, increasing and developing physical, mental and spiritual powers. The word Yoga means union between the individual (jivatma) and the supreme soul (paramatma). The science which teaches the method to reach it, is called Yoga-Shastra. The popular forms of yoga are: Bhakti yoga, Laya, Tantra or Kundalini yoga, Integral (Purna) yoga, Raja yoga, Karma yoga, Kriya yoga and Ashtanga yoga. In order to still and observe the mind, Patanjali presented a system called Ashtanga yoga or the eight-limbed yoga. These limbs represent all the aspects of the systems. Here an attempt have been made or more concentration given to the Pranayama- Prana (is the life that flows in the air) is the name given to pulsation which causes us to breathe in, ayama means to release. The effort to exhale is caused by a still higher consciousness which produces centripetal and a centrifugal pulsation in the nervous system which is connected to our lungs. It is called apana. Equalise prana and apana, says Lord Krishna. Instead of respiration conducted by lungs. The simple Pranayama of deep inhalation (puraka), retention (kumbhaka) and exhalation (Rechaka) of breath may be tried often. This gives the lungs oxygen and helps to throw out carbon dioxide it relieves the tension and brings calm to the mind. The usual body exercises develop the outer muscles and induce a healthy body (daily workout in gym), on the other hand the yoga postures tone up before everything the internal organs: the liver, spleen, pancreas, intestine, heart, thyroid, pituitary, endocrine glands-all the said glands play an important role in 'life' there secretion flows in to the blood bring about the growth of cells and tissues. The **kundalini** is the mystic energy (Shakti) in a dormant state in every human being. It is awakened as a result of harmonization of the pancreas. There are six centres (chakras) in the vital channel through which awakened kundalini must pass (1,2.) The **meditation** is as old as religious belief, and its main therapeutic value is in combating stress. It has formed part of discipline of priests, monks and people of many

APB's Statistical Quartile method for IBFS of a Transportation Problem and comparison with Least Cost Method

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Abstract:

In this paper, we study the new APB's statistical quartile method for finding the Initial Basic Feasible Solution (IBFS) to the transportation problem (TP) by quartile approach. By this method the problem was solved without changing the order of the transportation table, we can achieve the goal with less number of calculations and iterations. Moreover, we illustrate the method by suitable applications and compare it with Least Cost Method / minimum cell cost method and have shown that the new APB's quartile method gives very much good result as compare to least cost method.

Keywords: Transportation Problem, Statistical Method, Least Cost Method

AMS Subject Classification (2010): 90B06, 40G15, 90B99

1. Introduction:

As we have seen the history of transportation right from the invention of wheel in the middle east of Asia. A huge number of practical / physical models are transformed into transportation problems which generally include inventory problem, assignment problem, and traffic problem [2, 4].

The transportation problem [1] generally considered as a problems of multi – objective (like minimum cost and shortest path) combinatorial approach on the other hand as we know that the transportation problem were first proposed by Hitchcock in 1941.

Now as we know that, the quartile are nothing but the special case of quantile and generally associated with probability distribution contains 25% of total observations. They are generally used to calculate the interquartile range, which is a measure of variability around the median.

The paper mainly consists of three parts. In first part, basic definitions were given. In second part, algorithms for proposed method were given. The third part, explains new APB's quartile method along with numerical example. In the Four part , we have compared the result with least cost method along with conclusion.

APB's Statistical Quartile method for IBFS of a Transportation Problem and comparison with North – West Corner Method

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ABSTRACT:

In this paper, we study the new APB's statistical quartile method for finding the Initial Basic Feasible Solution (IBFS) to the transportation problem (TP) by quartile approach. By this method the problem was solved without changing the order of the transportation table, we can achieve the goal with less number of calculations and iterations. Moreover, we illustrate the method by suitable applications and compare it with North – West Corner method and have shown that the new APB's quartile method gives very much good result as compare to North – West Corner method.

Keywords: Transportation Problem, Statistical Method, North – West Corner Method

AMS Subject Classification (2010): 90B06, 40G15, 90B99

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I. INTRODUCTION:

As we have seen the history of transportation right from the invention of wheel in the middle east of Asia. A huge number of practical / physical models are transformed into transportation problems which generally include inventory problem, assignment problem, and traffic problem [1, 2, 9].

Now as we know that, the quartile are nothing but the special case of quantile and generally associated with probability distribution contains 25% of total observations. They are generally used to calculate the interquartile range, which is a measure of variability around the median.

The paper mainly consists of three parts. In first part, basic definitions were given. In second part, algorithms for proposed method were given. The third part, explains new APB's quartile method along with numerical example. In the Four part, we have compared the result with North – West Corner method along with conclusion.

II. BASIC DEFINITIONS:

[I] Transportation:

Let there be 'm' origins O_1, O_2, \dots, O_m having a_i ($a_i > 0, i = 1, 2, 3, \dots, m$) units of availability respectively and 'n' destinations D_1, D_2, \dots, D_n with b_j ($b_j > 0, j = 1, 2, 3, \dots, n$) units of requirements. If C_{ij} are the cost of transporting one unit of the commodity from i^{th} origin to j^{th} destination and X_{ij} be the units of transporting from i^{th} to j^{th} destination. The objective is to determine

X_{ij} which minimizes the total transporting cost (Z) satisfying all the availability constraints and the requirement constraints [6].

[III] Mathematical Formulation:

If $\sum a_{ij} = S$ is the total availability of origins and $\sum b_{ij} = D$ is the total requirements of destinations and if $S = D$ then the given transportation problem is balanced [6].

Minimize $Z = \sum \sum C_{ij} X_{ij}$

Subject to

$\sum X_{ij} = a_i, i = 1, 2, 3, \dots, m$ (Availability constraints)

$\sum X_{ij} = b_j, j = 1, 2, 3, \dots, n$ (Requirement constraints)

and $X_{ij} \geq 0$ for all i and j (Non Negative constraints)

In case if $\sum a_{ij} \neq \sum b_{ij}$ then it becomes unbalanced so that we have to make some manipulation to make balanced i.e. $\sum a_{ij} = \sum b_{ij}$.

[III] IBFS Methods: To find the initial basic feasible solution of a transportation problem, there are some standard methods which are mentioned below [6]:

- 1] Vogel's Approximation Method
- 2] Least Cost Method
- 3] North – West Corner Method

[IV] Quartile: As we have seen that the quartiles are three points that divide the data into four equal parts.

APB's method for the IBFS of a Transportation Problem and comparison with Least Cost Method

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Abstract - In this paper, we have given the new method as APB's method for the IBFS of a transportation problem by number theoretic approach for finding out the initial basic feasible solution towards the transportation problems and compare it with Least Cost Method / minimum cell cost method and have shown that the new APB's method gives very much good result as compare to least cost method.

Keywords: Transportation Problem, Congruence, Least Cost Method

AMS Subject Classification (2010): 90B06, 11A07, 90B99

I. INTRODUCTION

Though the theory of transportation problems generally evolved during the world war – II but one can think of its roots right from the 400 B. C. or from 3500 B. C. when wheel was invented in the middle east of Asia. A huge number of practical / physical models are transformed into transportation problems which generally include inventory problem, assignment problem, and traffic problem [1].

The transportation problem [5] generally considered as a problems of multi – objective (like minimum cost and shortest path) combinatorial approach on the other hand as we know that the transportation problem were first proposed by Hitchcock in 1941.

The standard transportation problems [9] mainly North– West Corner Method (NWCM), Least Cost Method (LCM) and Vogel's Approximation Method having important application in the area of physical distribution i.e. transportation of goods and services from several supply centers to several demand centers. In LCM, the flow of allocation is directly controlled by the cost entries i.e. lowest cost prefers first

We know that, the congruence relation $a \equiv b \pmod{m}$ is an equivalence relation [6] which tells us that $m \mid (b - a) \leftrightarrow a \equiv b \pmod{m}$. Thus it is interesting to modify the given transportation problem as number theoretic approach using the congruence relation.

The paper mainly consists of three parts. In first part algorithm for proposed method were given[8]. In the second

part, new APB's methods [10] along with numerical example were explained. In the third part, we have compared the result with least cost method along with conclusion.

II. ALGORITHM OF PROPOSED METHOD

The alternative method can be summarized into following steps applied for balanced transportation problem.

Step I] Examine whether the transportation problem were balanced or not. If balanced, then go to next step.

Step II]: Write the penalties over each rows by taking $[\sum_{j=1}^n C_{ij}] \pmod{m}$ and write the penalties over each column by taking $[\sum_{i=1}^k C_{ij}] \pmod{m}$ 'respectively, where 'm' is the value of supply and demand for the respective rows and columns.

Step III] Select the row or column with the highest penalty and allocate as much as possible in the cell that has least cost in the selected rows or column and satisfies the given condition. If there is tie in the values of penalties, one can take any one of them where the minimum allocation can be made.

Step IV] any row or column with zero supply or demand should not be used in computing future penalties.

Step V] Repeat steps from II] to IV] until the available supply at various sources and demand at various destinations is satisfied.

III. NUMERICAL EXAMPLE

A) Consider the following example to find out the minimum transportation cost

A New Algebraic method for the initial basic feasible solution of a Transportation Problem and comparison with Least Cost Method

¹S. D. Manjarekar, ²A. P. Bhadane

^{1,2}L. V. H. Arts, Science and Commerce College, Nashik – 422003, Maharashtra (India)

Abstract:

In this paper, we have developed a new method through algebraic approach for finding out the initial basic feasible solution and compare it with Least Cost Method / minimum cell cost method and shown that the new algebraic method is best as compare to least cost method.

Keywords: Transportation Problem, Field, Prime Number

AMS Subject Classification (2010): 90B06, 05C25, 11A41

1. Introduction:

Though the theory of transportation problems generally evolved during the world war – II but one can think of its roots right from the 400 B. C. or from 3500 B. C. when wheel was invented in the middle east of Asia.

The transportation problem generally considered as a problems of multi – objective (like minimum cost and shortest path) combinatorial approach on the other hand as we know that the transportation problem were first proposed by Hitchcock in 1941.

The standard transportation problems [4] mainly North– West Corner Method (NWCM), Least Cost Method (LCM) and Vogel's Approximation Method having important application in the area of physical distribution i. e. transportation of goods and services from several supply centers to several demand centers.

As we know that, there are some transformations like logarithm which converts multiplication and divisions of large numbers into small scale addition and subtractions respectively. In the similar manner.

We know that Z_n is a commutative ring[3] which becomes a field if and only if n is a prime number. A prime of the form $n = 4K + 1$ can be written as sum of two perfect squares. It is interesting to convert the transportation problem over the field Z_p where ' p ' is of the form $4K + 1$.

The paper mainly consist of three parts. In first part algorithm for proposed method were given. In the second part, alternative method alongwith numerical example were explained. In the third part, we have compared the result with least cost method along with conclusion.

Pollution Research Paper

Vol 39, Issue 1, 2020; Page No.(139-143)

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ALTERATIONS IN BIOCHEMICAL CONSTITUENTS DUE TO HEAVY METALS IN BODY TISSUES OF LAMELLIDENS MARGINALLIS FROM GANGAPUR RESERVOIRS AT NASIK, MAHARASHTRA, INDIA

BALASAHEB RAHANE AND RESHAM BHALLA

Abstract

The present study investigates the effect of heavy metals Zn, Cu, Pb and Cd on the total proteins, ascorbic acid, DNA and RNA content from different soft body tissues of bivalve species, *Lamellidens marginalis* collected seasonally (summer, monsoon and winter seasons) from Gangapur reservoir of Nasik district during November 2010 to October 2011. In the present investigation results revealed highest concentrations of heavy metals Zn, Cu, Pb and Cd during summer season in surface water and bivalve species sampled from Gangapur reservoir. The results also revealed the lowest protein, ascorbic acid, DNA and RNA concentrations in different soft body tissues in bivalves sampled during summer season, from Gangapur reservoir might be due to bivalves were exposed to higher concentration of heavy metals in summer than winter and monsoon seasons.

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Abstract

QUANTITATIVE ANALYSIS OF CASIEN BY PRECIPITATION FROM THE VARIOUS MILK POWDER SAMPLES & DETECTION OF METALS IN MILK POWDER SAMPLES

*Dr. Anita P. Patil

Abstract

The present research deals with the separation of casein from milk samples from various commercial milk samples of cow, buffalo and goat milk. The milk samples were analysed in laboratory for casein estimation by commercial precipitation method. Further the samples were further processed for inorganic qualitative analysis to investigate the various metals present in the milk samples by routine chemical analysis. After qualitative analysis of these milk samples, these three samples viz. cow, buffalo and goat milk samples were investigated by Energy Dispersion Spectroscopy (EDS) technique, to get the exact composition of metals present among these samples. From EDAX analysis it was observed that the cow, buffalo and goat milk samples contain large of transition metals in various concentration. The transition metals observed in these samples are Cr, Mn, Ni, Fe, Zn, Co, Cu & Cd. Further more the qualitative investigation of milk samples was investigated to find out the casein present in the various milk samples. From this investigation it was found that the cow milk samples contain 7.8 g of casein, the buffalo milk sample contains 4 g and goat milk sample contains 6.4 g of casein. From overall comparison it can be seen that cow milk sample contains more percentage of casein in contrast to buffalo and goat samples.

Keywords: Milk powder, casein, EDS, qualitative and quantitative estimation.

[Full Text Article] (https://wjpr.net/abstract_file/15722)

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EXTRACTION OF BEETROOT FOR ALCOHOL PRODUCTION BY FERMENTATION METHOD: ALCOHOL CHARACTERIZATION BY GC-MS AND ITS BIOASSAY.

Dr. Anita P. Patil

PG Department of Zoology and Research Centre Loknete Vyankatrao Hiray Arts, Science and Commerce,
College, Panchavati, Nashik-422003 Affiliated to SPPU, Pune (MH), India-422003

Abstract:

The method reports the chief method to produce the alcohol from beetroots *Beta Vulgaris* via fermentation method. For the research purpose the fresh beetroots were collected from market, washed with water to remove soil dust and other impurities on the outer surface of beetroots. These beetroots then used for further research. For alcohol production by this method the fermentation method was adopted in which beetroots were cut down in the small pieces, then mixed up with the sugar and yeast, kept this mixture in vessel for days. The overall mixture produces the alcohol which was separated. The separated alcohol was tested chemically for alcohol formation. The extracted alcohol was analysed by GC-MS and microbial assay of beet extract was carried for some pathogenic organisms.

Keywords: Beet root, Alcohol, fermentation, Gas chromatography, Microbial assay.

1.0 Introduction:

There are several chemical methods are available for economical synthesis of alcohol. As the alcohol particularly ethyl alcohol is used as a solvent in large number of chemical process. As well as demand of alcohol for the beverage purpose is very in all around the world. Thus a large number of researchers and chemist are working on the production of alcohol by cost effective methods. Although the several important methods are reported by which alcohol can be produced for economical purpose but, there are several by-products associated with main product alcohol. Removal or separation of such impurities is again enhance the cost or budget to

EFFECT OF HEAVY METAL INDUCED ANTIOXIDANT MECHANISMS IN FRESH WATER FISH *CLARIAS BATRACHUS*

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to SPP University Pune.

ABSTRACT

In this work we analysed protein content of tissue like gills and liver. Heavy metals are enter into aquatic bodies through runoff water metals (Hg and Cd) are affected the fishes present in fresh water like *Clarias batrachus*. Metals were analysed by atomic absorption spectrophotometry with flame & flammers atomization. The LC/EC values were determine for 24, 48, 72 & 96 hours. Protein was estimated from gills & liver which reveals that protein content was not reduced significantly ($p < 0.05$) when compare to control.

KEYWORDS: Protein, Metals (Hg & Cd), Gills and Liver.

INTRODUCTION

Fish constitutes an important aspect of human food due to the high level of quality protein, calcium, phosphorus and essential amino acids for the proper growth and functioning of body muscles and tissues. *Clarias batrachus* inhabit freshwater. It is suitable species for aquaculture because it grows fast and feeds on a large variety of agricultural by-products and can tolerate adverse water quality conditions. They contain up to 18.22% of protein and Vitamin A so it is highly valuable as nourishing food for convalescing patients. Asian cat fishes of commercial importance include *Clarias macrocephalus* and *Clarias lazera* (African cat fish or Nile fish) and *Pangasius sutchi* (Lee, J.S 1973; Kloke and Potaros, 1975; Chaturvedi, 2003; and Jain, 2003).

The contamination of fresh waters with a wide range of pollutants has become a matter of concern over the last few decades (Vutukuru 2005; Dirilgen, 2001; Voegborlo *et al.*, 1999; Canli *et al.*, 1998). The natural aquatic systems may extensively be contaminated with heavy

Sensors and controller for efficient utilization of agricultural sprayers a review

Mrs Seema V. Aware¹, Dr. U.P. Shinde² and V.V Aware³

1. Assistant Professor, CAET, Dr B.S. Konkan Krishi Vidypeeth, Dapoli 2. Professor, LVH College, Panchavati, Nashik-03. 3. Professor, Farm Machinery and Power, CAET, Dr B.S. Konkan Krishi Vidypeeth, Dapoli

Abstract

Agriculture plays major role in the Indian economy. In order to achieve higher crop production protection of plants from insects, pest and diseases, sprayers are very important. The different shapes of trees crops even during the same growing season requires a continuous adjustment of the applied spraying dose to optimize the spray application efficiency and to reduce environmental contamination utilization of different sensors and electronic controller is the need of efficient spraying system in this era. For the detection of target very advanced system such as vision systems, laser scanning, or with ultrasonic and spectral systems are being used. Ultrasonic sensor, Laser sensor showed better prediction of canopy volume due to high resolution. Ultrasonic sensor and light detection and ranging (LIDAR) sensor used for detection of crop height, width and volume with manual and destructive canopy measurement method. Result indicated that both ultrasonic sensor and light detection and ranging (LIDAR) had good correlation with manual methods, ultrasonic sensor is an appropriate tool for canopy characterisation but LIDAR proved to be a more accurate method.

The sensor based system with microcontroller variable rate spraying system saves the liquid from 70% to 28% for different crops like olive, pear and apple orchards compared to a conventional application.

Introduction:

Agriculture sprayer is an equipment used to apply herbicides, pesticides, and water soluble fertilizers on agricultural crops. Sprayers range in size from manually operated that is backpack with spray gun to tractor operated to self-propelled units similar to tractors with boom.

A pest has been defined as a living organism which causes damage or illness to man or his possession or is otherwise in some sense 'not wanted' (Convay, 1976). Row crops like cotton, different food grain crops are susceptible to large number of pest and diseases right from seedling stage till harvest. In bushy crops like cotton the spray distribution and coverage of spray volume are difficult. Broadly on the basis of application of pesticide, the sprayers are classified as hydraulic and air assisted. Hydraulic sprayers have been used for application of pesticides as spray diluted in water. Air assisted sprayer uses air as a vehicle to carry fine atomized droplets to the target. It employs blower to generate an air blast of sufficient discharge and velocity. The spray fluid is introduced in to air blast in the form of fine droplets. The turbulence in the air blast causes thorough blending of air and spray fluid. This air ladden with spray fluid then proceeds from the sprayer and displaces the original air in the plant canopy, and spray liquid contained in

Electrical Resistivity, Thermoelectric Power and I-V Characteristics of Sb-Se Thin Films at Different Compositions.

U. P. Shinde, R. S. Gosavi

Abstract: Sb-Se thin films of varying composition have been deposited on glass substrates at room temperature. These films were annealed at temperature interval of 50 °K. The electrical resistivity (ρ) and thermoelectric power (α) of same films were measured. The resistance of semiconducting films decreases rapidly on heating showing negative temperature coefficient of resistance (T.C.R.). The composition dependent resistivity shows exponential change, sharp fall of resistivity may be attributed due to increase of metallic 'Sb' in Sb-Se thin films. The composition dependent activation energy of Sb-Se thin films has been calculated. The activation energy (ΔE) of semiconducting films was found to increase with selenium concentration. For different compositions thermoelectric power (α) increases upto 70 at. wt.% of Se concentration and then slowly decreases. The I-V characteristics of Sb-Se thin films were measured using copper (Cu) contacts. The films show ohmic conduction for different applied voltages as well as various concentrations of Selenium (Se) in Sb-Se thin films.

Keywords: Sb-Se, substrate, composition, thin films, resistivity, activation energy, thermoelectric power, Voltage.

I. INTRODUCTION

The variation in electrical conductivity obtained by [1] on polycrystalline antimony triselenide was possibly caused by the presence of free 'Se' in the polycrystals. The electrical and the thermal conductivities of the melts of antimony doped antimony selenide was found to depend weakly on the concentration of the dopant [2]. The $\text{Sb}_x\text{Se}_{1-x}$ alloys and annealed films with $x=0, 0.1, 0.7$ and 0.9 have hexagonal structure and orthorhombic structure for $x=0.3, 0.4$, and 0.5 . The value of the thermoelectric power was found to be 120 μV per degree for pure selenium and is always positive for $x=0, 0.1, 0.3, 0.4$ and 0.9 showing that structures are of p-type conduction, while for $x=0.5$ the thermoelectric power is negative and equals -440 μV per degree, i.e. of n-type conduction [3]. $\text{Sb}_x\text{Se}_{1-x}$ (0.1, 0.2 and 0.3) alloy film films were prepared onto glass and quartz substrates by thermal evaporation technique. Structural, morphology and optical characteristics of the films were analyzed [4].

The structural transformation and transformation kinetics of $\text{Sb}_x\text{Se}_{100-x}$ films ($60 \leq x \leq 70$) were studied to investigate the feasibility of applying $\text{Sb}_x\text{Se}_{100-x}$ alloys in phase-change nonvolatile memories. The transition temperature, sheet resistance and activation energy for transformation decrease as the amount of Sb increases in the $\text{Sb}_x\text{Se}_{100-x}$ film [5]. The amorphous films are semiconductive, and their $E_g^{\text{opt.}}$ (0.28–0.35 eV) is decreasing with an increasing content of Sb [6]. From the survey of literature, I have undertaken the present investigation to correlate electrical properties of co-evaporated Sb-Se system with different compositions.

II. MATERIALS AND METHODS

A] Preparation of thin films by thermal evaporation technique:

Antimony-Selenium binary films have been formed on glass substrates kept at room temperature by evaporation of pure antimony and selenium from two different sources, in a vacuum of the order of 10-5 torr. The antimony and selenium both were evaporated from tungsten filament and nichrome windings using mica sheets respectively. Both the elements were simultaneously heated, so as to mix the vapours of 'Sb' and 'Se' gave the required films. The films of different composition have been obtained [7-11]. The set of films thus formed were annealed at different temperatures from 373 OK to 523 OK with temperature difference of 50 OK for 8 hrs each, for the purpose of observing the temperature dependent electrical characteristics as well as uniform distribution of the components in the deposits. After annealing the films were used for composition dependent resistance and thermoelectric power measurement.

B] Measurement Parameters:

a) Resistance Measurement:

The resistance of the specimen measured by digital multimeter. The resistivity [7-10] (ρ) of the sample calculated by the relation,

$$\rho = (R b d) / l, \text{ ohm-cm} \quad \text{-----} \quad (1)$$

Where l = length of the film in cm.

b = breadth of the film in cm.

d = thickness of the film in cm.

R = Resistance of the film in ohm.

b) Measurement of Thermoelectric Power (α):

Thermoelectric Power (α) was measured by differential method. The temperature difference (ΔT) was established between the two ends of the sample and the thermal emf was noted. The temperature difference (ΔT) of 10 OK between two ends of the sample was kept constant for above room temperature.

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Potentiometric Taste Sensing Using Reduced Graphene Oxide Screen Printed Electrodes

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Abstract



References



Citations



Supplementary Data



Suggestions

This paper reports the development of simple and economical reduced graphene oxide (rGO) based screen-printed electrodes (SPE) for five basic taste sensing applications. Twenty different test solutions for the five tastes of salty, sour, sweet, umami, and bitter at 1 ppm, 10 ppm, 100 ppm, 1000 ppm concentration levels were tested with the fabricated SPEs. From experimental results, electrical signals generated between the electrode and test solution interface were measured using the potentiometric method. Satisfactory potentiometric responses of SPEs to different ppm concentrations for each sample were used to analyze the sample data. Histogram using the statistical tool was used to analyze the changes in the conductivity response. A multivariate Principal Component Analysis (PCA) statistical tool correlated using loading plots between variables and factors of all the five basic tastes. The plot showed the interrelation between variables and test samples. The obtained experimental results from these rGO based SPEs make them suitable for their use in taste sensing applications such as for any taste disorder disability, food-producing industry, pharmaceutical industries, etc.

Keywords: Basic Taste; Conductivity; PCA; RGO; SPEs

Document Type: Research Article

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Abstract: Supplementing day to day energy requirement using renewable sources of energy is essential. However, highly fluctuating nature of renewable sources necessitates storage. Storage is expensive and has to be replaced periodically. In this project an innovative stand alone, indoor light system is proposed with minimum use of rechargeable battery by subjecting indoor light on the solar photo voltaic panel through the vaseline glass plate. The main system components comprise of a solar photovoltaic panel, Vaseline Glass Plate, CFL, current amplifier, choke, carbon resistance, rechargeable battery and lamps connected to grid supply.

Keywords: Vaseline glass plate, LED, Compact fluorescent lamp, Rechargeable battery, Sun's spectrum, yellow-green color Light & yellow light.

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INTERNET ADDICTION AND PSYCHOLOGICAL WELL-BEING AMONG COLLEGE STUDENTS

□ Jaimala Ashok Sode*
Dr. M.A. Bhardwaj**

ABSTRACT

Context : Day by day the usage of internet is increases, especially in young adults their use of internet has become more than a hobby; it has become an addiction or compulsion that has become out of their control. **Aims :** The aim of the study was to examine the internet addiction and their association with psychological well-being among college students. **Design :** A comparative and correlational study on conventional degree college students in Nashik district, Maharashtra, India. **Material and Methods :** The total sample of 360 college students (180 boys and 180 girls) from various colleges in Nasik city. The age group of the sample was 18 to 22 years. Internet Addiction Test (IAT) by Kimberly Young (1998) and Psychological Well-Being Scale by D.S. Sisodia and Pooja Choudhary were used for data collection. **Statistical Analysis :** Descriptive and inferential statistical analyses were used. Student's t-test and Pearson product moment correlation has been used for finding gender difference and association between variables. The correlation score between internet addiction and psychological well-being is **-0.585** and it is significant. **Results :** The mean of males and females male ($M = 80.5$, $SD = 6.128$) and female ($M = 80.340$, $SD = 6.229$) and the value of $t = 0.170$ was found to be statistically not significant. **Conclusions :** College students irrespective of gender have same level of internet addiction their internet use and addiction is not based upon their biological gender. There is negative relationship between internet addiction and psychological well-being. Those who had higher level of internet addiction showed low on psychological well-being, this should be considering during the study.

Keywords : Internet Addiction, Psychological Well-Being, College Students

Introduction

Internet is a very important element of life which cannot be ignored. Internet is used for educational purpose by a large community but unfortunately we have a large community including majority of youth and teenagers who use Internet for only social networking sites. The Internet as a global village has become an important information and entertainment source for adolescents serving substantial role in changing the social lives of people. Internet has become more than a hobby; it has become an addiction or compulsion that has become out of their control.

Internet addiction is described as an impulse control disorder, which does not involve use of an

intoxicating drug and is very similar to pathological gambling. Some Internet users may develop an emotional attachment to on-line friends and activities they create on their computer screens. Internet users may enjoy aspects of the Internet that allow them to meet, socialize, and exchange ideas through the use of chat rooms, social networking websites, or "virtual communities

According to Young (1998), "Internet addiction is defined as any online-related, compulsive behavior which interferes with normal living and causes severe stress on family, friends, loved ones, and one's work environment".

Kandell (1998) define internet addiction as "A

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**INTENTIONAL ENRICHMENT TECHNIQUE : AN EFFECTIVE METHOD
FOR IMPROVING HAPPINESS
AND HELPING ATTITUDE**

■ Mrs. Shraddha A. Raravikar*
Dr. Mrunal A. Bhardwaj**

ABSTRACT

The article describes a positive activity intervention designed by authors. The controlled trial started with a random assignment of academic professionals (fifty percent females) in one treatment and one control group. The Temporal Satisfaction with Life Scale and The Helping Attitude Scales were employed as pre test and post test measures of happiness and helping attitude. The results of a post test analysis of fifty days intervention showed that the technique was successful in augmenting the level of happiness and helping attitude of subjects. The controlled trial illustrated in this article is an extension of the study reported earlier (Bhardwaj & Raravikar, 2015). A major modification in delivering the intervention is done by giving subjects a choice to select activities of their interest. The change is done considering the importance of 'person-activity fit' suggested by Lyubomirsky and her colleagues (Lyubomirsky et al, 2005). An additional variable of helping attitude is also included in present study.

Keywords : Intentional Enrichment Technique, Subjective Well-being, Helping Attitude

'Positive Activity Interventions (PPIs)' is a scientific answer given by positive psychologists to an age old question 'what will make people happy?' One such intervention named as 'Intentional Enrichment Technique' is designed by the authors of this article. The technique attempts to provide tailored positive experiences that would increase level of happiness. In her research, Dr. Isen (Isen, 1987) has found that people were more prone to help others while in a positive state. So the authors of the study suggest that the elevated happiness will be followed by the elevated helping attitude.

The key objective of this study is to replicate the findings of earlier research done by the authors; but with improved experimental conditions. These improved conditions would be helpful in authenticating the effectiveness of the 'Intentional Enrichment Technique'. The improvement is done in two ways. First modification is done in delivering activities. In the earlier study, subjects were asked to do one activity per day and complete all the activities in a particular sequence. While

conducting this study, subjects were asked to choose any activities of their interest and follow one activity a day during intervention period in a sequence they like. If subjects choose fewer activities, they were asked to repeat them during the intervention period. Secondly, another variable of concern that is highly correlated with happiness i. e. helping attitude, is included in study to test the simultaneous augment in happiness and prosocial attitude.

Intentional Enrichment Technique

According to Lyubomirsky and colleagues, fifty percent of a person's happiness is influenced by genetics and another ten percent is determined by circumstances. It still gives forty percent chances to increase happiness by intentional activities. "Intentional Enrichment technique" suggests such activities. The technique is based on Fordyce's 14 Happiness Fundamentals (1977, 1983).

The Intentional Enrichment is divided into five components -

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A STUDY OF RELATIONSHIP BETWEEN PERSONALITY TRAITS AND MENTAL HEALTH AMONG HIGH SCHOOL CHILDREN

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Abstract

If we are able to understand the personality traits of children at an early age, compared to adults, we can easily deal with their emotional disturbances because as the age increases, certain personality traits may become philosophy of life. Comparatively, to prevent and to deal with emotional disturbances it is easy to identify and deal with the personality structure of children. Mental health of children is just as important as their physical health. Good mental health allows children and young people to develop the resilience to cope with life and grow into well rounded and healthy adults. With this perspective, the present study tries to find out the relationship between Confidence, Sociability, Neurotic tendency and Mental health. It was hypothesized that Confidence and Sociability would be positively correlated with mental health and Neurotic tendency would be negatively correlated with Mental Health. Researchers have used the tool Vyaktitva Shodhika (a personality inventory) by Dr. U. Khire (JPIIP,Pune). Sample size was 100 (N= 100, 50 boys/50girls). Pearson product moment correlation was applied. The entire three hypotheses were accepted. The present study may provide a good support to inculcate emotional-management programs for higher secondary school going children.

References 

*Contents are provided by Authors of articles. Please contact us if you having any query.

मौखिक स्त्री गीते

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सहाय्यक प्राध्यापिका,

महाराजा सयाजीराव गायकवाड महाविद्यालय, मालेगांव कॅम्प, मालेगांव, जि. नाशिक.

प्रस्तावना : महाराष्ट्रातीलच नव्हे तर भारतातील लोककलांची परंपरा फार प्राचीन आणि वैभवशाली आहे. भारत हा देश विविधतेने नटलेला असल्याने प्रत्येक प्रांत हा त्यातील वेगळेपण टिकवून आहे. ह्या वेगळेपणात भाषा, वेष, संस्कृती ह्या सान्या बाबी प्रामुख्याने येतात त्यात लोककलाही येतात. महाराष्ट्रातील लोककलांचे प्रकार विपुल आहेत. त्यात गोंधळ वा शाहिरी, लावणी, तमाशा, वाघ्या मुरळी, कलगीतुरा, भोवाडा, वासुदेव, कीर्तन, भारूड, कटपुतली, विवाहप्रसंगी पार पडणाऱ्या रुढी, बाळ आगमनासाठीचे स्वागत, सण, उत्सव इतर अनेक लोककला येतात. जगातल्या प्राचीनतम संस्कृतीमध्ये भारतीय संस्कृती उच्च दर्जाची आहे. कारण त्या संस्कृतीला लोकसाहित्याचे योगदान आहे. "लोकवाङ्मयातून लोकजीवनाच्या विविध पैलूंचे दर्शन घडत असल्यामुळे लोकवाङ्मयाच्या शास्त्रीय अभ्यासात लोकजीवन पद्धती आचार विचार, रुढी प्रथा विधी आणि विधी आचरण लोकसंस्कृती आदि घटकांचा विचार महत्त्वाचा ठरला." लोकसंस्कृती ही मुक्तपणाला, स्वाभाविकतेला, निसर्गसहजीवनाला अधिक महत्त्वाचे स्थान देणारी आहे.

स्त्री गीतांचा उदय व स्वरूप :- लोकगीतांच्या जोपासनेत आणि जडणघडणीत स्त्रियांचा मोलाचा वाटा आहे. मराठी लोकवाङ्मयात तर लोकगीते म्हणजे स्त्रीगीते म्हणण्याइतपत स्त्री गीतांची विपलता आहे. स्त्री ही मुळातच परंपराप्रिय व भाविक वृत्तीची असल्यामुळे परंपरेने चालत आलेल्या प्रथा, रुढी, विधी, कुलाचार आणि धर्माचरण करण्याकडे तिचा कल असे. तिच्या या वृत्तीतूनच लोकगीताचे जतन होऊ शकले.

लग्नविधीतील नवरी-नवरदेव यांना हळद लावण्यात रुखवताचे वेळी, लग्नाचे साहित्य तयार करताना दळणकांडण, निवडणे, टिपणे करताना, मुलाचा नामकरणविधी करताना, सण, उत्सव प्रसंगी अशा अनेक प्रसंगात लोकगीतांची निर्मिती होत आलेली आहे. पिठाच्या गिरण्या पूर्वी नसल्यामुळे स्त्रियांना घरीच दळण करावे लागे आणि मग दळताना जात्याबरोबर ओव्याही गती घेताना दिसत. मराठी स्त्री गीतात जात्यावरच्या ओव्यांची संख्या कितीतरी आहे. "जात्याभोवती फिरणारे स्त्रीमन असंख्या ओव्यांतून आपली सुखदुःखे जात्यातून सांडणाऱ्या शुभ्र पिठाबरोबर कसे सांडत राहिले होते याची प्रचिती मौखिक स्त्रीगीतातून येते."

मौखिकता हे बोलीभाषेचे वैशिष्ट्य असल्यामुळे बंधनमुक्त असते. त्यामुळे बोलीतील शब्द लवचिक आणि हवे तसे वाकू शकणारे असतात. ही भाषा दैनंदिन जीवनाच्या व्यवहारातील असल्यामुळे चैतन्यपूर्ण असते. लोकगीतातील शब्द चालते बोलते असतात. लोकजीवनाचे उत्कट चित्रण करण्याचे सामर्थ्य लोकगीताच्या भाषेत असते. लोकगीतात स्त्रीगीतांची संख्या अधिक आहे. स्त्री मुळातच संवेदनशील व भावुक वृत्तीची असल्यामुळे आपल्या मनातील भावनांचा आविष्कार करताना, मनातील विचार व्यक्त करताना आणि संसारातील सुखदुःखाची अभिव्यक्ती करताना ती जे जीवन जगते त्या जीवनातील कल्पनाच ती व्यक्त करते. त्यामुळे त्यात वास्तवता, स्वाभाविकता आणि सहजता पाहावयास मिळते. कथा, गीत, म्हणी, उखाणे, लोकमंत्र, जातिपुराणे इ. लोकसाहित्यातील शब्दसाहित्य बहुधा मौखिक आलेले आहे. काही वेळेस ते लिपिबद्ध झाले असले तरी त्याचे प्रचलन मौखिक राहिले आहे. चालिरिती, रुढी, व्रते, विधीविधाने, समजुती, कला, क्रीडा, ज्योतिष इ. लोकसाहित्यांतर्गत अन्य साहित्यप्रायः कृतिसंबद्ध आहे. स्त्रीवादी दृष्टी ही केवळ साहित्य आणि समीक्षा यापुरतीच सीमित नसून तो एकूणच जीवनाविषयक आकलन-अवलोकनाचा दृष्टिकोन आहे.

लोकगीताचा आढळ प्रामुख्याने निरक्षरात आणि शहरी संस्कृतीपासून दूर असलेल्या ग्रामीण लोकांत होतो. लोकजीवनात प्रचलित असलेली लोकगीते, मौखिक परंपरेने एका पिढीपासून दुसऱ्या पिढीपर्यंत आणि पुन्हा पुढच्या पिढीपर्यंत आपला प्रवाह चालू ठेवतात. मौखिक परंपरेमुळेच लोकगीतांची मूळ प्रकृती कायम राहू शकते. त्यामुळे कित्येक शतकापूर्वी लोकजीवनात

महाराष्ट्र लोकसंस्कृतीचे उपासक -गोंधळी

डॉ. किरण नामदेव पिंगळे

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विधिसंबद्ध नाट्याविष्कार तसेच लोकजीवन परंपरेने चालत आलेले धर्मभावनेशी संबंधित असलेले नाट्यस्वरूप आविष्कार समाजजीवनात देवदेवतांच्या भगतांनी व लोकनायकांनी विकसित केले. गोंधळ, जागरण, भारूड ही त्याचीच रूपे होत. त्यांनी वैशिष्ट्यपूर्ण अशी स्वतःची रंगभूमी विकसित केली.

महाराष्ट्रातील लोकधर्मात गोंधळ या नाट्यविधीचे अत्यंत महत्वपूर्ण स्थान आहे. गोंधळी ही देवीच्या भगतांची भटक्यांचे जीवन जगणारी एक जात आहे. गोंधळी जातीचे लोक देवीच्या उपासनेच्या स्वरूपाचा एक कुलाचार पार पाडतात. त्यालाच गोंधळ असे म्हणतात. गोंधळी जातीचे लोकच गोंधळ हे विधिनाट्य सादर करू शकतात. या जातीचे लोक महाराष्ट्र, कर्नाटक, मध्यप्रदेश आणि आंध्रप्रदेश या प्रांतात विशेष करून आढळतात. देवीचे अधिष्ठान असलेल्या रंगभूमीवर नाट्याच्या स्वरूपात हा विधी पार पडतो. गोंधळ्यांनी आपल्या विधिनाट्याची एक स्वतंत्र रंगभूमी विकसित केली असून आपल्या या रंगभूमीवरील रंगाविष्काराला संस्थात्मक स्वरूप प्राप्त करून दिले आहे. गोंधळ हा केवळ आता विधी राहिला नसून विधिस्वरूपाचा एक नाट्यप्रकार झाला आहे.

गोंधळ्यांच्या उपजाती - महाराष्ट्रात गोंधळ्यांनी रेणुराई आणि कदमराई अशाच आपल्या दोन पोटजाती असल्याचे सांगितले. यांनाच रेणुराव व कदमराव असेही म्हणतात. रेणुराई हे माहुरच्या रेणुकेचे भक्त असून ते रेणुकेचीच उपासना करतात. तर कदमराई हे तुळजापूरच्या भवानीचे भक्त असून तिचीच पूजा मांडतात. रेणुराई गोंधळी प्रामुख्याने रेणुकेची गाणी म्हणत असले तरी त्यांच्या गाण्यांच्या आशयात आई, अंबा भवानी, माय भवानी अशी संबोधने येतात.

रेणुराई आणि कदमराई दोन्हीही उपजातीचे लोक हे विधिनाट्य सादर करतात. मात्र जातीतील सर्वांनाच दीक्षाविधी पार पाडल्याशिवाय गोंधळ घालता येत नाही. गोंधळाने विधिनाट्य सादर करण्यालाच गोंधळ घालणे अशी संज्ञा आहे. वासुदेव जोशी स्वतःला गोंधळी समजतात. गोंधळी आणि वासुदेव जोशी यांच्यात बेटी व्यवहारही होतो.

गोंधळ्यांच्या दीक्षाविधी - गोंधळ्यांचा गोंधळी होण्याचा एक वैशिष्ट्यपूर्ण विधी असतो. गोंधळी जमातीतील एखाद्या लग्नप्रसंगी जेव्हा परंपरेनुसार जात पंचायत भरते त्यावेळी हा दीक्षाविधी पार पाडला जातो. ज्या मुलाला गोंधळ हे विधिनाट्य सादर करण्याचा अधिकार प्राप्त करून घ्यावयाचा असतो किंवा गोंधळ्याची दीक्षा द्यावयाची असते, त्याच्या गळ्यात विधिपूर्वक 'गेनमाळ' घातली जाते. पाच विवाहित पुरुष वराच्या गळ्यात विधिपूर्वक कवड्यांची माळ घालतात. ही माळ घातल्यावरच त्याला गोंधळ हे विधिनाट्य सादर करण्याचा अधिकार प्राप्त होतो. म्हणजे विवाह झाल्यानंतरच गोंधळी गोंधळाचा कुलाचार पार पाडू शकतात.

गोंधळ या विधिनाट्यात गोंधळी स्त्रीयांचा सहभाग कधीही नसतो. त्या देवीची उपासना करीत असल्या तरी त्याचे स्वरूप पूजाविधीच्या सादरीकरणाचे नसते. गोंधळ्यांचा पूजाविधी मात्र यजमानांच्यासाठी, यजमानाकरवी समुदायासमोर पार पाडलेल्या पूजाविधीचे असते. हा पूजाविधी नाट्यस्वरूप असतो. परमेश्वराचे लीलागायन, लीलादर्शन या स्वरूपाचा असतो.

आज महाराष्ट्रात जो गोंधळ प्रचलित आहे त्यात गोंधळ्यांची संख्या चार ते आठ अशी असते. त्यातील एक प्रमुख गोंधळी असतो. बाकी त्याचे साथीदार असतात. या साथीदारात वाद्य वाजविणारे वादक, समूहगानात सहभागी होणारे, सूर ओढून गाण्यात रंग भरणारे सुरते असतात. मुख्य गोंधळ्याच्या मागे तुणतुणे वाजवणारे सहकारी आणि सुरते त्यांची एक चारसहा जणांची मानवी भिंत निर्माण होते. त्यासमोर प्रमुख गोंधळी आणि संबळ वाजवणारा सहकारी असे दोघे आणि नाट्याच्या सादरीकरणात प्रसंगविशेषी एखादा मागे उभ्या असलेल्या सहकाऱ्यांपैकी असे मिळून गोंधळ नाट्याचे सादरीकरण करतात. संबळवादक एक किंवा दोन आणि तुणतुणे वाजवणारे दोन असे सहकारी असतात. हे सगळेच समूहगायनात साथ करून झील ओढतात.

आज रूढ असलेल्या गोंधळाच्या प्रकारात काकड्या गोंधळ व संबळ्या गोंधळ असे दोन प्रकार आढळतात. काकड्या गोंधळ हे कोणत्याही जातीचे लोक करू शकतात. हातात काकडा घेऊन देवीची गाणी म्हणून आणि शेवटी भंदे खेळून काकडा गोंधळ होतो. भंदे हे मातीच्या मडक्याच्या अर्ध्या भागात सरकी टाकून तयार केले जाते. त्यात सरकीचे तेल सोडून सरकी पेटवली जाते. पेटलेले भंदे देवीभोवती ओवाळण्याच्या क्रियेला 'भंदे खेळणी' असे म्हणतात. संबळ्या गोंधळ हा गोंधळी जातीचे लोकच घालतात. संबळ या वाद्याच्या साथीने गोंधळ्यांचे हे विधिनाट्य सादर केले जाते. म्हणूनच त्याला संबळ्या गोंधळ असे म्हणतात.

भिल्ल लोकसंस्कृतिचा खानदेशी अविष्कार

प्रा.विद्या सुर्वे बोरसे

प्रास्ताविक :

भिल्ल आदिवासींचे सामाजिक व सांस्कृतिक जीवन विविध वैशिष्ट्यांनी समृद्ध असून त्यांनी त्यानुसार जीवन शैली अंगीकारली आहे. निसर्ग आणि भिल्ल आदिवासींच्या साहचर्याची स्पष्ट छटा त्यांच्या सामाजिक, सांस्कृतिक वैशिष्ट्यांवर व जीवन शैलीवर पडलेली दिसून येते. तसे त्यांच्या दैनंदिन जीवन व्यवहारातून जाणवते. महाराष्ट्रातील भिल्लांच्या वस्तीस्थानाचा विचार करता नंदुरबार जिल्ह्यापासून धुळे, जळगाव, अमरावती, व औरंगाबाद जिल्ह्यापर्यंत सातपुड्याच्या रांगा विखुरलेल्या असून या संपूर्ण प्रदेशास सातपुडा प्रदेश म्हटले जाते. सर्वाधिक भिल्ल लोक नंदुरबार व धुळे जिल्ह्यात वास्तव्य करतात. त्या खालोखाल जळगाव जिल्ह्यात त्यांची वस्ती आढळते. या तीनही जिल्ह्यांच्या प्रदेशास खानदेशाचा अर्थ असून हेच महाराष्ट्रातील भिल्लांचे प्रमुख वस्तीस्थान आहे. सामान्य पणे आदिवासी जमातींचे वास्तव्य जंगलांच्या सानिध्यात व दर्याखोऱ्यात असते त्याप्रमाणे बहुतांशी भिल्ल लोकांचेही वास्तव्य खांदेसातील पाहडी प्रदेशात आहे. अशा पाहडी प्रदेशात राहणाऱ्या भिल्लांच्या वस्त्यांना पाडा असे संबोधले जाते. पाड्यातील संपूर्ण लोकवस्ती भिल्लांचीच असते. पाड्यात भिल्लेतर लोक आढळत नाहीत. पाहडपट्ट्या व्यतिरिक्त खांदेसातील मैदानी भागातही भिल्लांची वस्ती आढळते त्या शाहू समाजातील गावाचा एक भाग म्हणून गावाला लागून अस्तीत्वात आहेत. अशा वस्त्यांना भिल्ल हाटी म्हणजे भिल्लाटी असे संबोधले जाते. खांदेसातील नागरी भागात गावोगावी अशा भिलाट्य अस्तीत्वात असून तेथे भिल्लांचे वास्तव्य आढळून येते.

मी या शोध निबंधातून भिल्ल आदिवासींच्या सांस्कृतिक जीवनावर प्रकाश टाकणार आहे. त्यामध्ये भिल्लांचे सण व उत्सव, भिल्लांचे दैवते व भिल्लांची लोकनृत्यकला इ. बाबींचा अभ्यास मी केला आहे.

भिल्ल समाजात अनेक सण-उत्सव साजरे केले जातात त्यातून त्यांच्या समाज-संस्कृतीचे, रुढी परंपरांचे व निसर्ग प्रेमाचे दर्शन घडते. त्यातून त्यांच्या श्रद्धा व आस्था प्रतिबिंबित होत असतात. होळी, दीपावली, इंद्रदेवपूजा, इंदलपूजा, विजयादशमी, गोपालदेवपूजा, ग्रामदेवपूजा, नवाई, अक्षय्य तृतीया, भगोरिया (भोंगर्या बाजार), दिवासा (दीपअमावस्या) इ. सण उत्सव ते मोठ्या उत्साहात साजरे करून आपल्या परंपरांचे जतन व संवर्धन करीत असतात.

१. **होळी** : होळी हा भिल्ल आदिवासींचा प्रमुख सण होय. हा सण साधारणतः महिनाभर चालतो. होळीच्या दिवशी ते एका मध्यवर्ती ठिकाणी हिरवा बांबू रोवून त्या भोवती जंगलातील जळाऊ लाकडे रचतात रात्री होळी मातेची विधीवत पुजा करून होळी पेटवतात. रात्रभर नाचगाण्यांनी आनंदोत्सव साजरा करतात जोर जोरात वाद्य वाजवून होळी मातेची प्रार्थना करतात मुले मुली हातात हात घेवून एकत्र फेर धरून नाचतात. होळीच्या अगोदर काही दिवस व होळीनंतरची अनेक दिवस वेगवेगळे वेष परिधान करून चेहर्यावर काजळी व तऱ्हेतऱ्हेचे रंग लावून वेगवेगळ्या भूमिका व सोंगे करीत असतात. बेधुंद अवस्थेत नृत्य करीत गाणे म्हणत घरोघरी सामुदायिकरित्या पैसे जमा करून त्यातून सामुहिक भोजन घेत असतात. होळीच्या दिवसानंतर पाच दिवस त्यांचा हा कार्यक्रम चालतो. यास ते 'फाग' मागणे म्हणतात. पाच दिवस ते गावोगावी गटागटाने जावून नाचगाणे सादर करून त्या मोबदल्यात ते प्रत्येक घरून पैसे मागत असतात होळीच्या दिवसात आदिवासी भागात गावोगावी गल्लोगल्ली अशा नाचून फाग मागणाऱ्यांच्या झुंडीच्या झुंडी दिसून येतात. अशा पध्दतीने भिल्ल लोक सुमारे होळीच्या माध्यमातून जीवनाचा मनमुराद आनंद लुटत असतात.

२. **दीपावली** : दीपावली हा हिंदुंचा प्रमुख सण सुद्धा भिल्ल समाजात साजरा केला जातो. अत्यंत साध्या पध्दतीने दीपावली सण साजरा करतात. दीपावलीच्या दिवशी ते तेलाचे दिवे (पणत्या) लावून गुळ व जिलेबीचे गोड भोजन घेतात.

३. **इंद्रदेव पुजा** : भिल्ल लोक वर्षाऋतूत पावसाच्या आगमनाच्या वेळी इंद्रदेवाची पूजा करतात. आकाशात पावसाचे ढग दिसल्यावर ते मोठाप्रमाणे नृत्य करतात.

४. **विजयादशी दसरा** : दसऱ्याच्या दिवशी भिल्ल लोक एका झाडाखाली बुंध्या जवळ दोन-चार दगड एकत्र ठेवून त्यांना शंदूर लावून भिल्ल देवाची प्रतीकात्मक स्थापना करतात भिल्ल देवाची पुजा करून बकर्याचा बळी देतात. या मागे त्यांचा असा समज आहे की, देव प्रसन्न होऊन आशिर्वादाच्या रूपाने वर्षभरात त्यांना सर्पदंश होत नाही.

५. **इंदलपूजा** : भिल्ल लोक एखाद्या इच्छा आकांक्षेच्या पूर्तीसाठीची मानता पूर्ण झाल्यावर नवसपुर्तीचा भाग म्हणून हा उत्सव साजरा करतात. इंदल चे दोन प्रकार आहेत. वैयक्तिक इंदल (चु-यु-इंदल) व सार्वजनिक इंदल (गावगोंद-यो इंदल).

६. **गोपालदेवपूजा** : भिल्ल समाजातील गुरख्यांचा हा प्रमुख सण होय, वर्षातून एकदा हा सण साजरा केला जातो. यात गोपालदेव म्हणजेच श्रीकृष्णाला दुध दही चढवून पूजा अर्चा केली जाते व गुरख्यांच्या रक्षणासाठी प्रार्थना केली जाते व गुरख्यांच्या लाठ्यांची पूजा केली जाते.

७. **ग्रामदेव पूजा** : आपल्या गावाच्या सुख शांतीसाठी भिल्ल लोक ग्रामदेवाच्या रूपात बडादेवची पूजा करतात.

Role and Impact of NAAC on Higher Education Institutions in India

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Abstract: National Assessment and Accreditation Council (NAAC) is an organization that assess and accredits Higher Education Institutions (HEIs) in India. It is an autonomous body of University Grant Commission (UGC), headquartered in Bangalore, with prime agenda of to assess and accredit institutions of higher education system and improve the quality of teaching learning evaluation and research NAAC likewise provides financial assistance to the accredited HEIs for seminars, conferences and workshops. NAAC similarly encourages HEIs to adopt new policies and quality improvement in higher education institutes and encourages best practices for increasing quality in higher education.

Key Words: NAAC Accreditation and Assessment, HEIs, Impact of NAAC, teaching-learning evaluation.

1. INTRODUCTION:

Indian Higher Education System has expanded at fast pace in past three decades by adding more than 20,000 colleges and more than 8 million students. Today India has 800 universities which are divided into Central, State, and Private Universities along with many institutions and institutions of eminence such as AIIMs IITs and NIITs. India's education system is third in the world after USA and China in terms of students. Indian education emphasis is given on the science and technical education by 2004 large number of technical educational institutions was established in India. Moreover, distance learning and open universities are also at the core of Indian Higher Education framework, for instance Indira Gandhi Open University is the largest university in the world in terms of students enrollment around 5.5 million. In spite of built in regular mechanism that aim to ensure satisfactory level of quality in functioning of higher educational institutions there had been n specific modalities to assess and ensure quality of education imported by them. to address this issue. The naac after considering the institutional assessment and accreditation application of institution declared institutional eligibility for quality assessment (IEQA) status for the institution.

2. FUNCTIONS OF NAAC:

- ✓ Assessing and Accrediting Institutions/ Departments/ Programmes
- ✓ Evolving appropriate instruments of accreditation and fine tuning them whenever necessary.
- ✓ Preparing in-house pre-visit documents for the perusal of assessors.
- ✓ Co-coordinating the 'on-site' visit to its effective completion.
- ✓ To organize promotional activities related to quality in higher education, and Assessment & Accreditation, which include the following:
- ✓ Develop pre- and post-accreditation strategies
- ✓ Organize Seminars/Workshops/ Conferences to share and discuss education quality-related issues.
- ✓ Provide guidance to institutions for preparing their Self-study Reports (SSRs)
- ✓ Partner with stakeholders for promoting A/A
- ✓ Promote the establishment of Quality Assurance units
 - Internal Quality Assurance Cells(IQAC)
 - State level Quality Assurance Co-ordination Committee (SLQACC)
 - State Quality Assurance Cell (SQAC)

Establish collaborations with other National and International professional Agencies of A/A

3. BENEFITS OF NAAC ACCREDITATION IN HIGHER EDUCATION

Helps the institution to know its strengths, weaknesses, opportunities and challenges through an informed review

- Categorizes internal areas of planning and resource allocation
- Enhances collegiality on the campus
- Outcome of the process provides the funding agencies with objective and systematic database for performance based funding
- Initiates institution into innovative and modern methods of pedagogy
- Gives the institution a new sense of direction and identity
- Provides the society with reliable information on the quality of education offered by the institution

The Socio- Economic Impact of Covid-19 or Corona Pandemic in India

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Abstract

Globalization has increased there health risk by pandemics like COVID-19 diseases or corona diseases. The successful growth of any country is largely dependent on citizens' health. A healthy population contributes to productivity, saving, and progress. In 1950 India made remarkable efforts to improve public health. With India increasing population and industrialization increasing environmental problems and there is increasing communicability. No communicable diseases that not only effect the lives of people but also the working capacity of various sectors of economy such current burden is COVID-19 diseases. Due to this corona virus, firstly, its effect in china and china's economic slowdown. And hence due to communicable diseases, firstly Maharashtra government stuck down their companies, railways, social gathering, and hence its direct effect on the economy and share market collapsed due to this virus. According to CII Indian economy falls below 5% in FY2021 if policy action is not taken urgently. Corona virus has seen worrisome spreads in India recently. This paper explains the economic impact of COVID-19 disease and challenges in India's faces and some suggestions to overcome this pandemic.

Keywords: Covid-19, Pandemic, Communicable and no communicable, Social gathering, Global economy, Health emergency and Novel corona virus.

Introduction

COVID -19 diseases are mostly found in mammals and birds in humans. Novel corona virus causes respiratory tract infections that include common cold, coughing. This virus was firstly discovered in 1960—the global spread of COVID-19 since 2019, mainly in Wuhan state in China. The first case of the 2019-20 coronavirus pandemic in India was reported on 30 Jan. 2020; the infection rate of COVID-19 in India reported to be 1.7, which is remarkably lower than in worst-affected countries. The first case in India reported in Thrissur, Kerala. Which are communicable respiratory diseases detected positively since 20 March 2020? The outbreak has been declared an epidemic in more than a dozen states and union territories, where provisions of the epidemic diseases act, 1897 have been invoked, and educational institutions and many commercial establishments have been shut down. India suspended all tourist visas, as a majority of confirmed cases were linked to other countries on 22 March 2020 India observed a 14-hour voluntary public curfew at the instance of prime minister Narendra Modi. The government followed it up with lockdowns in 75 districts where COVID cases had occurred as well as major cities.

Further, on 24 March, the prime minister ordered a nationwide lockdown for 21 days, affecting the entire 1.3 billion population of India. The WHO director said that India had a tremendous capacity to deal with the coronavirus outbreak and, as a second-most populous country, will have an enormous impact on the world's ability to deal with it. According to UN report, "India is among the 15 most-affected economies due to coronavirus epidemic and slowdown in production in China. On 13 March 2020 the prime minister Narendra Modi proposed that SAARC nations jointly fight the pandemic corona, an idea that was

12. Impact of Covid-19 (Corona Virus) Pandemic on Indian Tourism

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Abstract

The study of this paper aims to measure the impact on novel covid-19 pandemic on tourism in India. Due to covid-19 the Indian tourism industry projected huge loss in 2020 because of shutdown of hotels and suspension in flight operation after onset and spread of covid-19 pandemic. This has directly affected the Indian economy to a large extent and covid-19 cause a long term negative impact on Indian tourism industry. The travel & tourism sector across the globe is undoubtedly the biggest casualty of covid-19 pandemic. working capacity of various sectors of economy. one such current burden is covid-19 diseases. The united nation dedicated agency for tourism assumes that international tourist arrivals will be downcast by 20% to 30% in 2020 when compared to 2019 .for this paper used secondary research methodology has been used for research for data collection ,secondary data collected from, literature review also government agency data, tourism online news has been collected.. This paper explain the tourism industry impact of covid-19 disease and challenges in Indian tourism industry and some suggestions to overcome this covid-19 pandemic.

Key Words: Covid-19, Pandemic, impact of Indian economy, tourism

Introduction

The Indian tourist industry is one of the important contributor to the economy of country. The Indian tourism industry biggest industry and lot of peoples are dependent on this sector. But due to covid-19 pandemic with the globalized world going into partial or complete shutdown the overall impact of human life ,economic growth and business are immeasurable both in short term and long due to uncertainty as things evolve. The travel & tourism sector across the globe undoubtedly the biggest causality of covid-19 pandemic. Several countries have issued travel advisories and are in lockdown mode, with all major global business, social and sporting events getting cancelled. The first case reported in Wuhan china but it expanded to nearer countries and finally spreading in India till mid of may covid-19 spread more than 180 countries . the first of covid-19 case in India reported on 30 jan.2020 in Thissur,Kerala.nd still continued the covid-19

8. India: Population Growth, Distributiona and Density

Dr. Pralhad Y. Vyalij

HOD, Department of Geography, L. V. H. College, Panchavati, Nashik.

Introduction

Population plays an important role in the economic development of a country. Population must be considered both from the angle of assets and liabilities connected with the attainment of economic development. For the attainment of overall development, proper utilization of both natural as well as human (population) resource is very much essential. Hence the study of the size and quality of population is important.

A] Growth of Population

According to 1901 census the total population of India was 23.83 crores. Since then India's population has been rising at varying rates except during the decade 1921, when it fall down by 0.31 percent. The present feature of population is the result of changes which have been taken place from the ancient periods.

The change have been taken place during the last 110 years are given in the table.

Table 1: Population of India with Decadal Variation

Year	Population in crores	Decade	% Variation of Decadal Population
1901	23.839	----	---
1911	25.209	1901-1911	+5.75
1921	25.132	1911-1921	-0.31
1931	27.897	1921-1931	+11.00
1941	31.866	1931-1941	+14.22
1951	36.108	1941-1951	+13.31
1961	43.923	1951-1961	+21.51
1971	54.815	1961-1971	+24.80
1981	68.332	1971-1981	+24.66
1991	84.630	1981-1991	+23.85
2001	102.70	1991-2001	+21.35
2011	121.02	2001-2011	+17.07

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Introduction

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Economic Recession in India : Causes, Effects and Recovery Measures

Dr. Narayan Namdeo Gadhe

Associate Professor in Economics

LVH Arts, Science & commerce College, Panchavati, Nashik-3

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Abstract:

The Indian economy is caught in the grip of slowdown in the past few quarters, it may call as economic recession. Some indicators like decline GDP, purchasing power of consumer, demand of goods and services, import and export, decline in industrial production and increase in rate of unemployment etc. are shows something going wrong in Indian economy since last consecutive tow quarters. GDP are worse than 2008-09 levels when a United State triggered recession occurs. Moody's investor's service recently estimated that India's GDP growth rate decline up to 4.5%. All over economic activities in the country hits by the recession, especially automobile and real estate sectors.

This paper argues that the government's poor policies are more responsible for present economic recession in India. The paper attempts to analyze the actual reasons to behind this economic slowdown in India. It is also highlights the effects of the recession on Indian economy. Further the paper suggests the recovery measures to overcome the situation.

Introduction:

Recession is the inevitable part of market mechanism. As J. M. Keynes has explained in Trade cycle theory after prosperity, all economy has to face recession. Indian economy is facing reclaiming phase in which many economic situation restricts development signs. Real GDP growth decelerated to 5 per cent in June 2019 quarter, it is lowest in past six years. While a slowdown in investment has been there for over years now the recent decrease in consumption has made the recession broad-based. Declining in purchasing power of consumer, reduced the demand of goods and services, decline in import and export and industrial production, uncertainty, insecurity, and increase in rate of unemployment. The above mentioned indicators observed in Indian economy since last few quarters. Today, as the Indian economy is caught in the grip of slowdown; it may call as economic recession.

The paper argues that the government's poor policies are more responsible for present economic situation in India. The paper attempts to analyze the causes and effects of the recession on Indian economy. Further the paper suggests the recovery measures to overcome the situation.

Objectives of the study:

The present paper seeks to analyze the following objective

1. To review the current economic situation in India.
2. To know the causes of recession in India.
3. To acquainted with the effects of the recession in Indian scenario.
4. To study the government initiatives for control the recession.
5. To suggest recovery measures.

How Can India Become a \$ 5 Trillion Economy?

Dr. Narayan Namdeo Gadhe

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Abstract

Indian economy is the fifth largest economy in the globe. Since last five years Indian economy registered a 7.5 percent remarkable growth rate. Prime Minister of India hopes that Indian economy will become five trillion dollar economy in next five years. It shows the optimistic attitude towards the economy. But is it really possible to achieve this aim? Rising unemployment, investment slowdown, poverty, hunger, recession etc. are the major challenges ahead. If these problems are considered, we realize that the dream of five trillion dollar economy is far away from reality. To make India a \$ 5 trillion economy the government needs to take major steps.

This paper mainly focuses on the challenges before five trillion dollar economy. It is also pointed out the recommendations to become India a five trillion dollar economy. The paper is based on secondary data; which is obtained from the web.

Keyword : trillion economy, GDP, unemployment, world, poverty, Population,

Introduction

Now a days \$ 5 trillion economy is the subject of debate and discussion everywhere. Prime Minister Narendra Modi set a ambitious goal; India will become five trillion dollar economy by 2024. At this stage the Indian economy stands at 2.94 trillion dollar. The aim is to double the economy till 2024. It will make India the fourth largest economy in the world behind the United States, China and Japan. Pramod kumar misra, the principal secretary of Prime Minister has said during the 30th convocation of the Sambhapur University that we are on the right track and fully committed to achieve the aim of five trillion dollar economy. Is it feasible for India? In reality the dream of five trillion dollar economy is far away. At present we are fighting for necessities, poverty, and hunger and many problems. Unemployment rate is at the highest level, economy is

Zero cost natural farming (Zero Budget) Needs and Reality

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Abstract

Using conventional techniques in agriculture is like a cancer for our soil and also health. Not only does this make the soil impervious, but eventually the peasantry goes in fear of debt. Therefore, In the Previous budget, the central government announced Zero Budget Farming for doubling the income of farmers to 2022. To change the picture of Indian agricultural development, we need to adopt the basic techniques of natural agriculture. Zero Budget Natural Farming (ZBNF) is the only way to deal with this growing problem. The term 'Budget' refers to credit and expenditure. Thus the word 'Zero Budget' means that without using any credit and without spending any money on the money purchased. Rajiv Kumar, Vice-Chairman of the NITI Commission, said that the Indian Council of Agricultural Research and the Agricultural Universities of India had said that the practice of zero cost natural farming was practiced on different lands in India and this technique needs to get scientific approval. Therefore, zero-cost natural farming has begun to be discussed throughout the country. But considering this discussion, two sides appear. On the one hand, the necessities of natural agriculture seem to be important, while on the other side, there is only discussion and some unanswered points for this fundamental change in agriculture. Both sides are discussed in this article by the researcher.

Keywords: Zero Budget Farming, The Need and Importance of Zero Budget Farming, Natural Farming.

Zero Budget Farming

Expensive production of seeds, chemical fertilizers and pesticides by private companies is increasing the cost of agricultural production. Often, Prices of agriculture production are less than the cost of production, and it falls into debt trap. Loans and Expenses the budget is referred to here

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Dr. Prashant B. Suryawanshi
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Abstract:

"Poverty is the deprivation of opportunity", said economist Dr. Amartya Sen. Financial inclusion gives the financially weak the chance to change their economic circumstances and lead better lives.

Today, 90% of India's 1.3 billion populations have a unique Aadhar identity, which is vital for meeting anti-money laundering "know your customer" (KYC) requirements. In the last four years, 330 million new Jan Dhan bank accounts have been opened. Mobile penetration is expected to reach 90% by 2020. Internet penetration has soared, and the use of digital payments is also rising significantly.

These are creditable achievements for the country. However, getting a unique identity, having a bank account and using digital payments are just the foundations of financial inclusion. Now these basics have been addressed, the government and private sector must take the next steps to build a superstructure of economic prosperity.

In this paper, the researcher attempts to understand financial inclusion and its significance for overall development of society and Nation's economy. This study focuses on approaches adopted by government towards achieving the ultimate goal of financial inclusion for inclusive growth in India.

Key words: Financial inclusion, Importance & scope of Financial Inclusion, Government Initiatives for Financial Inclusion, Challenges of Financial Inclusion, key elements for true financial inclusion in India.

Objectives-

- To understand financial Inclusion in India
- To know Importance & Scope of financial Inclusion in India
- To look at Government Initiatives for Financial Inclusion
- To come across the Challenges of Financial Inclusion in India
- To understand key elements for true financial inclusion in India.

Methodology:

The data collected is descriptive. Secondary research was conducted to review the present status of financial inclusion in India. The information and data for the research is collected through primary as well as secondary sources i.e. published articles, journals, newspapers, reports, books and websites.

Rural Development: Challenges & Opportunities for Sustainable Development

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Abstract

India is emerging as a major economy and our cities and urban centers are starting to show signs of prosperity. Unfortunately our development is lonely. In rural areas, I cannot travel with urban India. In rural India, about 68% of the country's total population still lives. No trickledown effect. The benefits of economic development are not shocking to more than a two-third of people. Our performance in such important areas as agriculture, infrastructure development and community and social services and overall rural development is lacking. Economic development in any country depends largely on rural development and helps the economy to grow and sustain.

Keywords: *Challenges, Rural, strategies, Sustainable Development.*

Introduction

India lives in a village. Despite the industrial development that took place in the last one and a half decades since independence, this saying that emphasizes the agricultural character of the Indian economy continues to be true today. The 2011 census estimates about 69% of the country's total population continues to live in rural India So that there is not enough land holding or alternative service to produce or buy essential goods. Despite the lack of employment opportunities, people in rural areas are unable to get



New Challenges for Indian Economy; A Critical Study

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Abstract:

India is the world's fourth-largest economy. It produced \$9.4 trillion in goods and services in 2017. But it has a long way to go to beat the top three: China, with a production worth \$23.2 trillion, the European Union with \$20.9 trillion, and the United States with \$19.4 trillion. In this research paper, research paper explores various challenges for Indian Economy in the year of 2020. There are few economic challenges for the new government than getting investment back on track, failure to do which could imperil India's ambitious growth plans.

Key words: Growth Domestic product, Agricultural development, Governance

Introduction

India has the world's sixth largest economy in measures of GDP. It has the third largest purchasing power in the world. When we talk about the global economy, India is one of its fastest emerging players. Since our liberalization in 1991, the economy has opened up and given us plenty of opportunities to succeed.

(i) Providing Essential Public Services for the Poor:

The most important challenge is how to provide essential public services such as education, health to large parts of our population who are denied these services at present. The performance of education and health sector is disappointing. There are large gaps in respect of educational facilities, health care and in related services such as maternal and child care, clean drinking water and access to basic sanitation facilities for the mass of our population especially the poor who do not have even minimum access.

(ii) Regaining Agricultural Dynamism:

One of the major challenges of the Eleventh Plan must be to reverse the deceleration in agricultural growth from 3.2 per cent observed between 1980 and 1996-97 to a trend average of only 1.5 per cent subsequently. This deceleration is undoubtedly at the root of the problem of rural distress that has surfaced in many parts of the country.

This deceleration is affecting all farm size classes. A second green revolution is urgently needed to raise the growth rate of agricultural GDP to around 4 per cent. The challenge posed is to at least double the rate of agricultural growth. This calls for action on both the demand side and supply side.

(iii) Increasing Manufacturing Competitiveness:

The manufacturing sector has also not grown as rapidly as might have been expected. The average growth rate of this sector has accelerated compared to the Ninth Plan but is unlikely to exceed 8 per cent in the Tenth Plan. It should be targeted to grow around 12 per cent or so if we want to achieve a GDP growth rate of 9 per cent.



Contribution of Agriculture Sector towards A \$5 Trillion Indian Economy

Dr. Rupali M. Deore

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LVH Arts, Science and Commerce College, Nashik-422003
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Contact No.9970456989

Abstract:

As we know that on 15th August 2019, delivering his 6th Independence Day Speech, Prime Minister Narendra Modi expressed confidence that India would be a \$5-trillion economy in 2024. we have set our National economical goal to develop Indian economy to a \$5 Trillion which would be the strongest economy of any other country in the world. Government of India and citizens are in a quest to achieve the 5 trillion economy goal which has been a Golden dream of our Prime Minister. The Former President of India, Late Hon'ble APJ Abdul Kalam has a mission of Super Power Nation or Mission 2020. In this research paper, researcher has tried to enlighten possibilities of how can agriculture sector contribute remarkably to achieve long awaited goal of \$5 Trillion Indian Economy? And challenges and obstacles are also explored by the researcher. Policies and initiatives are being taken by the Indian Government in an order to achieve a \$5 Trillion Economy.

Keywords: Agriculture Sector, \$5 Trillion Indian Economy, Policies and Subsidies in Agriculture Sector.

Introduction:

The agriculture sector of India has occupied almost 43 percent of India's geographical area. Agriculture is still the only largest contributor to India's GDP even after a decline in the same in the agriculture share of India. Agriculture also plays a significant role in the growth of socio-economic sector in India.

An enigmatic economy and an agrarian country where wealth comes from energy and natural resources. Although agriculture is still the great source of earning of the vast majority of Indians for livelihood purposes, it also counts for a shrinking share of the country's economic activity. On the other hand, industry and manufacturing has the potential to create wealth and new jobs, but Indian industrial sector hasn't yet realized its potential. While the technology sector is a symbol of India's economic progress, the irony lies in the fact that the combined workforces of the ten biggest IT firms total less than half the number of jobs at government owned Indian Railways – the country's largest employer.

Government Initiatives

Some of the recent major government initiatives in the sector are as follows:

- In September, 2019, Prime Minister, Mr Narendra Modi launched the National Animal Disease Control Programme (NADCP), expected to eradicate foot and mouth disease (FMD) and brucellosis in livestock.
- In May 2019, NABARD announced an investment of Rs 700 crore (US\$ 100 million) venture capital fund for equity investments in agriculture and rural-focused start-ups

The Legend of Bon Bibi in Amitav Ghosh's *The Hungry Tide*.

Dr. Sandeep A. Wagh

Asst. Prof in English

LVH Arts, Science and Commerce College, Panchavati, Nashik (MS)

Abstract

In the novel The Hungry Tide, Amitav Ghosh uses the legend, a type of folklore known as Bon Bibi to draw a connection between human beings of Sunderbans and the world of nature. The story serves as a melting pot for different cultures but is not very well known outside the Sunderbans. It's important to keep in mind that in the tide country, this story is a major guiding force and is thought of as being absolutely real. This story can mean different things to different people; for some characters in the novel, who doesn't believe in the mythology, the story is nothing more than a fun. For locals, however, the story is a way for them to connect to their history and their way of life in the tide country.

Key Words: Legend, Bon Bibi, Sunderbans, Syncretism.

The main purpose of folklore is to convey moral lessons, present useful information and everyday life lessons in an easy way for the common people to understand. Folk tales sugarcoat the lessons of hard life in order to give the audience pointers about how they should behave. It is one of the best mediums to pass on living culture or traditions to future generations.

Currently, many forms of folk literature have been transformed into books and manuscripts, which we see in the forms of novels, histories, dramas, stories, lyric poems, and sermons. Folk literature is, however, not merely a carrier of cultural values; rather, it is also an expression of self-reflection. It serves as a platform to hold high moral ground without any relevance to present day reality. Instead, writers use it as a commentary or satire on current political and social reality. In the modern academic world, folklores and folktales are studied to understand ancient literature and civilizations.

Folklore is the body of expressive culture, including tales, music, dance, legends, oral history, proverbs, superstitions, and so forth, common to a particular population, that comprise the traditions of that culture, subculture, or group. Scholars who study folklore are often called folklorists. Much of folklore study has been academic, classifying material and identifying original forms. Applied folklorists, on the other hand, use folklore and other traditional cultural material to address social problems. The term "folklore" was coined in 1846 by the Englishman William Thoms, who wanted to use an Anglo-Saxon term for what was then called "popular antiquities." Folklore generally refers to the body of material, in a variety of forms, which expresses the traditions of a particular culture. There is no clear-cut definition of the term "folklore," mainly because academics of different disciplines study the same material from completely separate perspectives. Scholars of literature focus primarily on structure, narrative style, content, and genre, while anthropologists view folklore as a means to understand the views of a culture.

There are numerous different types of folklore, ranging from such diverse examples as jokes and riddles, to animal tales and even some rites of passage. Many genres overlap, and

Understanding Revised NAAC Grading Pattern

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Abstract

National Assessment and Accreditation Council (NAAC), an autonomous institution of University Grant Commission (UGC), it has been merely 26 years since the inception of NAAC, whose Accreditation to Higher Education Institutions (HEIs) in India is mandatory likewise only a NAAC Accredited higher learning institutions are eligible for UGC and other various grants. Moreover, NAAC accreditation determines the quality of the institute in terms of education, infrastructure, research, teaching & learning, etc. NAAC Accreditation helps a learning institution to know its strengths, weaknesses, and opportunities through the various review process, likewise in initiating modern pedagogical methods and in receiving grants from the Government's various bodies. Importantly, it helps students to know details of the educational institution in terms of infrastructure, quality of education, research output, etc. Therein, NAAC Accreditation is indispensable to HEIs in India, and this paper, the prime focus of research has been to unravel the revised NAAC Grading Pattern because, in the end, a 'Grade' determines the quality of an institution.

Keywords: Higher Education Institutions (HEIs), NAAC Criteria, NAAC Grading Pattern, Calculations of Institutions CGPA, Assessment Outcome, NAAC Peer Team Report and Specimen Grade Sheet

Introduction

National Assessment and Accreditation Council, many in academia, is familiar with mostly its abbreviation NAAC. The job of the NAAC is to assess and accredit the quality of Higher Education Institutions (HEIs) in India. Moreover, the NAAC is mandatory for all HEIs in India. India is a very diverse country not only culturally and linguistically but education-wise as well. It is an outcome of the recommendations made by National Education Policy (1986) and the Programme of Action (POA) 1992, which advocated the establishment of a national accreditation body, thus on 16 September 1994 NAAC came into existence, viz. headquarter in Bangalore.

Since its inception, the NAAC has accepted changes and molded itself according to the changing time. NAAC made an upside-down change in its Assessment and Accreditation (A&A) methodology which came into effect from 1 July 2016 and later on in July 2017 Revised Assessment and Accreditation (A&A) Framework was launched, which introduce pre-qualifiers score before peer team visit, an institution must 30% of system generated score to be eligible for peer team visit for which HEIs must submit online their Self Study Report (SSR) and Student Satisfactory Survey (SSS). NAAC, for the first time, introduced a System Generated Scores (SGS) with online evaluation up to 70% and Peer Team evaluation 30%.

**Arun Kolatkar: A Painter of Rustic Maharashtra****Mr. Swapnil Alhat**M Phil Research Scholar,
KTHM College, Nashik-3 [MS]**Abstract:**

India is a country wherein people of various faiths live amicably since ages. Further, India is a birthplace of Hindu, Sikh, Jain and Buddhist religions; ergo Indian people are naturally a bit more religious than others. Due to religious and social restrictions, the masses of Indian society were illiterate and believed in superstitions and this was very rampant after the Independence, mostly for the first three decades. But, Maharashtra has had a long tradition of enlightenment and many saints have commented upon the blindly following of god through their 'Abhangas'. In rural area where livelihood of the people is dependable on farming; simultaneously, in draught affected area where famous deities are and people visit en masse, therefore the natives of religious destinations have commercialized the God itself for their livelihood, hence, we find lot of temples at Jejuri or Banaras, related to the main God. Arun Kolatkar painted all of these and life of the people of Jejuri in his poetic collection Jejuri, in a surrealistic albeit humorous manner likewise he indirectly comments upon the commercialization of religion and god.

Key Words: An Old Woman, A Scratch and Yashwant Rao.**Introduction:**

Arun Kolatkar, an Indian poet of post Independence India, was born in Maharashtra, a state in India, he was a bilingual poet, wrote both in Marathi and English and had influenced Marathi poets of seventies. He grew up in the rural Maharashtra therefore he knew about the village life and religious places and in Western Maharashtra Jejuri is the most popular pilgrimage of the people. He was influenced by the avant-garde movement of Europe and especially then dominant movement of surrealism and existentialism; ergo these two elements are prominently conspicuous in his poems. His Jejuri had influenced the Nissim Ezekiel and Salman Rushdie ergo we find the Ezekiel also focuses upon the rustic life and the superstitions believed by the people. Kolatkar and other poets and writers especially of first three decades after independence endeavoured to educate the society through their writing.

The post independence Indian society was a different one than that of post 1940s. Indian society at that time was largely illiterate and grappled with many superstitions or unscientific beliefs. Kolatkar being a graphic designer by profession aptly painted in social reality of Maharashtra's countryside, as does a painter who draws a painting as it is, without making an addition of his own fantasy, so does Kolatkar depicted the plights people of rustic Maharashtra that too of religious places. His magnum opus Jejuri, a collection of poems, was published in 1976 and won the Commonwealth Writer's Prize in 1977.

Kolatkar has focused upon the problems and hardship of life faced by the people who live in the vicinity of religious places. Jejuri's Khandoba is a family deity of many

ग्रंथालय व माहितीशास्त्र विकासातील माहिती संप्रेषण तंत्रज्ञानाची भूमिका.

संभाजी पुंडलिक व्याळीज,

ग्रंथपाल

लोकनेते व्यंकटराव हिरे कला, विज्ञान आणि वाणिज्य,

महाविद्यालय, पंचवटी, नाशिक - ०३

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सारांश:

भविष्यात मानवी जीवन सर्वार्थाने समृद्ध करण्यामध्ये माहिती तंत्रज्ञानाचा मोलाचा वाटा आहे. माहिती तंत्रज्ञानाचा आजवरचा प्रवास पाहता, भविष्यात मानव संपूर्णपणे या तंत्रज्ञानावर अवलंबून असेल असे चित्र दिसते.

माहिती आणि दळणवळण तंत्रज्ञानात गेल्या काही वर्षांत भारतीय अर्थव्यवस्थेत मोठी वाढ झाली आहे. यापूर्वीही जागतिक स्तरावर या तंत्रज्ञानाचा येत्या काही वर्षांत मोठ्या प्रमाणात वाढ होण्याची शक्यता आहे. सध्याचा ग्रंथालय व माहितीशास्त्र हा एक अत्यंत जटिल व्यवसाय आहे. कारण त्यात अभ्यासपूर्ण आणि तांत्रिक ज्ञान आवश्यक आहे. अशा प्रकारे आधुनिक व्यावसायिक ग्रंथालयाच्या वाचकांना अथवा वापरकर्त्यांकडे भिन्न पैलूंविषयी परिचित असले पाहिजेत. शैक्षणिक ग्रंथालय व माहितीशास्त्र प्रशिक्षणामध्ये अधिक अधिक माहिती स्रोतांद्वारे डेटा अद्ययावत करून योग्य कौशल्ये निर्माण करून मनुष्य शक्तीचा योग्य विकास सुनिश्चित केला पाहिजे. तंत्रज्ञानाचा अद्ययावत करण्याच्या गरजेवर आणि पुरविल्या जाणाऱ्या सेवांसाठी सुसुत्रता आणण्यासाठी सहकार्याची गरज आहे. अनुकूलन असणाऱ्या प्रयोगांची गरज लक्षात घेऊन त्या गोष्टीवर अधिक भर देणाऱ्या नवीन तंत्रज्ञान अवगत करून डिजिटल ग्रंथालयाच्या संप्रेषणासाठी ग्रंथालयांनी पुढाकार घेतला पाहिजे.

मुख्य शब्द : माहिती तंत्रज्ञान, संगणक, संप्रेषण, ग्रंथालय व माहिती केंद्रामध्ये माहितीचे संकलन, संघटन, पुनर्प्राप्ती, दळणवळण तंत्रज्ञान इ.

परिचय:

भविष्यात मानवी जीवनातील अधिकतम क्रिया-प्रक्रिया माहिती तंत्रज्ञानाच्या माध्यमातून पार पाडल्या जातील. जन्म दाखल्यापासून ते मृत्यू दाखल्यापर्यंतच्या संपूर्ण प्रवासातील सर्वच कामे या तंत्रज्ञानामार्फत केली जातात. पंधरा-वीस वर्षांपूर्वीचा काळ आठवला तर आपण रेल्वे आरक्षण, बँकिंग, पारपत्र आवेदन, मुद्रांक नोंदणी, स्थावर मालमत्तेच्या खरेदी-विक्रीच्या नोंदी, नोकरीसाठीची आवेदने, शॉपिंग, विविध प्रकारची देयके चुकती करणे, इत्यादी कामे संगणकाद्वारे

ऑनलाईन करू शकू असे त्याकाळी स्वप्नातही वाटले नव्हते. आज ही तत्सम कामे सर्व वयोगटांतील नागरिकांकडून अत्यंत सहजपणे केली जात आहेत. जे कधीकाळी केवळ अकल्पित होते, ते आज प्रत्यक्षात घडताना दिसत आहे. येणाऱ्या काळात याहूनही अधिक किचकट व गुंतागुंतीची कामे माहिती तंत्रज्ञानामार्फत केली जातील.

उदाहरणार्थ, भारतातल्या पेशंटवरील एखादी गुंतागुंतीची शस्त्रक्रिया अमेरिकेतील एखादा सर्जन रोबोटिक माथनांचा वापर करून ऑनलाईन करू शकेल. किंवा त्याला लागणारी माहिती हि

22. Digital Library: The Source of new Forms of Information

Mr. Vyalij Sambhaji Pundlik

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Nashik.

Abstract

The concept of a digital library is a boon to the 21st century. With the advancement of today's scientific research, there is always a controversy in the world. The library sector is no exception. It is becoming increasingly difficult to find the information you need from within this vast ocean of knowledge. It is safe to say that digital libraries were created by systematic management of information. But with the use of communication technology, any reading material in the world can be obtained. The digital library service is directly accessible to readers.

The creation of the digital library has revolutionized the age of information technology in a way. The library is open to you seven days a week and twenty-four hours a day. And how can you use the library as much as you want? Looking at this advancement in technology, it can be said that the future will be the age of digital library. Dr. S. R. Ranganathan's Fourth Act is helping readers to read time.

Keywords - digital library and literature, technology, internet, information source,

Introduction

The history of the library is very long and varied. Even today, the nature of libraries is changing day by day. The main reason behind this is technology and its increasing use. The increasing use of technology is changing the nature and direction of libraries. Similarly, the resources in the library have also changed a lot. As the nature of libraries changes, their importance, functions and responsibilities are also increasing day by day. Today, libraries are not limited to the exchange of texts or non-textual materials. So their work has become more comprehensive. Libraries seem to be at the forefront of development. Libraries that were once closed are now seen in a modern and universal form due to the development of technology.

Modern libraries are just a click away. Information technology and the internet play a big role in this. Through the latest technology and internet, every person in the society has started

13. Best Practices in Loknete Vyankatrao Hiray College Library: A Study

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Abstracts

The role of libraries is very important in the era of information explosion in the 21st century. Efforts are made to provide maximum services to the students, staff and external readers who use the library. This article discusses the best practices in the library. The role of NAC is very important in the development of Loknete Vyankatrao Hiray College Library in Nashik. That is why an attempt is made to develop the library through the library in terms of Naac. In this paper I have mentioned the best practices to be implemented in the library. Status of Diamond College Collection Development Library. The best practices in this library are library services, internet facilities, book banking facilities, earn and learn, archive development and services, exchange services and free access, reference services, information literacy programs, newspaper clipping services, information display and information services. Attempts have been made to provide information.

Keywords: Best Practices, Library services, NAAC, L V. H. College.

Introduction

Global changes, especially information and communication technology (ICT), affect the functioning of educational libraries. Technological developments have changed the way users expect an educational library. Ways to create collections and services for the reader class or for users are different from previous methods. In order to effectively meet the demands of end users, educational libraries need to adopt better practices. It is important to create a standardized guide based on the best practices employed by libraries that will enhance the value-based services of educational libraries.

Libraries and information services of higher education institutions play a role in enhancing the quality of educational and research environment. The National Accreditation and Evaluation Council (NANC) strives for quality and excellence in higher education. Helps to

The Use of RFID Technology in Libraries and Role of Librarian

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Abstract :

The library states that intellectual property may include journals, books, reports, theses. The purpose of the security system is to provide library staff, library equipment, equipment, library protection and security facilities for security purposes. At the same time, the use of technology is important for increasing efficiency, productivity and user satisfaction due to the application of security systems.

Given the importance of library security, it is important to focus on the use of RFID technology in libraries in the future. The details of the technology, the disadvantages, the benefits and the role of the library are described.

Introduction :

Electronic machines and techniques are used for the mechanics of the library. The mechanization of the library is the use of a machine for work related to repetitive tasks and library services.

Part of that is R. F. Income D. (Radio Frequency Identification) means technology that uses radio waves to automatically detect the individual. The purpose of any RFID system is to transmit data through appropriate electromagnetic or magnetic technology. Commonly known as tags, and completing specific applications by retrieving data through machine means at the right time. RFID is one of the most secure technologies used in industry and academia. The modern educational library is one such place. Where millions of books, magazines, CDs, DVDs, and other electronic reading material are included. Managing it through the library and managing such a huge collection is a challenge.

Rfid Tag is easy and easy to use in library management. Rfid The library management system contains electronic data of the texts, each of which is connected to RFID tags, readers, computer networks and software. In this library system, the giving, returning and sorting of books using RFID tags. The library staff handles all the work. One can search for books in RFID bibliography marked with RFID tags, book identification and searches using RFID reader are monitored or monitored through electronic data in the book's tag.

RFID technology is being implemented in many industries today. Rfid Tagged this tool in large malls as well as retail stores, retailers have begun making it mandatory for their suppliers to tag store-ordered goods. Libraries around the world have begun using RFID to speed up the process of self-investigation, controlling theft and reducing inventory control in libraries. The use of barcode technology has been discontinued and is gradually being replaced by RFID technology. This article provides information on the problems facing librarians and some of the role of RFID.

Requirements for library security: Increase in library use, inadequate library staff use of open door system, overloading of books in library, duplicate service not available in the library. In such cases non-path is followed. There are occasional incidents which are dangerous to the culture of the texts. Like-

डॉ. योगिता हिरे
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प्रास्ताविक : वर्तमान युग में हिंदी ने राज्यभाषा, राजभाषा, राष्ट्रभाषा के साथ आंतरराष्ट्रीय भाषा के रूप में गौरवपूर्ण स्थान पूर्ण किया है। आज पूरे विश्व में सर्वाधिक भाषा बोलनेवाले जनसंख्या की दृष्टि से अंग्रेजी के बाद हिंदी द्वितीय क्रमांक पर आसीन है। आंतरराष्ट्रीय व्यापार, शैक्षिक एवं सांस्कृतिक आदान-प्रदान, पर्यटन हेतु हिंदी भाषा का प्रशिक्षण एवं तालीम प्राप्त करने के लिए विदेशों में महत्व दिया जा रहा है। विश्व के १५० से अधिक विश्वविद्यालयों में हिंदी भाषा का अध्यापन विधिवत हो रहा है। वहाँ स्वतंत्र रूप से हिंदी विभाग कार्यरत है। राष्ट्रीय स्तर पर राष्ट्रभाषा हिंदी हमारे गौरव, अस्मिता एवं राष्ट्रीय एकात्मकता का प्रतीक है तथा उसका महत्व अक्षुण्ण है। आम आदमी के जीवन गौरव, रोजगार पूरक तथा जीविका निर्वाह वृत्ति की दृष्टि से हिंदी भाषा का शिक्षण लक्षणीय एवं उल्लेखनीय है। मनुष्य जीवन के समृद्ध एवं सुखद जीवन स्तर, उसकी आर्थिक सुस्थिरता, सुनिश्चित आजीविका की सुरक्षित मानसिकता, सामाजिक प्रतिष्ठा, सकारात्मक आशावाद एवं अध्येताओं तथा छात्रों को पहुँचाने योग्य उर्जा हिंदी भाषा के शिक्षण में अवश्य ही परिलक्षित है। वर्तमान में हिंदी की उपयोगिता पठन-पाठन और छात्रों को पैठ बनाने के लिए आवश्यक सा हो गया है जो व्यावसायिक स्वरूप उभरकर आया है, उसका उपयोग बाजार में अपनी पैठ बनाने के लिए आवश्यक सा हो गया है। हिंदी में निपुणता प्राप्त व्यक्ति न केवल रचनात्मक रूप से बल्कि व्यावसायिक रूप से भी सफल हो सकता है। इस प्रकार हिंदी भाषा तथा साहित्य के शिक्षण से संभावित रोजगार के विविध अवसर निम्नानुसार दृष्टिगोचर किए जा सकते हैं

- १) **दूरदर्शन :** दूरदर्शन पर हिंदी वृत्त निवेदन, सूत्र संचालन, साक्षात्कार विषयक लेखन एवं प्रस्तुतिकरण, हिंदी धारावाहिक मालिकाओं के लिए कथा, पटकथा, संवाद तथा गीत लेखन आदि।
- २) **चित्रपट :** हिंदी फिल्मों के लिए पटकथा, संवाद, गीत आदि का लेखन।
- ३) **आकाशवाणी :** आकाशवाणी से प्रसारित हिंदी के विविध कार्यक्रमों में संहिता लेखन। नभोनाट्य, साक्षात्कार, प्रश्नावली आदि का आलेखन। वृत्त संकलन, वृत्त निवेदन एवं उद्घोषणा आदि प्रस्तुतिकरण।
- ४) **विज्ञापन :** आकाशवाणी, दूरदर्शन, वी.डी.ओ., मोबाईल, चित्रपटगृह, अखबार, पोस्टर, मोंग्लिन, विज्ञापन संस्थाएँ आदि प्रसार माध्यमों के लिए हिंदी विज्ञापन की संहिता, संवाद, घोषवाक्य, गीत आदि का लेखन। साथ ही प्रस्तुति एवं मॉडेलिंग।
- ५) **अनुवाद :** हिंदी तथा हिंदीतर भाषाओं में परस्पर साहित्य अनुवाद लेखन। अनुवादित साहित्य कृतियों तथा अन्य पुस्तकों को विभिन्न संस्थाओं के पुरस्कार एवं मानदेय का अर्जन। केंद्रीय कार्यालयों, अनुवाद ब्यूरो, बैंकों में अनुवाद कार्य बड़े पैमाने पर जारी है। इस क्षेत्र में रोजगार की अनेक संभावनाएँ हैं।
- ६) **साहित्य सृजन :** हिंदी साहित्य लेखन एवं समीक्षा तथा नाट्य-चित्रपट आदि के रसग्रहण। साहित्य शोध ग्रंथ लेखन। दृक श्राव्य माध्यमों के लिए साहित्य निर्मिति। हास्य काव्य लेखन, हास्य कवि सम्मेलन एवं हिंदी कथाकथन द्वारा भी रोजगार प्राप्त किया जा रहा है।
- ७) **प्रकाशन :** हिंदी साहित्य पाठ्यपुस्तकें, हिंदी पत्र-पत्रिकाएँ आदि का मुद्रण, प्रकाशन, संपादन, मुद्रित-संशोधन आदि क्षेत्रों में उत्तम रोजगार उपलब्ध है।
- ८) **केंद्रीय सेवाएँ :** डाक, तार, आकाशवाणी, दूरदर्शन, ई-मेल, इंटरनेट, दूरभाष आदि के माध्यमों तथा केंद्रीय सेवाएँ, रेल, सेनादल, केंद्रीय लोक सेवा संघ, स्टाफ सिलेक्शन समिति, राजभाषा कार्यन्वयन समिति, केंद्रीय मंत्रालय का गृह विभाग, केंद्रीय अनुवाद ब्यूरो, राज्य तथा केंद्रीय हिंदी साहित्य, अकादमी, केंद्रीय हिंदी विदेशालय, केंद्रीय हिंदी संस्थान, भारतीय जीवन बिमा निगम, केंद्रीय शासन के विभिन्न निगम, अखिल भारतीय तकनीकी शिक्षा परिषद जैसे केंद्र सरकार के निकाय, विदेशी महाविद्यालयों एवं विश्वविद्यालयों में हिंदी का प्रशिक्षण आदि केंद्रीय सेवाओं में हिंदी भाषा शिक्षा को लेकर रोजगार के अनेक अवसर प्राप्त हो सकते हैं।
- ९) **विविध समारोह :** सामाजिक, राजनीतिक एवं सांस्कृतिक हिंदी उपक्रमों एवं समारोहों के आयोजन तथा सूत्र संचालन में भी अच्छे रोजगार प्राप्त हो रहे हैं।
- १०) **राजनीतिक क्षेत्र :** अंग्रेजी से अनभिज्ञ नेता तथा मंत्रिजनों को हिंदी प्रशिक्षण तथा हिंदी सहायक, निजी सहायक, हिंदी दुभाषियों की नितांत आवश्यकता होती है। साथ ही सांसद, केंद्रीय मंत्री तथा राष्ट्रीय राजनीतिज्ञों को हिंदी प्रशिक्षक के रूप में हिंदी भाषा के ज्ञाता छात्रों को रोजगार प्राप्त हो रहा है।

लोकसाहित्य में लोकगीत

डॉ. योगिता हिरे

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लोक साहित्य की परंपरा उतनी ही प्राचीन मानी जाती है, जितनी कि, मनुष्य जाति की है। लोक साहित्य जनता की संपत्ति होने के कारण लोक संस्कृति का दर्पण है। जन-संस्कृति का जैसा सच्चा तथा सजीव चित्रण लोकसाहित्य में उपलब्ध होता है, वैसा अन्य कहीं नहीं मिलता। सरलता और स्वाभाविकता के कारण यह अपना विशेष महत्व रखता है। साधारण जनता का गाना, हँसना, खेलना, रोना जिन शब्दों में अभिव्यक्त हो सकता है, वह सब कुछ लोकसाहित्य में आता है। लोकसाहित्य में हर देश की अपनी सभ्यता एवं संस्कृति, धर्म, रीति-रिवाज, कला-साहित्य एवं सामाजिक आकांक्षाओं का सूक्ष्म अवलोकन लोकसाहित्य के द्वारा सुलभ हो जाता है, लेकिन लोकसाहित्य के बारे में प्रश्न उठता है कि लोक और साहित्य दो शब्दों को मिलाकर लोक साहित्य शब्द बनता है।

लोक शब्द का अर्थ :

लोक साहित्य में ‘लोक’ शब्द का प्रयोग प्राचीन काल से हो रहा है। यह शब्द संस्कृत की ‘लोक’ धातु में ‘ध्वन’ प्रत्यय जोड़ने से निर्मित हुआ। इस धातु का अर्थ है ‘देखना’ इसका लट् लकार में अन्य पुरुष एकवचन रूप ‘लोकते’ होता है। अतः ‘लोक’ शब्द का मूल अर्थ हुआ ‘देखनेवाला’। इसलिए लोक शब्द का अभिप्राय उस सम्पूर्ण जन समुदाय से है, जो किसी देश में निवास करता है। ऋग्वेद के ही सुप्रसिद्ध पुरुष सूक्त में ‘लोक’ शब्द का व्यवहार जीव तथा स्थान दोनों अर्थों में हुआ है। इसी प्रकार पुराणों में भी ‘लोक’ शब्द स्थान के पर्यायवाची के रूप में प्रयुक्त है। ‘लोक’ शब्द से हिंदी में लोग शब्द बना है, जिसका अर्थ है, १) स्थान, २) संसार, ३) प्रदेश ४) जन या लोग, ५) समाज, ६) प्राणी ७) यश ८) दिशा आदि। इस प्रकार उपनिषदों में दो लोक माने गए हैं। इहलोक और परलोक।

संस्कृत साहित्य की तरह हिंदी साहित्य में लोक शब्द के लिए लोग शब्द का प्रयोग ‘सामान्य जनता’ के लिये किया गया है। वास्तव में लोक शब्द हिंदी में अंग्रेजी भाषा के ‘फोक’ शब्द का पर्याय है। जहाँ इस शब्द का प्रयोग अशिक्षित, असभ्य वर्ग के लोगों के लिए किया जाता है, चाहे वे नगरों में रहते हैं या गाँवों में। केवल ग्रामीणों के लिए ही लोक शब्द का प्रयोग स्वीकार्य नहीं है। हजारीप्रसाद द्विवेदी के मतानुसार “लोक शब्द का अर्थ जनपद या ग्राम्य नहीं है, बल्कि नगरों और गाँव में फैली हुई वह समस्त जनता है, जिनके व्यवहारिक ज्ञान का आधार पोथियाँ नहीं हैं” ये लोग नगर में परिष्कृत, रूचि-सम्पन्न तथा सुसंस्कृत समझे जानेवाले लोगों की अपेक्षा की अपेक्षा अधिक सरल और अकृत्रिम जीवन के अभ्यस्त होते हैं और परिष्कृत रूचिवाले लोगों की समूची विलासिता सुकुमारिता को जीवित रखने के लिए आवश्यक वस्तुएँ उत्पन्न करते हैं।”

लोकगीतों की परंपरा :

लोक साहित्य में लोक गीतों का महत्वपूर्ण स्थान है। इनका सम्बन्ध मनुष्य जीवन में आदि से अन्त तक रहता है। जब बच्चा माँ के पेट में होता है, तब से लेकर उसकी मृत्यु तक लोक गीत गाये जाते हैं। उसके हर संस्कार में, खुशीयों में, दुःख में, प्रेम-विरह में, हर्ष-उल्लास में, व्रतों-अनुष्ठानों में, श्रम परिहार में, ऋतु परिवर्तन में हर जगह लोक गीत उसका साथ निभाते आये हैं। इसलिए हर देश में, हर धर्म, हर जाति,