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ABSTRACT BOOK

International e-Conference On New Horizons And Multidisciplinary Applications In Science And Technology

Date : 11th to 13 th October 2021

Organised by

Faculty of Science and IQAC, Shri Vitthal RukhminiCollege, Sawana,
(Tq. Mahagaon Dist. Yavatmal Pin. 445205), Maharashtra, India

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Sawana,Tq.Mahagaon ,Dist. Yavatmal-445205 (Est,1984)
Affiliated to SGB Amaravati University,
NAAC accredited "C" Grade (1.64 CGPA on 4 point scale)

International e-Conference On New Horizons And Multidisciplinary Applications In Science And Technology

(ICMA-2021)

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Shri Vitthal Rukhmini College,Sawana
(Tq. Mahagaon Dist. Yavatmal Pin. 445205)

KEYNOTE SPEAKERS

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Kolhapur

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श्री शिवाजी शिक्षण संस्था, पुसद

जि. यवतमाळ ४४५ २०४

विजयराव पाटील (चोंढीकर)
अध्यक्ष, माजी आमदार

संस्था नोंदणी क्रमांक - एफ ११० यवतमाळ

०७२३३-२४६०३६

जा. क्र.

दिनांक :- १०.१.२०२१

Shri Shivaji Shikshan Sanstha, Pusad is established by Late Deorao Patil Chondhikar with his contemporary friends to provide the rural children basic education. Now the Institution is slowly but gradually growing in this direction as a result in 1984 Shri V. R. College is established to make availble the facilities of higher education for the rural students especially the girls of the region.

I am very much pleased with the Pricipal Dr. H.S. Mahalle and all the faculty members that they are toiling very hard to uplift the rural students to face the challenges of the modern world by organizing this conference, to develop condfidence in them and inculcate the research attitude in them.

The organization of International e-Conference on the topic on of ' New Horizons Multidisciplinary Appication in Scinence and Technology' (ICMA-2021) 11 th to 13 th october 2021 is one more effort to open the doors of research among the students and faculty and they will surely be benefited by it.

It gives me immense pleasure to extend my best wishes for the conference and I am quite sure it will be a grand success.

Best regards

President
Shri Shivaji Skikshan Sanstha,
Pusad Dist. Yavatmal

श्री शिवाजी शिक्षण संस्था, पुसद

जि. यवतमाळ ४४५ २०४

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अनिरुध्द पाटील (चोंढीकर)
सचिव

☎ ०७२३३-२४६०३६

जा. क्र.

दिनांक :-

MESSAGE

I want to congratulate the Pricipal and organising committee for the organisation of International e-conference in our College to be held from 11 October 2021 to 13 October 2021 . I am sure that this conference will be very helpful for the rural studetns and faculty. I am confident that this event will be of high quality in term of academic and research and sure that if will bring drastic change in our rural students.

I belive that the conference will be a grand success.

My hertly best wishes.

(Anirudha Patil Chondhikar)

Best Wishes

I want to express my gratitude for inviting me to the international e-conference in such a rural college. I hope it will enrich the research level of the teachers and students.

My best regards for success ….!

Hon'ble Dr. N. P. Hirani,
(Ex-M L C) Maharashtra,

Indranil Manohar Naik
MLA,
81 - Pusad Vidhansabha Constituency,
Dist. Yavatmal (M.S.)

"Naik Bunglow" Karla Road, Gandhinagar, Pusad Tq.Pusad Dist.Yavatmal - 445204 ☎ 07233-246310,246822,248001 (Fax)

Date: 10 OCT 2021

- Massage -

I am Pleased to know that international e-conference is organiged in your College from 11 Oct.2021 to 13 Oct.2021. The conference is essential for the development of the students. I hope it will help the rural students.

My best wishesfor this conference.

(Indranil M.Naik)

डॉ. वजाहत मिर्झा
विधान परिषद सदस्य
महाराष्ट्र राज्य

शुभेच्छा संदेश

दि. 10/10/2021

श्री विठ्ठल रुक्मिणी महाविद्यालय ,सवना ता. महागाव जि. यवतमाळ आपल्या महाविद्यालयात आंतरराष्ट्रीय अभाषी परिषद चे आयोजन केले आहे. ही अतिशय अभिमानास्पद बाब आहे. सवना सारख्या छोट्याश्या गावात अशी परिषद आयोजित करणे ही गौरवाची बाब आहे. खेड्या पाड्यातील गरजू व होतकरू विद्यार्थ्यांना विद्या दानाचे कार्य या संस्थेच्या माध्यमातून होत आहे. या आंतरराष्ट्रीय अभासी परिषदेचा जास्तीत जास्त विद्यार्थ्यांनी लाभ घेऊन आपल्या ज्ञानात भर पाडून घ्यावी.

या होणाऱ्या कार्यक्रमास माझ्या हार्दिक शुभेच्छा !

आपला

आ. डॉ. वजाहत मिर्झा

Affiliated to Sant Gadge Baba Amravati Unirersity,Amravati
Shri Shivaji Shikshan Sanstha,Pusad Sanchalit

SHRI VITTHAL RUKHMINI
ARTS,COMMERCE & SCIENCE COLLEGE
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Shri.Vijayrao patil (chondhikar)
President
Shri.Shivaji Shikshan Sanstha,Pusad

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www.svrcollegesawana.org

Dr.Hemant Mahalle
M.Sc.,M.Phil.,Ph.D.
Principal

It gives me Immense pleasure to announce hear that our International e-conference "New Horizon's and Multidisciplinary Applications In science and technology, ICMA-2021 has been inaugurated at the hands of our chief guest prof. Dr. S.R.Yadav.

The motive behind organising this International Conference is very clear, to develop confidence to face the challenges of the modern world, to inculcate research aptitude and attitude among the faculty and the students, specially coming from remote region of Vidarbha as our college is located in the rural area, and is affiliated to SGBAU Amravati University Amravati.

It's our duty, to keep them update by organising such conferences, seminars, workshops, Symposium's etc and show them the route towards the overall progress of their personality.

During the Pandemic it was clearly evident that our life has become virtual and highly dependent on the information technology, computers and mostly on smartphones. Science and technology are crucial aspects of our daily lives and without that it is impossible to imagine our lives without science and technology.

India Successfully executed the Mars orbiter mission in its first attempt in 2013 and the successful launch of chandrayan-2 which proves the capacity of Indian scientist and also prove that there is huge scope of research in science and technology.

So as to develop quality education and research culture it is required to focus on fostering students innovative mentality and abilities, for this, we must focus to strengthen the build-up of Basic disciplines such as mathematics, Physics, chemistry and biology and encourage higher education Institutions to set up and focus on basic research and interdisciplinary courses and specialization, training programmes, organize knowledge exchange programmes, frame the inter and intra institutional linkages to boosts up scientific culture which is supposed to be source of science and technology innovation.

I hope and sure numerous scientists, professors, technicians, students will take up this responsibility to enhance the economic and scientific growth of India. As Dr. A.P.J. Abdul Kalam the former president of India said" All of us do not have equal talent, but all we have equal opportunities to develop own talents". Our aim is to provide recent technological developments in all fields of science.

I welcome all dignitaries, our keynote and plenary talk experts, scientist. Professors, principals, staff members, students, conference committee members, International and national organising committee members and technical support staff.

At the end I am also thankful to all for boosting our moral and their strong support for the conduction of this international e-conference ICMA-2021 successfully.

(Dr. Hemant Mahalle)
Principal

Convener Message

It gives me immense pleasure that the Faculty of Science and IQAC of Shri. Vitthal Rukhamini Arts, Commerce and Science College is organizing an "International e-Conference on "New Horizons and Multidisciplinary Applications in Science and Technology (ICMA-2021)" on October 11, 12 & 13 2021.

The conference provides a platform for researchers to exchange ideas for further progress in research and development. Significant contributions by Faculties, Researchers, and Academicians of several disciplines from all over the world has done a commendable job for the betterment of society and mankind.

The urge to look for advancements in research and experimental techniques today is felt in almost every field of science and technology. This conference is a platform where scholars can share their views and ideas on the subjects related to the objectives of conference.

It would be a matter of great satisfaction, not only for the organization but the whole researchers' community to be part of such conferences.

I hope your experience of being a part of this conference will be wonderful. ICMA- 2021 is a venue where exchange of ideas finds you a global partner for collaboration by which you can explore your research experiences. Hopefully, the conference discussions, presentations and contributions play a significant role to update the knowledge in concerned field.

I wish the conference a great success.

Convener
Dr. Swati S. Tathod
Assistant Professor & Head
Department of Botany

Organizing Secretory Message

On behalf of organizing committee of international e-conference on "New Horizons and Multidisciplinary Application in Science and Technology i.e., ICMA-2021". I would like to extend warm welcome to all researchers, academicians, faculties and delegates from all corners of globe.

Our motive behind the conference is to take an opportunity to build networks with other academics and expert in the similar fields of studies around the world and exchange of ideas on recent advances in computer science, Environmental science, cell & molecular biology, plant and animal science, material, agricultural as well as chemical science. The problems that we faced in the 21st century require a broader view of scientific culture. In that context the contribution from basic sciences with strong multidisciplinary research has increasingly become essential paradigm for the development and survival of the world. As the faculty of science & IQAC of our college feel that the multidisciplinary approaches should take center stage while applying advancing and disseminating science and technology. Therefore, faculty of science and IQAC of our college decided to organize three days e-conference entitled "International e-conference on New Horizons and Multidisciplinary Application in Science and Technology" i.e. ICMA-2021 on 11th ,12th and 13th October 2021.

The main objective of the conference is to update the recent development of knowledge and practices in basic sciences and to enhance and promote multidisciplinary research as a tool to overcome challenges in the coming decades. The research in basic science that transforms into technologies always help's society to live in better environment, to inculcate the research atmosphere in campus and impart the benefits of science and technology to the last hut of the society. Scientists, teachers, research scholars and the student shall address challenges and share information regarding restoration, projects, programs and Research across the world. ICMA-2021 is multi-disciplinary conference aims to bring together scientists, faculties, researcher's and students to involve in the above said processes.

I wish the conference great success.

Mr. R.N. Ingole
Organising Secretory ICMA-2021
Assistant Professor & Head Department of Chemistry.

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Principal
Shri. Vitthal Rukhmini College Sawana

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Assistant Professor Department of English
Shri. Vitthal Rukhmini College Sawana

INVITATION

Dear Sir/Madam

It gives us immense pleasure to cordially invite you to participate in an International e-conference on "New Horizons in Multidisciplinary Application In Science and Technology-2021" organized by Shri Vitthal Rukhmini Arts, commerce and science College Sawana, Tq-Mahagaon District Yavatmal.

ABOUT INSTITUTION

Shri Vitthal Rukmini Arts, Commerce and Science college Sawana is established in 1984 with Arts faculty and in 1985 Commerce. The mission of the college is to provide the facility of higher education for the economically backward class of the society especially the girl's students of the region. Keeping in mind the need and demands of the students, the college has started science faculty in 2009. The college is located in a small village which is surrounded by more remote villages. So from a humble beginning, the college has become a leading academic institution in the region. The college offers education in three disciplines viz. Art, Commerce, and Science. It is the greatest endeavor of the institution to build self-confidence in the students and inculcating in them and the confidence to accept the global challenges of the world, The college has been assessed and accredited by NAAC Bangalore.

ABOUT CONFERENCE

From Learning and knowledge management system to mobile social platforms, there are many technologies and knowledge from basic science that support formal and informal learning and the performance of an individual. The research in basic science, that transforms into technology, always helps society to live in a better environment. To inculcate the research atmosphere in campus and impart the benefits of science and technology to the last hut of the society. Scientists, teachers, researchers, and the students shall address challenges and share information regarding restoration projects, programs, and research across the world.

ICMA-2021 is a multidisciplinary e-conference aims to bring together scientist, faculties, researchers and students across the world to involve actively in the above said process.

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(Principal)

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(HOD Botany)

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- Organometallic Chemistry
- Catalysis
- Nano Chemistry
- Physico-Chemical Aspects
- Nanomaterial
- Nanotechnology
- Material Science
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- Luminescence materials
- Thin Film and Polymer
- Laser and X-rays
- Applied Physics
- Nuclear Physics
- Renewable sources of Energy
- Biomaterials and Biosensor
- Electrodynamics
- Semiconductor
- Taxonomy
- Ethnobotany
- Molecular biology
- Genetic Engineering
- Applied Entomology
- Toxicology
- Palynology
- Mycology

ABOUT COLLEGE

Shri Vitthal Rukmini Arts, Commerce & Science College, Sawana is the fulfillment of Late Balasaheb Deshmukh Sawanekar's long cherished dream to provide higher education to the rural people especially the girls of Mahagaon Taluka. As there was no facility of higher education for the girls in the region keeping this in mind the college was established in 1984 by Shree Shivaji Education Society Pusad under the able guidance of Shri Vitthalrao Deshmukh Sawanaker, Deoraoji Patil Chondhikar (Ex MLC) and Vijayraoji Patil Chondhikar (Ex. MLC).

The college, established in 1984 with 38 students had only Arts stream. Subsequently, commerce stream was started in 1985. To encourage the most rural Students for higher education the college constructed a small hostel for boys. The vision and zeal of late Shri Balasaheb Deshmukh Sawanekar founder of the college dedicated efforts of Vijayraoji Patil Chondhikar and Shree Shivajirao Deshmukh Sawanekar have contributed to the growth of the college. Due to the more demand for the admission the college has started section for B.A. First year in year.

In the year 2009 we have started the Science faculty to fulfill the need of the students in the region. Hon'ble Shri Shivajirao Deshmukh Sawanekar has taken utmost efforts to start the Science stream. The institution is engaged in Imparting education to students from different corners of Mahagaon Taluka and nearby region. Our approach also involves working with parents to meet the individual needs of every student, and supporting them to fulfill their academic and co-curricular goals.

The institution is engaged in the task of transmission of knowledge through organizing seminars, conferences, workshops, Science exhibition, Poster presentation, competitive examination classes, Extra coaching for weak students, Social work through NSS etc.
It is also my goal to make the rural students' responsible citizens of the country. This small college has been bestowed with a team of dedicated, efficient teaching and non-teaching staff. The college has separate library with more than 3000 books are available for the students, staff & local readers.

Its gives great pleasure for me to invite the rural Boys and Girls students in this Academic campus for their overall development.

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PLENARY TALK

Structure and function of Photosystem I – with my contribution on this research field

Shin-Ichiro Ozawa (IPSR, Okayama Univ.)

Oxygenic photosynthesis produces oxygen and assimilates carbon dioxide sustains photosynthetic organism growth that results in the global environment formation for the present living things and donates positive feedback to each other. Photosynthetic organisms evolved for billions of years and converged into the present oxygenic photosynthetic organisms. The essential photosynthesis components localize in the chloroplast that is one of the organellar in the cell. The thylakoid membrane structure and the void space (stroma) are found in the chloroplast. Thylakoid membrane is organized precisely to form stacking (grana) and internal space (lumen). Most of the light-activated enzymes are embedded in the thylakoid membrane. There are two types of essential photosynthetic protein complexes, known as Photosystem I (PSI) and Photosystem II (PSII). These two protein complexes make strong electron potential under the light and simultaneous electron transfer reaction occurs across the thylakoid membrane. Importantly, it is observed that augmentation of proton concentration at lumen coupled with electron transfer. This proton gradient across the thylakoid membrane is essential to produce ATP by chloroplast ATP synthase. Moreover, the two photosystems have two distinct roles in the system. The PSII is specialized to supply electrons to the thylakoid membrane to initiate electron transfer reaction, by catalyzing water to evolve oxygen at lumen. The PSI functions as a terminal of the electron transfer and provides electrons for Ferredoxin (Fd) of which electron is transferred to Ferredoxin NADP reductase and ultimately NADPH is formed. The ATP and NADPH are utilized in various stromal metabolic reactions therefore PSI provides electrons directly to stromal enzymatic reactions. For decades, many studies revealed the molecular architecture of PSI and PSII. The PSII structure is highly conserved between photosynthetic organisms while PSI structure and functions have diverged. That suggests the function and structure of PSI is a biological strategy result to adapt the habitat environment for oxygenic photosynthetic organisms. In other words, the diverged PSI system reflects plasticity and the limitless possibility of photosynthesis. Here I will present structural divergence of PSI including my published works with my messages for the coming next-generation scientists.

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PLENARY TALK

Entropy-Driven Binding of Gut Bacterial B-Glucuronidase Inhibitors Ameliorates Irinotecan-Induced Toxicity

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The World Health Organization GLOBOCAN database indicated that colorectal cancer is the third most common cancer globally. In Taiwan, a high-fat and low-fiber catering culture has caused colorectal cancer to rise steadily, which seriously threatens people's health. More than half of colorectal cancer patients are diagnosed at stage 2 or later and therefore must receive chemotherapy. Although chemotherapy effectively kills cancer cells, the side effects also cause pain for patients. Irinotecan is the first-line chemotherapeutic agent for the treatment of metastatic colorectal cancer, and SN-38 is its active metabolite that blocks DNA replication by inhibiting type I topoisomerase, leading to cell death. SN-38 is converted to SN-38-glucuronide by UDP-glucuronosyltransferase in the liver to facilitate drug excretion. However, microflora-encoding β-glucuronidases (GUSs) are notorious for reversing the glucuronidation to release SN-38 in the intestinal lumen and thus represent the major cause of undesirable effects. Among patients taking irinotecan, 87% suffer from severe delayed diarrhea, and ~10% become dehydrated, whereas ~3.5% are at high risk of death owing to neutropenia. We reported small molecule inhibitors against microbial GUSs to alleviate the side effects of chemotherapy drugs.

Because microbial GUSs and human GUS (HsGUS) are highly conserved, type VII mucopolysaccharidosis occurs when HsGUS deficient. To selectively target microbial GUSs, the research team synthesized a series of uronic isofagomine (UIFG) derivatives based on structure–activity relationships that act as general, potent inhibitors of bacterial GUSs, especially those of Escherichia coli and Clostridium perfringens. The best inhibitor, C6-nonyl UIFG, is 23,300-fold more selective for E. coli GUS than for human GUS (K_i = 0.0045 and 105 μM, respectively). Structural evidence indicated that the loss of coordinated water molecules, with the consequent increase in entropy, contributes to the high affinity and selectivity for bacterial GUSs. The inhibitors also effectively reduced irinotecan-induced diarrhea in mice without damaging intestinal epithelial cells.

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PLENARY TALK

Microbial diversity as a potential resource of novel antibiotics to treat the AMR bacterial infections

Dr. Tushar Lodha

Scientist NCMR-NCCS Pune, India

Antimicrobial resistance (AMR) by bacteria is rising threat to public health and the environment. As yearly seven lakh people die due to the infection of drug-resistant diseases, World Health Organization (WHO) has recognized AMR as 'one of the biggest threats to global health'. To tackle the multi-drug resistant pathogen infections there is a need to discover novel antibiotics. Environment is the richest source of medicines and tiny creature (microbes) are one of them. It has been projected that microorganisms encompass $>10^9$ unique metabolites. The bacteria are skilled producer of numerous bioactive compounds which are not just limited to use as antibiotics, ~~microbial metabolites,~~ but are also used in fungicides, insecticides, organ transplantation, cancer treatment, and anti-parasitic. India has a marvelous biodiversity in terms of both animals and plant. But the prokaryotic diversity is poorly studied in India. Bacterial richness in the environment is enormous and only a small fraction (~1%) of prokaryotes can be cultured in the laboratory. Next -generation sequencing data showed that there is tremendous diversity that was never cultured in laboratory. Till date majority of bacteria are hard to culture under the current laboratory conditions. Access to the uncultivated bacteria that live in environment will improve health through an improved understanding of the role played by these microorganisms with the ability to culture them. Accessing this missing diversity is vital for two key reasons; (1) It likely plays significant roles in the function of the biosphere, (2) It quite possibly represents an untapped mine of bioactive compounds. Therefore, it is important to explore the microbial diversity using novel culturing methods and make available novel phylotypes of microorganisms which produces novel natural products that could benefit various aspects of human health.

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PLENARY TALK

Innovations in post genomic era and emergence of new biology

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In the post genomic era there is a paradigm shift with the development of contemporary approaches in systems biology and synthetic biology. The integrative biological investigations involving "bottom-up approaches and synergistic collaborative processes in the laboratory simulated atmosphere have given a new understanding to systems structure, systems dynamics and control methods. It's the integrated outcome of biogenic molecules phenomenon leading to process of self- organization, multiplication, growth and metabolic activities. The flow of information and its complexity in biological systems can be traced to functional properties of molecules and emergence of properties of biological order. Systems biology approach involving tools of synthetic biology provides a significant mechanism to understand most mysterious process of nature the origin and evolution of life on the earth and elsewhere. Abiogenesis of a photo-autotrophic system in the laboratory simulated possible prebiotic atmosphere and its catalytic properties will be discussed.

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PLENARY TALK

What a Waste: Need of Inorganic Waste Management.

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According to a report, annual production of solid waste around the globe is close to 1.3 billion tons and it is projected that it will reach 3 billion tons by year 2025. The waste management annually cost $205 billion and it is estimated that it will reach $400 billion in 2025. Solid waste has a significant impact on the environment and on humans. Uncollected and poorly managed waste contributes to the flood, air pollution and serious health impact. The modernization of society increases the consumption of inorganic materials which leads to many inorganic wastes. The inorganic waste includes paper, plastic, glass, industrial ash, slags. These wastes partly get recycled and most of the time they end up in dump yards/ landfilled. As an example, around 76 % of glass waste end up in landfilled as their chemical compositions are not suitable for the conventional recycling route. Our approach deals with the recycling of inorganic waste by novel methods towards the green economy. Novel alkali activation technique unable one to recycle inorganic waste and utilize them as the construction materials. These materials have significant potential for scientific breakthrough and science renewal. The inorganic waste management is necessary to avoid incalculable risks to humanity and for better tomorrow.

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PLENARY TALK

Nanostructured materials for photo-electrochemical water splitting

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With the ever-increasing population, in our not-so-distant future, the global energy consumption is also going to steadily increase to beyond manageable magnitude. At the moment, our major source for energy are the fossil fuels such as oil, coal, natural gas etc. Aside from the depleting fossil fuel levels another disconcerting factor for us in this regard is the bi-product of burning these fossil fuels; green-house emission in the form of CO2. Nuclear source of energy such as uranium and thorium are not very earth abundant. This leaves us with the option of renewable energy resources. Now, among the renewable energy resources the one that has captured the most attention is solar energy. The sun provides the amount of energy in an hour that is equivalent to our global energy consumption in a year. Efforts are on to develop new energy storage mechanisms for sunlight. Of a particular interest is water splitting process which is a thermodynamically uphill process requiring 1.23 V/e-. Thus, a two-electron transfer reaction to produce H2 from water can require 2.46 V and, in a photo, -assisted mechanism the solar energy can be conceptualized as being stored in the hydrogen bonds. When required, this energy can be readily harvested by running the reverse reaction of burning hydrogen to produce electricity. Additionally, the by-product from burning hydrogen is water which is environmentally benign and if properly managed can be utilized as further raw material for the same. Now, one of the major challenges in water splitting is the electrodes that comes with the electrochemical part of it. The selection of the semiconducting material is of critical importance for fabricating an effective electrode. The material should have appropriate band gap (≥ 2.0 eV), strong visible light absorption, a suitable band edge position in order to carry out the water oxidation and reduction reactions chemical, electrochemical and photostability in aqueous medium, fast charge carrier (electron and hole) transport properties and low cost, just to name a few essential qualities. Nano structuring can be really helpful in these aspects as it can assist in manipulating band gaps of suitable materials to a reasonable region or it can create interesting morphology or defect structures that can either help in smooth charge transfer or create new trap centres. Various materials have been explored for such purposes and various nano-morphologies have been explored so far with various degrees of success. This presentation will attempt to shed a bit of light on the progress achieved so far and the basic concepts behind it.

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Internet of Things (IOT) : Exploration Defies and Future Solicitations

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ABSTRACT

As the Internet of Things (IoT) evolves as the next phase of the Internet's growth, it's becoming increasingly important to define the numerous possible areas for IoT applications, as well as the research issues connected with these applications. IoT is projected to infiltrate practically every facet of daily life, from smart cities to health care, smart agriculture, logistics and retail, and even smart living and smart ecosystems. Despite the fact that current IoT enabling technologies have vastly improved in recent years, there are still a slew of issues that need to be addressed. Many research issues are sure to occur because the IoT concept is based on heterogeneous technologies. IoT is an important research issue for studies in numerous related domains such as information technology and computer science because it is so broad and influences nearly every aspect of our life. As a result, the Internet of Things is paving the way for new types of research to be conducted. This paper highlights future uses and research issues as well as the recent progress of IoT technologies.

Keywords: Internet of Things (IoT), IoT applications, ecosystems, heterogeneous technologies.

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Traditional Phytomedicines and Their Antibacterial Activities from Mahur Forest

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ABSTRACT

Ethnomedicinal survey with traditional herbal practitioners from tribal communities has been conducted in mahur forest during 2018-19. It is found that, some of the forest plant species are used as ethnomedicines by the practitioners to overcome the health issues locally. This paper mainly focused on the ethnomedicinal (Traditional) uses and antibacterial activities of some forest plants. Traditional phytomedicines of Wrightia tinctoria, Sapindus emarginatus and Cyathocline purpurea are recorded. Among these Wrightia tinctoria proved the highest antibacterial activity against tested bacteria.

Keywords: Traditional Phytomedicines, Antibacterial activity, Mahur forest.

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An Application of Cloud Base Data Storage with Data Integrity

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ABSTRACT

Cloud computing has been envisioned as the de-facto solution to the rising storage costs of IT Enterprises. With the high costs of data storage devices as well as the rapid rate at which data is being generated it proves costly for enterprises or individual users to frequently update their hardware.Cloud storage moves the user's data to large data centres, which are remotely located, on which user does not have any control. However, this unique feature of the cloud poses many new security challenges which need to be clearly understood and resolved. One of the important concerns that need to be addressed is to assure the customer of the integrity i.e. correctness of the data in the cloud. This paper provides a scheme which gives a proof of data integrity in the cloud which the customer can employ to check the correctness of the data in the cloud.To support efficient handling of multiple auditing tasks, and further explore the technique of bilinear aggregate signature to extend that main result into a multi-user setting, where TPA can perform multiple auditing tasks simultaneously. Extensive security and performance analysis show that the proposed schemes are highly efficient and provably secure.

Keywords: aggregate, cloud, CSP, paradigm, TPA

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An Analysis of a Two Dimensional Continuous Non-Linear Dynamical Systems

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ABSTRACT

The prediction of physical phenomenon commonly observed in nature has been a tough challenge before the scientists and mathematicians all over the world. A careful mathematical modeling of such events has helped us to predict the physical state of a system given the current state. Non-linear dynamical systems like mass-spring systems, electrical circuits, chemical reactions, predator-prey models, Lorenz equations, damped driven pendulum, Van der Pol oscillator, and many more have been studied by many mathematicians and physicists and the strange behavior, so called chaos, has been observed in such systems. As an example of a chaotic dynamical system, we have considered the Duffing oscillator, which is an extremely forced and damped oscillator. In this paper, we have analyzed the dynamics of the Duffing oscillator. We have constructed the differential equation of the motion of the Duffing oscillator, obtained its critical points and classified them in reference to their stability. Also, we have obtained the solutions for different initial conditions and different ranges of parameters and concluded that the system exhibits chaotic behavior.

Keywords: Dynamical systems, nonlinear oscillators, equilibrium points , period doubling, chaos.

Mathematics Subject Classification: 37, 37C, 37C05, 37C10, 37C20, 37C25, 37C27, 37C35, 37D, 37G.

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Study of Physicochemical Parameters of Drinking Water from Degloor Tehesil, District-Nanded (MS)

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ABSTRACT

As water plays essential role in human life, so it is very important to know the quality of water. In view of this, we have collected 10 drinking water sample from different villages of Degloor tahesil, district Nanded (MS), having different sources such as bore well, well, River, ponds, hand pump to study it's suitability for drinking purpose. Physico-chemical Parameter such as Temperature (T), P^H, Total Dissolved Solid (TDS), Total Hardness (TH), of drinking water was determined. Result shows that most of the parameters are within permissible limit given by WHO, but some samples requires some purification process.

Keywords: Physico-chemical Parameter, Water Samples, Water quality standards.

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Effects on Ultrasonic Velocities, Densities, Viscosities & Refractive Indies of Nicardipine Hydrochloride at Different Temperatures

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ABSTRACT

Densities, viscosities, refractive indices and ultrasonic velocities of the Nicardipine hydrochloride drug were measured over the entire mole fractions at (88.210, 74.561, 72.157& 68.108) K. From these experimental results, excess molar volumes VE, viscosity deviation Δη, refractive index deviation ΔnD, deviations are calculated. It was found that in all cases, the data obtained fitted with the values correlated by the corresponding models very well. The results are interpreted in terms of molecular interactions occurring in the solution.

Keywords: Viscosity; Density bottle, Refractive Index; Ultrasonic Velocity; Molecular interactions.

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Toxic Effect of Aqueous Extract of Curry Leaves on Erythrocyte Sedimentation Rate in Fish, Channa Punctatus

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ABSTRACT

In the present investigation, the effect of sub- lethal concentration of Curry leaves aqueous extract on fish Channa punctatus was studied after 24 hrs, 48 hrs, 72 hrs and 96 hrs exposure. Different concentrations of Curry leaves 5ppm/ lit, 20ppm/lit) were used against erythrocyte sedimentation rate (ESR) and results showed the gradual increase in the ESR, ranging (7.22-8.00 mm\hrs) for 15 pm/lit for (24 hrs - 96 hrs) and (7.46-8.36/lit) for 20ppm/lit, respectively.

Keywords: Curry leaves, Erythrocyte Sedimentation rate, Channa punctatus.

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Assessment of Water Quality - A Case Study of Umarkhed Area

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ABSTRACT

A study of physico-chemical and microbial properties of water sample is done in the regions of Umarkhedtehesil of district Yavatmal state Maharashtra. Some water samples were collected from different regions having different sources and physico-chemical properties were analyzed like hardness, TDS, pH, conductivity, Chloride, Sulphate, D.O. & C.O.D etc. The MPN count resulted from the bacteriological study of these samples has given the information regarding the suitability of the water for drinking and other domestic applications. The results are studied comparatively and conclusions regarding the use of such waters are made.

Keywords: COD, DO, TDS, Physico-chemical properties

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Report of a Fossil Wood of Mimosoideae from the Latest Cretaceous Sediments of Maharashtra, India

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ABSTRACT

A petrified fossil wood described in the present paper is collected from Mahurzari of Nagpur District and lies at 21° 14' N., 79° 1' E. which is about 20 kms from Nagpur. So far there are fossil records from the Deccan Intertrappean sedimentary of Mahurzari which is of uppermost Cretaceous to lower Eocene age.

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Physicochemical Analysis of Soil from Some Farms of Ghatanji Region of Yavatmal District in Maharashtra

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ABSTRACT

The yield of the crop is dependent of the type of the soil and proper cultivation. Hence it is necessary to study some parameters of the soil. So in the present study is undertaken to determine the physico-chemical characterstics of some samples of soil from some farms of nearby village of Ghatanji region, Dist Yavatmal. The soil characterization was carried out for the parameters like pH, conductivity, chloride, sulphate, sodium, potassium. The variation of values were observed in the different Parameters due to the soil quality in different places.

Keywords : Conductivity, Chloride, Sulphate, Sodium, Potassium, Carbon.

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Review on Corona Virus, Pandemic, Precautions and Treatment; Current Situation in India

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ABSTRACT

There is a new public health crises threatening the world with the emergence and spread of 2019 novel coronavirus (2019-nCoV) or the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The virus originated in bats and was transmitted to humans through yet unknown intermediary animals in Wuhan, Hubei province, China in December 2019. There have been around 97,000 reported cases of coronavirus disease 2019 (COVID-2019) and 3400 reported deaths to date (05/03/2020). The disease is transmitted by inhalation or contact with infected droplets and the incubation period ranges from 1 to 14 d. The symptoms are usually fever, cough, sore throat, breathlessness, fatigue, malaise among others. The disease is mild in most people; in some (usually the elderly and those with comorbidities), it may progress to pneumonia, acute respiratory distress syndrome (ARDS) and multi organ dysfunction. The case fatality rate is estimated to range from 2 to 3%. Diagnosis is by demonstration of the virus in respiratory secretions by special molecular tests. Common laboratory findings include normal/ low white cell counts with elevated C-reactive protein (CRP).

Keywords: 2019-nCOV, SARS-CoV-2, COVID-19, Pneumonia, Review

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Variation in Total Dissolved Solids (TDS) Of Groundwater of Arni Town, District-Yavatmal (Ms) India during Period of June 2020-May 2021

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ABSTRACT

Water is life. Groundwater is considered as purest and majorly available source of water. It is used to fulfill 50% urban and 80% ruler water demand in India besides irrigation. Total Dissolved Solids, also known as TDS, are inorganic compounds that are found in water such as salts, heavy metals and some traces of organic compounds that are dissolve in water. Total dissolved solids (TDS) are a measure of the combined total of organic and inorganic substances contained in a liquid. This includes anything present in water other than the pure H20 molecules. These solids are primarily minerals, salts, and organic matter that can be a general indicator of water quality. Arni is a town (Taluka) with (Administrative Division) & Tahsil in Yavatmal district of Maharashtra State in India. As groundwater is prominently used to fulfill domestic demands hence quality of groundwater must be checked time to time in order to supply safe drinking water. In this paper, one attempt has been made to study of variation in total dissolved solids of water of Arni Town, District-Yavatmal (MS) India over a period of 1 year from June 2020 to May 2021. TDS range of groundwater in Arni city is found to be acceptable and fair.

Keyword- water, total dissolved solids, groundwater, variation in total dissolved solids of water of Arni Town, District-Yavatmal (MS) India.

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Viscosity Behaviour of 2-Aryl-2-Dihydronaptho (1, 8-Ef) (1, 2, 4)-Triazepine-3(4H) Thiones in Different Percentages of Solvent

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ABSTRACT

The viscosities and densities of several 2-Aryl-2-dihydronaptho(1,8-ef)(1,2,4)-triazepine-3(4H) thiones(VI a-e) have been obtained in good yield after the isomerization N-(1H-naptho) (1,8-cd) thiadiazepine-3(4H)-ylidene anilines (Va-Ve). The viscosities and densities of these synthesized compounds (VI a-e) in different percentages of acetone- water, ethanol-water, dioxane-water mixtures have been measured. From the data obtained the relative viscosities have been calculated which are used to measure the molecular interactions in the solutions and to study the viscosity behavior of substituted 2-aryl-2-dihydronaptho(1,8-ef)(1,2,4)-triazepine-3(4H) thiones on the basis of the presence of different substituents.

Key words – Viscosity, Substituted triazepine-3(4H) thiones

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Evaluation of Antibacterial and Antioxidant Properties of Indigenous Cow Urine

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ABSTRACT

The article was emphasized on evaluation ofantibacterial and antioxidant potential of indigenous cow urine.Cow urine collected from rural area undertaken for analysis to establish antibacterial and antioxidant activity using agar well diffusion as well as DPPH assay. The zone of inhibition against test bacterial strains and DPPH assay hasrevealed promising results which confirms that the cow urine as a potent therapeutic agent. The presence of lipase enzyme in urine makes it highly potential anticancer agent which can be detectedby performing thin layer chromatography (TLC) and titrimetric method.

Keywords: Cow urine, antibacterial activity, antioxidant activity etc.

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Deltamethrin Pesticide Residues: Extraction by QuEChERS Method and Analysis by GC-MS/MS

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ABSTRACT

To ensure low pesticide levels in food the present studies was undertaken wherein samples of pigeonpea seeds procured from the field of experiments at the time of harvest of kharif crop of 2013-14 were studied for the residues of deltamethrin, a widely used insecticide in Vidarbha belonging to class synthetic pyrethroid. Pesticide residues were extracted using QuEChERS method and then analyzed through GC-MS/MS. Residues of deltamethrin in pigeonpea seeds in the samples of crop sprayed with 0.0014, 0.0028 and 0.0042 per cent deltamethrin were found below detectable limit (BDL) of 0.01 ppm for all the three concentrations .Considering the maximum residue limit (MRL) 1 mg/kg for pulses as specified by CODEX, the evaluated spray treatments of deltamethrin 2.8 EC can be considered most safe to the consumers.

Keywords: Deltamethrin, GC-MS/MS, Insecticides, MRLs, QuEChERS, Residues

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Protein Profile Pattern in Gamma Irradiated Wild Pea

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ABSTRACT

Genetic Variation in germplasma has important role in identification of varieties. Electrophoreticpattern of protein fraction are directly related to the genetic background of the protein and be used to certify the genetic make-up SDS-PAGE (SDS-Polyacrilamide gel electrophoresis) is valid technique increasingly being utilized as an approach for species identification, Each variety or an approach for species identification .Each variety or a group of varieties exhibit characteristic protein banding Pattern thus on the basis of the pattern they can be identified accordingly.

Keywords: SDS- PAGE, Protein, Banding pattern

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Analysis of Physico-Chemical Parameters and Ground Water Quality of Some Villages in Lonar Taluka of Buldana District, Maharashtra, India

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ABSTRACT

The ground water quality and some of its physico-chemical parameters were analyzed of different localities in some Village of Lonar Taluka, district Buldana, Maharashtra. The water samples analysis involved pH, TDS, temperature, Alkalinity, nitrate, total hardness. The water samples were collected from different localities of the village and analyzed for the suitability of drinking purposes. It was found that the water samples were found not suitable for drinking and domestic purposes directly without prior treatment.

Keywords: Ground water quality, physico-chemical parameters, etc.

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New Image Processing Technique for Automatic Detection of Nitrogen in Cotton Plant

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ABSTRACT

This paper proposes method for nitrogen estimation using color image analysis from cotton plant. In this study we developed new image processing technique to estimate nitrogen content in cotton plant. We collected images of cotton leaves with the camera and applied image processing techniques. We applied different function for estimation and find (R+B)/G gives good correlation of r=0.98 within minimum time and less cost than other methods.

Keywords: Color Image Processing, RGB Functions, Regression Analysis, Nitrogen Estimation, Cotton

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Role of Librarian in the 21st Century in the Changing World of Digital Environments

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ABSTRACT

Today, the walls of a library are giving way to digital environments to establish the links with information and virtual. Information is a valuable resource. The traditional libraries should be transformed into hybrid libraries focused on providing information collected in the form of books and electronic sources to survive and meet the need of end users. In this paper describes the role of librarian in libraries, which have collection in form of e- books, digital documents and various databases and common access to the internet. Modern libraries are creating the society of knowledge. The librarians are constantly open to any changes in their field and eager to improve their skills and knowledge.

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Synthesis, Characterization and Antimicrobial Study of Manganese (II) Complex of 2-(Furan-2-Yl)-5-Hydroxy-4 H-Chromen-4-Ones

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ABSTRACT

The synthesis of Manganese (II) metal complex has been synthesized by using novel 2-(furan-2-yl)-5-hydroxy-4H-chromen-4-one ligand. The ligand was prepared by the Claisen-Schmidt condensation method of 2,6-dihydroxy acetophenone and 5-methylfurfural. The structure of the complex has been characterized by the analytical data, conductivity measurement, magnetic moment, UV-Vis spectra, IR and XRD analysis. Analytical data shows 1:2 stoichiometry and the magnetic moment, suggests that Mn (II) complex has octahedral geometry. The conductivity data revels that the complex is non electrolyte. Antimicrobial study of complex with selected bacterial strain and fungal strain carried out and the results have been compared with commercial standards. The Mn (II) complex shows moderate to good Antibacterial and Antifungal activity.

Keywords: IR, XRD study, Physico-chemical property, Magnetic Susceptibility and Conductivity, Antimicrobial activities.

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Effect of Water Pollution of an Organism Godavari River Nanded District Maharashtra State

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ABSTRACT

Water Pollution is the major problem in Maharashtra as well as other states in India. Due to the water pollution a large number of aquatic plants and animals are affected. They suffer from various diseases and also respiratory problems. The term water pollution control is used to indicate the control of pollution of water from any source. The man requires clean water for drinking purposes to promote healthy living. Near about 71% of earth's surface is covered by water. The total Volume of water on the earth is 1011 million cubic kilometers; only 2.5 to 3% is fresh water which is able for drinking purposes.

Water contains various types of different inorganic and organic substances that are harmful for living organisms including also human beings. Domestic sewage industrial wastes, oily wastes, radioactive wastes, and also agricultural wastes etc affects pure water and water become polluted. Role of human beings is to control water pollution by avoiding supply of unwanted wastes.

Key words: Godavari River, different pollutants, aquatic Organism (plants and animals)

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Effect of Extracts of Various Plant Parts on Seed Mycoflora and Seed Germination of Brinjal Var. Manjri Gotya

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ABSTRACT

The common and dominant seed borne fungi were found to be inhibitory for seed germination and caused great loss in seedling vigor, seed and seedling rots of the **Brinjal var. Manjri Gotya**
The root stems, leaf and bark extracts of some common and easily available plants were screened for the Bio-control of the seed mycoflora of the Brinjal.
Root, stem and leaf extracts of all the test plants were found to be inhibitory in more or less degree for the incidence of seed mycoflora while with a few exceptions, they were found to be stimulatory for seed germination

Key words: Solanum melongena, seed mycoflora, seed germination, seedling vigor, seedling emergence, leaf extract.
Short running title- Bio control of seed mycoflora and seed germination

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Synthesis of Heteryl Amino Derivatives of Bis[5-Cyano-1,6-Dihydro-6-Imino-2-Isopropyl-4-(Methylthio) Pyrimidine] Diazene

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ABSTRACT

Study of the synthesis of heteryl amino derivatives of bis[5-cyano-1,6-dihydro-6-imino-2-isopropyl-4-(methylthio) pyrimidine] diazene we have obtained low yield at room temperature than the reaction carried out at the reflux condition.

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Green Thiocyanation of Aryl Aldehydes Using Ethyl Methyl Imidazolium Chloride

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ABSTRACT

A green method for thiocyanation of aldehydes using 1-ethyl-3-methyl imidazolium chloride ionic liquid as a catalyst, provide environmental friendly and simple protocol for thiocyanated aldehydes as major outcome in short reaction time. Different substituted thiocyanated aldehydes are the sole outcomes of this method. These thiocyanato aldehydes are useful intermediates in the synthesis of heterocycles bearing sulfur, in which the thiocyanate group will be readily altered into other sulfur-containing compounds.

Keywords: Emim[Cl],Aldehydes, Ammonium thiocyanate, RT (Room Temperature)

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Agro Medico Study of Melghat Region

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ABSTRACT

Melghat is known as paradise of Vidharbh .Melghat means the 'meeting of Ghats 'which is just what the area is, a large tract of unending hills .The forest of Melghat is mostly of the Dry Mixed Deciduous type and one of the important forests of Vidharbh region .The Melghat forest has great diversity of medicinal plants. Present study includes the study of agro medico study of this region.

Key words: Medicinal plants, Melghat Forest.

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Yield and Proximate Composition of Pleurotus Sajor - Caju

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ABSTRACT

Pleurotus sajor-caju wascultivated on different agro wastes viz. soybean straw, paddy straw, wheat straw, jowar straw, sunflower stalk and bajra strawto study the productivity and proximate composition of fruiting bodies. Soybean straw showed significantly highest yield (with 81.00% B.E.), maximum protein (25.90%), fat (2.80 %), and ash (7.40%) content. Significantly maximum moisture content was found (88.30 %) on wheat straw, carbohydrate content on Jowar (58.20%) straw, crude fiber content (7.90 %) on paddy straw.

Keywords: P.sajor-caju, B. E., yield, agro waste, fruiting body.

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E-Learning, M-Learning & Information Literacy : Role of Academic Library

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ABSTRACT

The rapid growth of ICT & rising computer knowledge / skills of the students have laid very strong foundation for the appearance of new & more sophisticated educational from such as E-Learning, M-Learning. Today information is an important resource for organizations, business & every walk of our life. To identify, retrieve, analyse& effective use of information is required skill set for employees or users, which is know as Information literacy skills. This paper digs in evaluate the concepts of E-Learning , M-Learning& Information Literacy.

Keywords: E-Learning, M-Learning, Information Literacy

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A Survey : Impact of Covid-19 Pandemic on Educational Sector in India

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ABSTRACT

The impact of pandemic COVID-19 is observed in every sector around the world. The educationsectors of India, as well as the world, are badly affected by this.The end of March 2020 recorded the spread of covid 19 pandemics to over 185 countries and resulted in the closure of over 95 percent of all schools, colleges, and universities impacting close to approximately 350 million students.Around 32 crore learners stopped moving schools/colleges and all educational activities halted in India. COVID-19 pandemic lockdown has worked as a catalyst for educational institutions to grow and opt for online platforms with advanced technologies, which have not been used before. Entrance tests of several universities and many competitive examinations are held in such a crucial period that is affecting the education system badly. In the present study,data collected by using a semi-structured questionnaire via the Google survey form was shared with the study participants through an online platform by schools and collegestudents, servants, farmers, businessmen, and others (Total=247) from which 131 males and 116 females.This paper highlights somemeasures taken by the Government of India to provideseamless education in the country. Both the positive and negative impacts of COVID-19 on educationare discussed and some fruitful suggestions are also pointed to carry out educational activities during the pandemic situation.

Keywords: Education, COVID-19, Impact, University, Government of India.

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Alum Catalyzed Synthesis of Dimethyl 1-(2-Chloroquinolin-3-Yl)-2, 2-Dicyanoethylphosphonate from 2-Chloroquinoline-3-Carbaldehyde

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ABSTRACT

An efficient solvent free method was developed for the synthesis ofderivatives of dimethyl 1-(2-chloroquinolin-3-yl)-2,2-dicyanoethylphosphonate from 2-((2-chloroquinolin-3-yl)methylene)malononitrile, obtained from 2-chloroquinolin-3-carbaldehydes by using dimethylphosphite in the presence of alum as catalyst at room temperature. All the synthesized compounds were characterized by IR, 1HNMR, Mass spectroscopy.

Keywords: - 2-chloroquinoline-3-carbaldehyde, Knoevenagel condensation, Michael addition, dimethylphosphite, Alum.

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Determination of Organochlorine Pesticides Residues From Water Samples Collected From Lower Pus Dam, Veni (M.S.)

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ABSTRACT

The contamination of organochlorine pesticides (OCPs) from the selected surface water of Lower Pus dam at Veni in Mahagaon Tahesil of Yavatmal District was investigated to estimate the current status of Organochlorine Pesticide residues in water. In this study water samples were collected from various locations of lower pus dam veni in two seasons during the year 2019. The Endosulfan, DDT & DDE were the most frequent detected compounds in the water. The concentration of the Endosulfan pesticides residue was found in the range of 0.03-0.04 µg/L, DDT in the range of 0.04-0.05 µg/L and DDE in the range of 0.01-0.02 µg/L. The Chlorodane and Heptachlore pesticide residues were found in very low concentration.

Key Words: Organochlorine , Pesticides, Lower pus dam.

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Application of Yogic and Nutritional Aspects: Enhancing Sports Performance

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ABSTRACT

Yoga, the old Indian discipline is principally a profound science. Today, yoga tracks down its utility in numerous circles of human existence. Sports are no special case for it. Yoga is productive in conveying the physical, mental and moral wellness expected of sports faculty, in this way building up that yoga is a flexible framework applicable to a reformist society. Furthermore, yoga additionally delivers to build up the guideline of widespread unity among sports people. Nourishing science, then again gives significant data on the right sort of food decisions, dietary propensities and the need of healthful supplementation for individuals in the field of sports. This paper endeavors to draw out certain parts of yoga and nourishment that play a part in augmenting sports execution.

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Insects Pests Management : Prevention and Control

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ABSTRACT

An effective and reasonable irritation the board relies upon the information on the procedure, bug science and bug biology in agroecosystem. This section features the essential ideas and standards of feasible bug the executives that depend on distinct objectives, appraisals of populace size, assessment and correlation of accessible administration choices and checking just as assessment of rehearsed the board exercises/techniques concerning and costs. Characterized objectives decide better and fitting accessible administration alternatives in a predominant circumstance; populace gauges help in deciding activity edge and choosing time span for commencement important activities. Viability of accessible control alternatives in specified time span, natural and social outcomes and money saving advantage proportion can help in positioning out the proficient, practical and ecofriendly the executives techniques. This section centers around the key ideas and standards, reasonable systems and different methods of bug the board.

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Studies on Ethonomedicinal Properties and Ecological Aspects of Leucas Aspera Linn Plant

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ABSTRACT

This study indicates that Leucas aspera extracts have good antidiabetic activity. Ethanol and Petroleum ether extracts of Leucas aspera exhibited significant anti-hyperglycemic activities. The current piece of work is a focus on micro level study and is purely based on contents in leaf of **L. aspera** in Nagpur region which is use in medicine as well as cosmetics. Basically Aromatic plants of family Lamiaceae that is **L. aspera** have aromatic smell and its aroma which is a characteristic features of family Lamiaceae. **L. aspera, is** commonly known as **Dronapushpi**. In this work I got six compounds in leaves of L.aspera which is use as medicine as well as cosmetics industry. These are **9,9 trimethyloctahydrbenzo(d) cycloprop(c) oxepin-2,4-dione,3-Buten-2-one,3-methyl-4-(1,3,3-trimethyl-7-Oxabicyclo[4.1.0]heptan-1y, Tetratriacontane ,Hexacosane, Heptacosane, Tetratetracontane** Also I got 1.33 % gm of aroma oil found in 100 gm leaves of L. aspera. L. aspera is a wild herb or shrub which is having medicinal value to a great extent and is available abundantly in field of India **Conclusion-** Natural herbs help in preserving and enhancing the beauty and personality of human beings. Natural Cosmetics and personal-care products may contain ingredients whose safety is unknown or which are known to create health risks. The present review focuses on the ethnobotnical potential of herbal extracts for cosmetic purposes. Natural cosmetics general term applied to all preparation and external conditioning and beautifying the body.

Key Words: Leucas aspera ,Ethnobotany, Cosmetics, antidibetic activity

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Eco-Friendly Synthesis of Quinoxaline Derivatives Catalysed By Zinc Triflate

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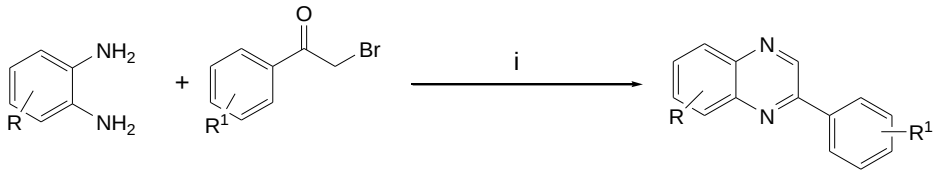
ABSTRACT

Quinoxaline nucleus based nitrogen containing compounds have wide applications in pharmaceutical and paint industries. Some antibiotic structures constitute the quinoxaline moiety. For the synthesis of such important class of derivatives, a simple and efficient method is developed. The reaction between substituted phenacyl bromide and benzene 1,2 diamine catalysed by Zinc triflate in water solvent. The method is eco-friendly; require mild reaction condition, easy work up procedure and good yield are the main features of the method.



1 2 3a-3x

Scheme 1: Reagent and conditions: (i) 10 mol% $Zn(OTf)_2$, 5 mL water, 70-80^{0}C.

Keywords: quinoxaline, phenacyl bromide, benzene 1, 2 diamine, zinc triflate.

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Rheostat Effects of Leaves Extracts of Some Indigenous Plants on Household Insect Pests, Red Imported Fire Ant, Solonepsisgeminata Fabricius

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ABSTRACT

Red imported fire ants are dominant in altered areas and live in a wide variety of habitats. They can be found in rain forests, disturbed areas, deserts, grasslands, alongside roads and buildings, and in electrical equipment. Colonies form large mounds constructed from soil with no visible entrances because foraging tunnels are built and workers emerge far away from the nest. The highest mortality rate and repellent activity was noted at 10% ethanolic plant extract of Ipomea cornea (Beshram) among the plants used for experiments. The evaluation of experimental data revealed that Azadirachta indica (Neem), Ipomoea carnea (Beshram) and Vitex negundo(Nirgudi)the plants species synthesized numerous volatiles known to exhibit toxic, insecticidal and repellent properties to the household pests. Testing of the ethanolic extract of plants leaves for the control of household pest help in the development of new synthetic insecticides which do not appears post hazard effect on human. The laboratory experimental evaluation of the leaves of commonly occurring of such indigenous plants shows highest toxicity and repellent activities against the red imported fire ant, Solonepsisgeminata. Theexperimental resultsindicate the potential of ethanolic plant extracts to control the commonly occurred household pest red antsas compared with the commercial highly toxic, synthetic pesticides such as Boric powder and Lindane.

Key words: Solonepsisgeminata, Ethanolic plant extract, toxicity, bioformulation.

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Comparative Study of Mobile Devices Based on Query Processing in Mobile Environment

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ABSTRACT

The main objective is to investigate the performance improvement of mobile query processing, focusing on the server and client sides. In server side query processing, we consider single-cell and multi-cell queries, whereby a cell is a service area for a single stationary host to communicate with a static network. A quick response in answer to a mobile query is important, because mobile users invariably move to another location while awaiting the query result. The application of query processing will change the way of user interaction and it also increase working performance for better user workability. This paper is a brief description on comparative study of different devices and Implementation of query processing in their environment. This paper explains and considers various attributes of the devices. The paper also covers suggestions with respect to query processing mechanism for performance improvements within minimum time in mobile computing environment.

Keywords- Query processing, mobile computing, mobile devices, mobile environment, mobile database

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Drinking Water Quality Analysis of Water Samples Collected From Manora Region, Dist. Washim

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ABSTRACT

For the drinking water quality analysis, the samples were collected from the different regions of Manora which includes Tap water, Tub well, and Well water for observation of Physico-chemical analysis. The in-vitro test of the collected water samples was performed for analysis of different parameters such as water temperature, pH, dissolved oxygen, total dissolved solids, Conductance, Chlorides, and Phosphates. The obtained data were compared with the standard unit given by BIS. The results of this study tell that physico-chemical parameters are within maximum permissible limit of WHO and BIS. Therefore, water is safe and suitable for domestic and drinking purposes after some treatment.

Keywords: Physico-chemical analysis, Manora region & Drinking water standards.

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Association of MyCoFlora with Soybean Seed Their Significance and Management

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ABSTRACT

Seed mycoflora of Soyabean (Glycine max L.) seeds were examined in agar plate, blotter method and found the association of fungi i.e., Aspergillus niger, Aspergillus flavus, Fusarium oxysporum, Fusarium moniliforme, Macrophomina phaseolina,Sclerotium rolfsii and Alternaria alternata. Seed mycoflora and their culture filtrate caused considered reduction in seed germination and seedling growth. Effect of fungicides, bio-agents and Phyto-extracts on seed mycoflora, germination and vigour index of Soyabean was also evaluated. Seed treatments improved seed germination, vigour index and reduced seed borne mycoflora.

Keywords: Soybean, seed mycoflora, seed germination, vigor index.

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Extraction of Phytochemicals and Study of Their Antimicrobial and Antioxidant Activities of Leaves of Spilanthes Acmella L

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ABSTRACT

The pharmacological activities of any plant is because of the presence of primary metabolites, secondary metabolites. Spilanthes acmella could also be an important medicinal plant commonly mentioned as akarkara plant with rich source of therapeutic constituents. By chewing the leaves or flowers, it produces a numbing effect to the tongue and gums so it's called as toothache plant. In soxhlet extraction technique Extraction solvents was heated in the bottom flask, vaporizes into the sample thimble, condenses in the condenser and drip back. When the liquid content reaches the siphon arm, the liquid contents emptied into the bottom flask again and the process is continued. Gram positive bacteria Staphylococcus aureus NCIM 2079, Gram negative bacteria Escherichia coli NCIM 2109, Fungi (Yeast) Candida albicans NCIM 3471, Fungi (Mould) Aspergillus niger NCIM 545 are used as reference Strain for antimicrobial activity. Antioxidant activity was tested by DPPH method.

Extracts of leaves of Spilanthes acmella L. using Chloroform, ethyl acetate and methanol solvents exhibited potent antimicrobial activity against Escherichia coli, Staphylococcus aureus, Candida albicans and Aspergillus niger. The Chloroform extract showed highest antimicrobial activity against Escherichia coli with zone of inhibition of 25.24mm and 10.54 against Staphylococcus aureus. Potent activity against Aspergillus niger with zone of inhibition of 19.12 mm. Antioxidant activity was tested by DPPH method. The use of herbal crude drugs, in tracts and their remedies have significantly increased throughout the world. Phytochemical extraction by Soxhlet apparatus is very effective time saving and solvent saving Technique. The scientific and authentic researches can be done in order to exploit traditional knowledge of medicinal plants.

Keywords: Phytochemicals, Spilanthes acmella L., hot extraction, Soxhlet, Chloroform extract, antimicrobial, antioxidant activity, etc.

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Computer Science in Compulsory Education Curriculum

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ABSTRACT

Computers have become a part and parcel of life and with it we have seen various new applications of computers and developed a new field of science i.e. "Computer Science". Computer Science is not only a study of programming languages but it is also a study of design and use of computer for application of the theory from different fields. Artificial Intelligence, Virtual Reality, Big Data Analytics, Networking, etc. are a few prominent uses of Computer Science that are seen to be having immense potential for developments in future. Since there has been a major focus shift on technology, including Computer Science as a compulsory subject in the education curriculum is very important. Many education curriculum have been designed based on the present use of technology but are being offered as an optional subject, whereas Computer Science can no more be viewed as a secondary subject and should be a necessary qualification irrespective of the field of study a student chooses to pursue. This paper highlights the main reasons for the subject to be included as a compulsory education curriculum. Not only does the paper highlight the reasons but it also states the significance of Computer Science in the future.

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Combustion Synthesis of Ce^{3+} Activated Blue-Emitting $KBaPO_4$ Phosphors

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ABSTRACT

Blue emitting $KBaPO_4$: Ce^{3+}phosphors sample is prepared using combustion synthesis method. Spectroscopic properties of Ce^{3+} and integrate the Ce^{3+} ion with host inorganic material show interest for most of the applications in photoluminescence studies. Prepared sample of $KBaPO_4$: Ce^{3+}carried out for emission and excitation spectra for photoluminescence measurement. XRD, morphology, absorption band and concentration of Ce^{3+} ion with emission intensity are reported in present work. Structural and morphological studies confirm phase and purity of prepared sample with crystalline in nature. PL spectra of Ce^{3+} due to the 4f–5d transition of Ce^{3+} ions peaking at 330 nm. Chromatic properties index with the help of the emission spectra with color coordinate of sample observed in blue region. The photoluminescence emission spectra of $KBaPO_4$: Ce^{3+}phosphor exhibit blue emission band centered at 440 nm.

Keywords: - XRD, Photoluminescence, morphology, chromatic, stability temperature, emission and excitation spectra.

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Exploration and Assessment of Wild Vegetables of Jalgaon Jamod, Dist. Buldhana (Maharashtra)

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ABSTRACT

Wild vegetables those occur naturally not only provide source of carbohydrates and proteins but also help to fill up deficiencies of many micronutrients, vitamins and minerals, which are not present in our regular vegetables. Present investigation concerns with exploration of such wild edibles from Jalgaon jamod region. About 40 different wild vegetables contributed to 29 families scored during the investigation. These annual or seasonal vegetables make part of regular diets of local inhabitants and tribal peoples. Maximum vegetables were belonged to amaranthaceae (10%) family followed by caesalpiniaceae (8%), euphorbiaceae (8%), portulacaceae (5%), malvaceae (5%), rutaceae (5%) and fabaceae (5%). While about 21 remaining families contribute only 3%. Present research will provide visibility to these wild nutritional crops and encourage their further evaluation for possible nutritional and pharmaceutical benefits.

Keywords: Wild vegetables, Jalgaon jamod, Annual, Seasonal, Tribal peoples, Amaranthaceae etc.

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"Physicochemical Analysis of Water from Various Sources in Umarkhed Region"

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ABSTRACT

Water is perhaps the most precious natural resource after air. Though the surface of the earth is mostly consisting of water, only a small part of it is usable, which makes this resource very limited. This precious and limited resource, therefore, must be used with prudence. As water is required for different purposes, the suitability of it must be checked before use. Also, sources of water must be monitored regularly to determine whether they are in sound health or not. Poor condition of water bodies is not only the indictor of environmental degradation, it is also a threat to the ecosystem. In industries, improper quality of water may cause hazards and severe economic loss. Thus, the quality of water is very important in both environmental and economic aspects. Thus, water quality analysis is essential for using it in any purpose. After years of research, water quality analysis is now consisting of some standard protocols. There are guidelines for sampling, preservation and analysis of the samples. Here the standard chain of action is discussed briefly so that it may be useful to the analysts and researchers. Key Words: Water Quality Monitoring, Water Quality Assessment, Water Quality Analysis, Chain of Custody

Keywords: Drinking water, water quality parameters, underground water.

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"Chemical Analysis of Drinking Water in Dhanki Region Ta- Umarkhed, Dist- Yavatmal"

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ABSTRACT

The objectives of this study are to analyze the underground water quality of Greater Dhanki Region by water quality index. The most important 11 physico-chemical and biological parameters such as Calcium, Magnesium, Chloride, Sulphate, Total Hardness, Berium, Total Dissolved Solids, Alkalinity collected from 10 different locations since a period of 2021. In this study 80% water samples were found good quality and only 20% water samples falls under moderately poor category. The water quality index ranges from 15.47 to 62.65. Therefore there is a need of some treatment before usage and also required to protect that area from contamination.

Keywords: Water quality parameter, Underground water, Drinking water,

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"Some Traditional Genotypes of Jowar from Osmanabad District of Maharashtra State"

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ABSTRACT

Jowar is the major crop after sugarcane and maize of Osmanabad district. Present paper deals with some traditional genotypes of Jowar found in Osmanabad district. Most of them are rare. They are used as medicinal plants and economically very important. It is the need of time to conserve them for the use of next generation. In present paper the traditional genotypes of Jowar like Jot, Lakdi, Maldagdi, Maldandi and Shendri are discussed.

Key word: Traditional, Genotype, Jowar.

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Using Machine Learning Techniques to Detect Distributed Denial of Service Attacks

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ABSTRACT

Machine learning (ML) is used for network intrusion detection because it is predictable after training with relevant data. ML provides a great way to detect new and unknown attacks. There are many types of network intrusion attacks; however, this document focuses on distributed denial of service (DDoS). DDoS attacks are the most destructive attacks, which will disrupt the safe operation of basic services provided by different organizations in the Internet community. These attacks are becoming more and more complex, and the number is expected to increase, which makes detecting and combating these threats challenging. Therefore, an advanced intrusion detection system (IDS) is needed to identify and recognize abnormal behavior of Internet traffic. This research combines well-known clustering methods such as Naive Bayes, Multilayer Perceptron (MLP), and SVM, uses decision trees and various classification algorithms, to detect DDOS attacks.

Keywords: Classification, Distributed Denial of Service, Machine Learning,

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Comparison & Correlation of Some Pulses Mycoflora in Different Storage Bags

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ABSTRACT

Among Various leguminous crops geern gram [Vigna radiate,(L)] and black gram[Vigna mungo,(L.)] are the important pulses crops cultivated in Marathwada region of Maharashtra. The crops have been reported to suffer from various types of disease and majority of them are known to be caused by fungi which are seed borne in nature. The term pulse mycoflora or seed borne fungi is used for both qualitative as well as quantitative analysis of fungi occurring on or in the seed.

In present investigation attempts have been made to study pulses mycoflora responsible for various pulses abnormalities and toxify its content in different storage containers like Paper bag, Polythen bag, Gunny bag, and Polythene Coated Gunny bag.

Key words:-Storage, Mycoflora, Pulses, bags.

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Yogic and Nutritional Benefits of Sports Performance

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ABSTRACT

Derived form the sankrit word yuji meaning yoke or union, yoga is an ancient practice that brings together mind and body practicing yoga is said to come with many benefits for both mental and physical health though not all of these benefits have been backed by science. nutrition is a topic of constant change and has grown as a dynamic field of clinical study. Nutrition plays a very vital role in our life. Yoga and Ayurveda had laid down the foundations of dietetics. The valuable guidelines regarding various food articles and diet for Yoga Sadhaka, to achieve maximum benefits, are given in traditional yoga texts like Hatha Pradipika and Gheranda Samhitha. Now is the time to evaluate the place of nutrition in Yoga and to study how the dietetic principles in yoga will help to eradicate the national problem of Mal-nutrition and poverty which is the pressing need of the moment

Keyword:-yoga, nutrition, performance

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Effect of Synthesis Techniques on VUV Properties of Eu^{3+} Doped YVO_4 Phosphors: A Comparative Study

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ABSTRACT

The europium doped yttrium vanadate (YVO4:Eu3+) doped phosphor have been synthesized by two different techniques viz., solution combustion (CM) and solid-state diffusion (SSD) techniques. X-ray diffraction patterns confirm the formation of a pure phase in the samples synthesized by both the methods; however, the luminescence intensities of the samples are different under vacuum ultraviolet (VUV) excitation i.e., 147 and 172nm. The effect of synthetic technique is also seen on morphology of materials studied with the help of scanning electron microscopy, which shows an agglomeration and increase in particle size with increasing calcination temperature in case of SSD. The luminescent properties of the synthesized material have been studied by using synchrotron radiation. The photoluminescence (PL) results clearly show the strongest red emission peak at the wavelength around 618 nm. The highest luminescent intensity is obtained for the sample prepared by the CM method compared to SSD method. It is also noted that wavelength of 172 nm is more efficient than the 147 nm for excitation of YVO4:Eu3+.

Keywords: Yttrium Vanadate, Combustion Synthesis, Solid State Diffusion, VUV Luminescence

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In Vitro Antimicrobial Activity Of 3-Thio-4-Aryl-5-Tolyl-[1, 2, 4]– Dithiazolidines [Hydrochloride]

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ABSTRACT

A series of novel 3-thio-4-aryl-5-tolyl-[1, 2, 4]-dithiazolidine [hydrochloride] have been synthesized by the interaction of several Ammonium aryl dithiocarbamate with N-p-tolyl-S-chloro isothiocarbamoyl chloride in refluxing chloroform medium. These compounds were screened for their antibacterial and antifungal activities against–E. coli, P. vulgaries, S. aureus, S. typhimurium, K. pneumonie, Ps. aeruginosa, A. niger and C. albicance.The newly synthesized compounds have been characterized by analytical and IR, ^{1}H NMR and Mass spectral studies.

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Study of Potential Energy Curves for Ground State of GaCl, GaBr, GaF and GaI Molecules

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ABSTRACT

The diatomic molecules Gacl, GaBr, GaF and GaI, are spectroscopically studied by the many workers. The accurate ground state constant of these molecules, derived from latest Fourier transform spectroscopic analysis are used to construct the RKR curves. The Hulbert-Hirschfelder, extended Rydberg and Zavistsas potential energy functions are used and are compared with their respective RKRV curves. The error curves are also studied.

Keywords: Potential energy curve, Diatomic molecule, extended-Rydberg, H-H, Zavitsas Potential

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Ethnobotanical Studies of Wild Edible Plants Used By Tribal of Jawhar Taluka, Palghar (M.S.)

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ABSTRACT

Ethnobotany is the study of relationship between people and plants. It is a new discipline studying the knowledge and traditional practice of the indigenous and ethnic societies in conservation and use of biodiversity for human health and nutrition. Ethnic peoples are using this approach of including food of medicinal and nutritional value in their diet since ages. Keeping this view in mind, the present study has been carried out in tribal dominated Jawhar taluka of Palghar District in the year 2019-21. Jawhar is a mainly tribal region and different tribes like Thakur, Kokana, Mahadev Koli, Dhor Koli, Katkaris and Varli live in this region. During the study 58 medicinal & edible plants from 32 different families were identified from study location which is used by tribal peoples as home remedies to cure various ailments. The common & painful diseases like, jaundice, anemia, piles, diarrhea, skin diseases, intestinal worms, menstrual irregularities, snakebite, diabetes, dysentery, typhoid fever, urinary stones, scabies, cough, cold & bacterial infections etc. are cured by using the traditional medicines.

Keywords: Ethno-botany, Jawhar, wild edible plants', tribals

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Green Synthesis of α-hydroxyphosphonates by using DES Catalyst

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ABSTRACT

Synthesis of series of bioactive α-hydroxy phosphonates (2a-i) stirred by the benevolent choline chloride-based Urea a deep eutectic mixture wasemployed as an efficient and green ionic liquid catalyst for solvent free condition at room temperature. The current approach to generate sustainable catalyst in place of volatile organic compounds to 2-chloroquinoline-3-carbaldehyde (1a–i) with triethylphosphite. The reaction is furnished in short time and products were obtained in good yield.

Keyword- α-hydroxy phosphonates, deep eutectic mixture, volatile organic compounds

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Automation and Monitoring of Greenhouse with Arduino

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ABSTRACT

Automation and monitoring of greenhouse is very beneficial for farmers in India, especially in rural India. The main objective of this work is, to develop a simple and cost-effective system which monitor and control the environmental parameter in the greenhouse to maintain the best possible environment for crops and to get maximum yield. This system is also minimizing the labor cost of farmers.

Keywords: Greenhouse, Arduino

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Synthesis of Substituted 2-Amino-4-Pheyl Thiazole Derivatives for Anti-Microbial Applications

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ABSTRACT

In present work a novel series of Substituted 2-Amino 4-Pheyl Thiazole has been synthesized from 2-Chloro, 1- phenyl Ethan-1-one and Thiourea on refluxing in ethanol. The reaction was monitored on TLC plate, the synthesized compounds are confirmed on the basis of elemental analysis and spectroscopic data such as IR, H1NMR etc. these compounds screened for in-vivo Antibacterial activities against a strain of E-Coli, B. Subtilis ,

Keywords: 2- Amino 4-Pheyl Thiazole, E-Coli, B. Subtilis etc

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Einstein A- Coefficient of Isomer 3 of C_5H_2 Molecule

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ABSTRACT

Laboratory formation of four isomers of C_5H_2 molecule is reported. For identification of a molecule in cosmic objects, one of the required input data is Einstein A- coefficients (radiative transition probabilities) for the molecule. Here, we report Einstein A- coefficients for electric dipole transitions in the isomer 2 of C_5H_2 among the rotational levels of the ground electronic and ground vibrational states up to 21 cm^{-1}.

Keywords: C_5H_2 molecule, isomers, molecular data.

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Metabolic Profile of Cassia Auriculata L. Extracts by High Performance Liquid Chromatography

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ABSTRACT

Present study involvescharacterizationof medicinallysecondary metabolitessuch as phenolic compounds namely Ellagic acid, Catchol, Gallic acid, Quercetin, anthrquinone were detected byqualitative High Performance Liquid Chromatography (HPLC) analysis. Cassia family is well known source of anthrquinone glycosides and its derivatives in the various parts of plants. The simple high performance liquid chromatography method was developed and validated for the determination of anthrquinone in the extract from Cassia auriculata. The extracts were analyzed on C-18 column isocratic mobile phase in HPLC equipped with UV detector at 270 nm. The limits of detection obtained for the analyte were in the range of 2.5 to 1.5µg/ml.

KEYWORDS: HPLC, Cassia auriculata, phenolic compounds.

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Study of Structural Impact on Annealed CDs Thin Films by Spray Pyrolysis Method

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ABSTRACT

A thin film of CdS is use for in the fabrication of hetero-junction solar cell. The CdS thin film deposited by spray pyrolysis technique shows the direct band gap 2.4 eV on glass substrate of different thicknesses. CdS thin films were annealed in air from 1000C about 3 hours.. The XRD reveled that the films were polycrystalline in nature and with hexagonal phase. The crysternality of the films was improved by annealing in air at 1000 C.

Key Words: Annealed CdS, Spray pyrolysis, XRD, thin film,

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HPTLC Profiling and Antimicrobial Studies of Some Commonly Used Indian Spices

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ABSTRACT

Indian medicinal system is one of the most believable and traditional system of medicine in the world where we find importance of spices and condiments in daily life. Spices have been in use as food additives since ancient times. They are used as flavoring agent and also as preservatives. Most of the spices are indigenous in origin with characteristic aroma and strong taste. These spices not only add flavor to dishes but also they have lots of medicinal properties. By considering their polyvalent significance in present investigation we have made an attempt to study antimicrobial potential and HPTLC profiling of Curicumalongi, Cinnamomumverum, Cuminumcymenium, Piper nigrum.Chromatographic analysis (HPTLC) showed presence of several phytochemical compounds with variable Rfvalus and concentration. The antibacterial activity showed significant growth inhibition against Escherichia coli,Staphylococcus aureus, Staphylococcus epidermidis, Pseudomonas aeruginosa, Streptococcus pyogenes, andStreptococcus pneumoniae.The mixture of phytochemical compounds present in the extracts might be responsible for the antibacterial activity against these bacteria. The results obtained support the application of these spices in several traditional ethnomedicinal applications. Furthermore, HPTLC fingerprint developed may be useful in the correct identification of these spices and in detecting adulterations in preparation of commercial spice pockets.

Key Words: HPTLC, Antimicrobial Activity, Spices.

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Fermentation of Banana Must Using Mango Fruit Inoculums

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ABSTRACT

Wine was prepared from eight different varieties of banana (Khozikodu, Karpurchakra keli, Palaykondan, Alpan, Pisang celyan, Lamby, Karpurvalli and Ardhapuri). Alcohol% of the wines produced using different varieties of banana were found to be in the range of 4.34 to 7.89. Highest Alcohol % observed was 7.89% in wine produced using ardhapuri variety.The Ardhapuri variety in which more alcohol production was found was used as reference in this study. This study was performed to investigate the effect of mango fruit must inoculum on fermentation of banana wine. The banana must was prepared from pulp of ripe banana fruits of Ardhpuri variety. Pectinase enzyme and potassium metabisulphite (KMS) were added to the juice. Then it was chaptalized to 19°Brix. Diammonium phosphate (DAP) was added to this and pH adjusted to 3.5. The inoculum of banana juice and mango juice was used at a concentration of 10% for the fermentation banana must separately. After inoculation the fermentation was carried out at 20^{O}C for about 22 days. Physicochemical parameters were then analyzed and concentration of volatile acids (VFA) was determined by using gas chromatography (GC). Banana wine produced using banana juice and mango juice inoculum had °Brix (6.1and 6.5), alcohol (4.38 and 4.24%) and titratable acidity (0.93 and 0.83%) respectively. All nine volatile acids analyzed were detected in both wines. Significant effect was not observed on physicochemical parameters of banana wine produced by using different must inoculums.

Keywords: Banana must, banana wine, volatile acids, mango must

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Biodegradation of Para-Nitro Aniline from Soil Sample of Nanded District (MS), India

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ABSTRACT

Pesticides are used to control various pests and excess use may destroy the plants. They form one of the important groups of xenobiotics compounds. Parathion is one of the pesticides which is used for controlling foliar pests. it is hazardous to humans& animals also. During its use when it dropped in the soil. It undergoes microbial degradation and is converted into para-nitroaniline, which is also a hazard. The response of three bacterial strains showing tolerance to the para-nitroaniline i.e., Azotobacter, pseudomonas, and bacillus was selected and their degradation activity was studied by determining the susceptibility of the strain towards the para-nitroaniline and spectrophotometric analysis and observed MIC was 320 ppm and percent of degradationincreases with time. The MIC for Bacillus spp. is 320 ppm (31mm) Pseudomonas spp. is 160 ppm (12mm) and Azotobacter spp. 160 ppm (12 mm). After 96 hrs. of incubation, the percent degradation of Bacillus spp. is 42% Pseudomonas is 41% and Azotobacter is 40%.

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"Isolation of Fusarium Oxysporum F.Sp. Lycopersici Causing Fusarium Wilt of Tomato and Their Control"

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ABSTRACT

Diseases are a major limiting factor for tomato production. Diseases can be classified into two groups. The first are those caused by infectious microorganisms that include fungi, bacteria, viruses and nematodes. These diseases are contagious and can spread from plant to plant in a field, often very rapidly when environmental conditions are favourable. Present investigation of isolation and their control measures of fusariumwilt on tomato. the Pathogen was isolated from infected plant parts by tissue isolation technique on Potato Dextrose Agar (PDA) medium.

Keyword: - Tomato, Isolation, Fusarium, Control measures etc

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A Review on Medicinal Botany (Ayurvedic Herbs) and its Significance

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ABSTRACT

The usage of plants in the medical systems is of great significance in almost all countries and the medicinal plants became part of many modern medicines. There are many phytochemicals and metabolites isolated from plants including steroids, terpenoids, carotenoids, flavonoids, alkaloids, tannins and cardiac glycosides. Plants that are used as medicines have been referred to as “herbs” Originally, the term “herb” only applied to non-woody plants.

Today, “herb” refers to any part of any plant used for aroma, flavoring or medicine, including those that come from trees and shrubs. An “herb” may be a fruit, a bark, a flower, a leaf, or a root, as well as a non-woody plant. Although the term “herb” can also be used with food spices, it is generally used in reference to any plant, or any part of a plant, having nutritional and/or medicinal values. Most of the Ayurvedic herbs, thus formulated, are free of side effects or reactions. This is the reason why Ayurveda is growing in popularity across the globe. The Ayurvedic herbs that have medicinal quality provide rational means for the treatment of many internal diseases, which are otherwise considered incurable in other systems of medicine. Go through the following lines to learn all about the importance of herbs in order to lead a healthy, peaceful and disease-free life.

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A floristic Survey of Trees and Shrubs in Digras City District Yavatmal, Maharashtra

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ABSTRACT

The present survey deals with the floristic diversity in Digras City with reference to the perennial angiosperms such as trees and shrubs. The multiple ecosystem services are provided by the green urban spaces in cities. The biodiversity of city is important as it is vital that native and endemic species of flora are conserved. The Present study documents a total of 127 species representing 40 families trees and shrubs. Among these trees were dominant having 82 species followed by shrubs having 45 species.

Keywords: Perennials, floristic diversity, conservation, Green space.

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Utilization of Local Plant Resources as Medicine by Tribal Communities in Mulchera Tehsil of Gadchiroli District in Maharashtra, India

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ABSTRACT

Ethnic groups usually depend on plant resources for treatment of different ailments. Usually they do not visit any doctor or a medical store asking for allopathic medicines. A survey has been conducted during last winter and summer seasons to collect the information from tribal people using different plants that commonly occur in this area for the treatment of various diseases. The data collected was obtained through personal interviews with elderly people and other local inhabitants during field survey. About 30 plants were observed to be in use for major diseases like jaundice, insomnia, white discharge, menstrual problems and kidney stones besides diabetes and common cold.

Key words: Tribal community, Ethnobotanical study, plant uses.

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Adverse Effects of Excessive Mobile Phone Use

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ABSTRACT

The study of adverse effects of excessive mobile phone use were conducted as a questionnaire method in order to evaluate its effects faced by peoples due to excessive use of it. The study found that most of the people face an adverse effects of mobile phone at an early stage of their life (16-20). People face many problems such as headache, eye problems, impaired concentration and memory and also fatigue. The health problems faced by them. The respondents suggested that one should decide the time-limit for using cell phones and use glasses while working which blocks the blue light coming from it.

KEYWORDS: Smart phone usage, mental health, pros and cons of phone, pandemic, mental health

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Synthesis and Antibacterial Screening of Metal β-diketonates

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ABSTRACT

1-(2,4-dihydroxy-5-nitrophenyl)-3-(thiophen-2-yl)propane-1,3-dione (DNTPD) and its transition metal complexes were synthesized. The β-diketone ligandis synthesized by employing Baker-Venkataraman rearrangement on 4-hydroxy-5-nitro-2-(thiophen-2-yl)oxyacetophenone which was previously synthesized by p-nitroresacetophenone and thiophene-2-carboxylic acid. The synthesized compounds were characterized by physical properties, elemental analyses, ^{1}H-NMR, mass spectra,IR spectra and electronic spectra and the geometry of metal complexes have been concluded by magnetic spectra. The thermal stability ofmetal complexes has been studied by Thermogravimetric analysis. The ligand and its transition metal complexes have been studied under pathogenic bacteria like Staphylococcus aureus, Bacillus subtilis, Proteus vulgaris, Escherichia coli and Proteus aeruginosa by filter paper disc diffusion method.

Keywords: β-diketones, Metal complexes, Baker-Venkataraman rearrangement,Thermogravimetric analysis, Antibacterial activity.

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Investigation of Gamma Irradiation Effects on Conducting Polymer Based Composite

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ABSTRACT

In the present study, novel electrically conducting material polyaniline (PANI) and its composite with metal oxide (MgO) was synthesized by chemical oxidation method using ammonium persulfate as oxidizing agent. Various samples of PANI/MgO composites were prepared by varying the amount of MgO (5, 10, 15 wt% of aniline monomer). The irradiation effect on the prepared PANI based composite was investigated by means of DC electrical conductivity study. The irradiation process was carried out in air in a conventional gamma ray chamber, which uses 60C0 source, and the composite was exposed to gamma radiation dose of 40kGy under varying experimental conditions. The duration of irradiation of the samples by gamma rays were gradually increased from 0 - 8 mins. The experimental results showed that the DC electrical conductivity of the samples was significantly influenced by gamma irradiation.

Keywords: PANI/MgO, XRD, DC conductivity, gamma irradiation

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Growing Tasks of Academic Libraries and E- Resources

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ABSTRACT

The need for e-information services to theUsers are also growing and becoming very essential. The collision of web based e-leaming and teaching environment has influenced every aspect of library and information services in academic libraries and providing new opportunities and challenges to the library authority for participation in the knowledge based society along with electronic and multimedia publishing, Internet based-information services, global networking, web situated digital resources etc.
Librarians are accused with selecting and organizing resources and instructing patrons on how to detect and use these, and preserving information regardless of format or technology. The information revolution and the knowledge that is available on the Web have built new challenges to these traditional authority ethics. The appear challenges of acquiring and providing access to electronic knowledge resources require librarians to modify their tasks from traditional librarian to information scientist by learning and applying new skills to understand the evolving technologies to manage and provide quality on-line information service to the knowledge society. So the picture of the future academic library authority must be to create a World Class Networked Global Library and Information Centre to provide timely web based excellence information service to the user in duration in the e-leaming environment. The future need for changes in academic libraries, trends and challenges before the library authority in the e-leaming environment and the various growing tasks of the academic library authority also have been discussed in this study.

Keywords: Information Technology, Academic Library Authority, Web Technology, Technology Challenges, E-Resources, E-Leaming Environment.

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Higher Education and Role of Libraries in India

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ABSTRACT

Education is a form of learning in which the knowledge, skills, and habits of a group of people are transferred from one generation to the next through teaching, training, or research. Education is commonly divided into stages such as preschool, primary school, secondary school and then college, university or apprenticeship. Education can take place in formal or informal educational settings.

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ICT is A Boon for Library

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ABSTRACT

This paper present's the effects of ICT on Libraries. The purpose of this paper is to find the use and implementation of ICT in college library. Computer and communication technology have brought revolutionary changes in the field of library management.

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Identification of Toxic Metals and TLC Separation by Using Aq. Humic Acid

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ABSTRACT

Thin layer chromatographic method is used for the separation and identification of metal ions. The separations were performed on thin layer of silica gel-G using aqueous humic acid as mobile phase. The chromatographic behavior of metal ions in surfactant mixed solvents was generally studied by using the thin layer of Silica Gel-G. Effect of concentrations, effect of pH. Effect of adsorbent effect on the Rf value of different metal cations were studied by using Aq. Humic acid as a mobile phase.

Key words: separation, TLC, aqueous, pH, adsorbent, metal ions

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Investigation of Phyllospheric Mycoflora of Chili from western Vidarbha, Maharashtra

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ABSTRACT

In the present research work phyllosphere mycoflora of Chili, was undertaken, to investigate different types of fungal mycoflora. The leaf, stem and fruit samples were collected from various field of Amravati and Akola region at the intervals of 15 days starting from seedling state up to its harvesting. The diseases samples were collected in all the stages of plant i.e. seedling, foliage, flowering and fruit-formation stage. The samples from plants were brought into laboratory in separate sterilized polythene bags for isolation of all possible phyllosphere mycoflora. The infected plant parts which were collected different stages of disease development and all the samples were carefully preserved in the form of herbarium to study the etiology of diseases. The symptoms of diseases were studied in the beginning as well as severity of infection. Phyllosphere isolation were carried out by different methods such as serial dilution, leaf impression, leaf washing methods, etc. The different types of fungal pathogens were also isolated by cutting small fragments of aerial diseased parts of plants from junction of infected and healthy parts. From the phyllosphere study it was concluded that mainly Deuteromycetean fungi were found to be associated with various parts viz. leaf, stem and fruit. The fungal isolated were identified with the help of available literature and stock cultures.

Keywords: - Chili, Pathogen, Symptoms, Morphology, Phyllospher, Mycoflora

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Different Information Communication Technology Based Projects and Its Consequence on Students Performance in Higher Education

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ABSTRACT

ICT refers to technologies that enable telecommunications access to information. It is comparable to IT but mostly focuses on communication technology. In India, education has been aggressively pushed via the application of Information and Communication Technologies (ICTs). Using single way and interactive television, from radio to satellite India has tried and has successfully extended education to backward places. India has extensive expertise in both formal and informal education with broadcasting and digital technology. Various more digital technology-based initiatives in different parts of India have been implemented. Technology used in the name of education is not the goal of education, but rather an aid to it. The use of technology, which is one of the most powerful parts of the information age, encumbers individuals in order to strengthen citizens and occupation members in the face of events and concepts, as well as to simplify their daily routines. India now aspires to be a leader among knowledge-based societies, and it is working hard to achieve this goal. We can say that at this point in time, information and communication technology (ICT) has an impact on every element of human life. They play important roles in the workplace, in business, in education, and in the entertainment industry.

Keywords: Higher, Education, Information Communication Technology, Project, Student, etc.

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Impact and Contribution of Google Tools in Current Education System

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ABSTRACT

The technology has revolutionized every part of human life, and education sector is not an exception to this. The modern tools like various apps and software have offered very effective way to deliver the education to everyone who is interested, even across the national boundaries.
Google, one of the giants in technology has developed several tools which have become popular in a very short time. The tools like google docs, is a great tool these days. The Google Classroom is one of the most preferred tools to continue the teaching-learning in the challenging period of pandemic.
In the present article we have tried to highlight few of the useful tools of google which are really helpful in the current education system.

Keywords: Google tools, Google Docs, Google Classroom, Google Language Tools (GLT)

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Carbon Sequestration by Blue Green Algae (Spirullina Species) Under the Fresh Water Ecosystem

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ABSTRACT

A typical Spirullina culture has been studied with the effect of different concentration of CO2. The unisolated species were collected from fresh water ponds in Nagpur . Collected samples were isolated for Spirullina species with Streak plate and Pour plate method by using serial dilution, purification was done by antibiotic treatment. At different concentration of CO2 and in different pH values the growth of Spirullina species was tested. This results concluded that the highest growth of Spirullina species was at 30% of CO2 concentration, 7.4 to 8.0 pH values.At 30% of CO2 concentration the highest growth of Spirullina species was reported . By this results it was estimated that the Spirullina species having good carbon sequestration potential as it can tolerate up to 40% CO2 concentration in the medium, and can give excellent biomass accumulation under the 30% CO2 contents in the medium. This Spirullina species can be exploited as good source of bio-fixation of environmental CO2.

Key Words: sequestration, potential, bio-fixation

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Malathion Induced Alterations in Liver of Major Carp Labeo Rohita

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ABSTRACT

Malathion is an insecticide of group organophosphorus showing strong insecticide properties accompanied by low toxicity for vertebrates. The present study shows the malathion induced alterations in the biochemicals of liver of major carp Labeo rohita exposed to sublethal dose for 30 days. Glycogen, Protein and Cholesterol of liver was estimated on 10th, 20th, and 30th day. The liver glycogen was found to be depleted significantly after 10 and 20 days of exposure. However, it increased after 30 days. Liver protein was elevated after 20 days of exposure, but after 30 days of treatment it depleted significantly. The fish exhibited elevated liver cholesterol during the exposure of 30 days.

Keywords: Malathion, Labeo rohita, Glycogen, Protein, Cholesterol.

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Botanicals Sold by Herbal Vendors Employed for Skin Diseases in North Maharashtra

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ABSTRACT

Ethno-medicinal plants have traditionally occupy an important position in socio-cultural and socio-economic arena of rural and tribal societies. The present authors surveyed, Nasik, Nandurbar, Dhule, Jalgaon and Buldhana Districts of North Maharashtra for the traditional knowledge of herbal vendors, since July 2009. This paper particularly reports drugs sold by vendors to combat various skin diseases such as mouth sores, itching, boils-with pus, pimples, ringworms, black pots, eczema, scabies, bile, hair blister etc. Total 24 species belonging 24 genera and 19 angiospermic families are included. They employ various plants parts like rhizome, stem barks, leaves, flowers, fruits, seeds or entire plants and some domestic substances. The paper shows correct botanical names, local names, parts used types of medicinal recipes and doses prescribed by the herbal vendors. These drugs if studied on scientific lines, may yield valuable lead molecules and serve as additional sources of medicine.

Keywords: Herbal, Vendors, Ethnomedicine North Mahrashtra

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A Comparative Experiment Study on Supervised Classifier SMO – Support Vector Classifier and Unsupervised Hierarchical Cluster for Chronic Kidney Disease Data Statistics

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ABSTRACT

The researcher using a classification method for the comparative study of chronic kidney patient analysis of data for Supervised with SMO – SVM and Unsupervised Hierarchical Clustering function. Now we are proposed best model by applying the Chronic kidney disease data contains 25 attributes and 400 instances including class, First, we are applying Supervised- classify – SMO- SVM- One Attributes – htnVs Class, Applying Cross- validation from 4 to 15 + 70% split, Calibrator: Logistic and Kernel: Polynomial, and found the result, the summary of classifier model value of ROC area for CV fold using 4 is 0.794 and the weighted average is same for all CKD, not-CKD class value is also 0.794, the accuracy of correctly classified instances 74.25 % as well as the result of a Confusion matrix is same for all Cross-Validation Folds from 5 to 15, the value of ROC area CCI is same for all CV folds from 5 to 15.

And similarly, the researcher is using Second, Step-2 by applying two attributes (htn, appetVs Class),– Two Attribute with Supervised- classify – SMO- SVM- Applying Cross-validation folds from 4 to 15 + 70% split, Calibrator: Logistic and Kernel: Polynomial function to check further prediction and trying to increase the better accuracy as compared to the earlier model, during practical research found the result the summary of classifier model value of ROC area is by using CV folds is 4 the value of ROC Area is 0.868 and CV fold is 5 the result of ROC area is 0.844. The accuracy of the result of summary classifier model by applying CV Fold is 4 and the accuracy of correctly classified instances is 83.33 %, the researcher also checks the CCI accuracy by increasing CV fold from 5 to 15, but the result is not getting the higher accuracy, as well as the value of Confusion matrix, is same for all Cross-Validation Folds from 6 to 15, the value of ROC area CCI is same for all CV folds from 6 to 15.

Similarly, research also trying to increased accuracy and allying Third, Step-3 (24-Full Vs Class) – by using Full Attribute, Supervised- classify – SMO- SVM- Full 24 Attributes – 24 Attributes Vs Class (CKD and not-CKD), Applying Cross-validation from 4 to 15 + 70% split, Calibrator: Logistic and Kernel: Polynomial function and found the result of accuracy by the class value of ROC Area is near to value 1 i.e 0.988 with accepting the value of CV fold is 4,7,11,12,13 and the another highest accuracy value of ROC Area is 0.990 which is equal to value 1.000 with accepting the value of CV folds is 5,6,8,9,10,14,15 which is the highest accuracy, similarly the value of CCI is
98.50 % for CV fold is 4, 7, 11, 12 & 13 & 98.75 % for CV folds are 5,6,8,9,10,14,15, the result is same for confusion matrix also by using same CV folds.
Again researcher is also comparing the result with unsupervised, hierarchical clustering algorithm by applying full attributes i.e of 24 attributes with 400 instances, also found the best and accurate result and highest accuracy is the prediction of hierarchical algorithm model.
Therefore, found the best model prediction for Supervised- SMO in WEKA on the basis of three test using calibrator of logistic and kernel using polynomial function by applying Cross Validation Folds from 4 to 15(Train on a portion of the data and test on the remainder) with 70% split, and final prediction is, increasing the no of attributes the accuracy of Correctly Classified Instances (CCI), ROC Area value and Confusion matrix value increased. Similarly research is also found to confirm predict the result of Unsupervised Hierarchical Clustering algorithm by applying full attributes also confirm prediction is increasing the number of Clusters from 2,3,4 and 5 for both Euclidean and Manhattan Function, the accuracy of result in terms of better and accurate clusters found. The adopted methodology clears the process of practical.

Keywords: Data Mining, Classification, Clustering, SMO, SVM, Calibrator, Logistic, Kernel, Polynomial, Euclidean, Manhattan, WEKA, CKD.

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Understanding Impact of Social Media Use on Academic Performance among Elementary College Students: A Case Study for Nanded City

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ABSTRACT

Investment plays a vital role in a developing country such as India, as it provides the necessary funds for undertaking productive activities to be circulated in the economy. Savings are our country's largest source of investment. Investments are assume they control their own destiny, whereas individuals with external LOC relate their experiences to destiny, luck or chance. Consequently, LOC has a great influence on an individual's investment decision-making behaviour. As a result, this study attempts to assess the LOC of an individual and segment the investors based on their level of internal and external LOC.

Keywords: Locus of control, Individual investor, Segmentation of investors.

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An Analysis of Observed Angiospermic Airborne Pollen of Spring Season Based Upon Their Mode of Pollination in Firozabad District of Uttar Pradesh

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ABSTRACT

A floristic survey in Firozabad district was carried out from three selected sites which are 15-20 km away from each other. The main objective behind the field study was to find out angiospermic species which may shed large number of pollen in the atmosphere and to note their specific pollination period and mode of pollination which was useful criterion in the identification of atmospheric pollen. We studied variations in concentration of airborne pollen and other particles of biological origin which are collectively known as Primary Biological Aerosol Particles (PBAP) in those three sites. During the annual cycle the frequency of pollen in the air was different in different seasons. It might be due to local climatological influence on flowering of plants. The maximum pollen types have been recovered during spring, followed by rainy, summer and winter. On the basis of mode of pollination in spring season 46.94% anemophilous, 40.94% entomophilous and 10.90% amphiphilous species were found. Maximum plants bloom, during spring and rainy season followed by summer and winter season.

Keywords: Amphiphilous, anemophilous, entomophilous, pollen, pollination

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Deepfakes, a Threat to Society

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ABSTRACT

Nowadays, people faced a problem of face swapping images and forged videos, widely known as the Deepfakes. These kind of images and videos are being circulated on social media , freely causing problem peoples privacy. Some deepfake images are very hard to distinguish from original ones and cannot be identified by human eye. This concept of fabrication and manipulation of digital videos and images are not new. This paper discusses about the fact of face swapping algorithms , their impact on the media, a review of deepfake and its development over the years. Conclusion of this paper offers recommendations based on the analysis.

Keywords: Deepfakes, Generative Adversarial Networks(GANs), deepfake threats Machine Learning.

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Repelency and Mortality Effect of Plant (Bergera Koenigii) Extracts against the Red Flour Beetle (Tribolium Castaneum)

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ABSTRACT

The effects of different concentrations of extracts of Bergera Koenigii against Tribolium castaneum (Herbst) at different time interval. Five applications of Control, 1%, 2%, 5% and 10% were used to assess the mortality of T. castaneum at three different days. The results revealed that the mortality and repellency of T. castaneum increased with highest concentration of plant extracts. Tribolium castaneum gave highest mortality (70%) at 10%, while least mortality (40%) was obtained lower concentration (1%). Comparing the relative efficacy of these plant extracts in relation to times, highest percent repellency (80%) at 10%, while least repellency (40%) was obtained lower concentration (1%). Regarding interaction between concentration and time, mortality and repellency increases with respect to increase in concentration. Therefore, this study confirmed that plant extracts are effective in the management of T. castaneum and most effectively at higher concentration with longer time period.

Keywords: Tribolium Castaneum, Plant Extracts, Mortality, Repellency.

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Consequence of Soil pH on the Fungal and Bacterial Community

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ABSTRACT

The influence of pH on the relative importance of the two principal decomposer groups in soil, fungi and bacteria, was investigated along a continuous soil pH gradient at Hoosfield acid strip.This experimental location provides a uniform pH gradient, ranging from pH 8.5 to 4.0, within 180 m in a silty loam soil on which barley has been continuously grown for more than 100 years. We estimated the importance of fungi and bacteria directly by measuring acetate incorporation into ergosterol to measure fungal growth and leucine and thymidine incorporation to measure bacterial growth. The growthbased measurements revealed a fivefold decrease in bacterial growth and a fivefold increase in fungal growth with lower pH. This resulted in an approximately 30-fold increase in fungal importance, as indicated by the fungal growth/bacterial growth ratio, from pH 8.3 to pH 4.5.

Key Words: Fungi, Bacteria, soil pH.

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Twitter Based Sentiment Analysis - Theoretical Aspects

Rajendra T Kaple

The model

Logistic regression is a method for analyzing a dataset in which there are one or more independent variables that determine an outcome (which is binary). In logistic regression, the dependent variable is binary i.e. it only contains data coded as 1 (TRUE, success, pregnant, etc.) or a 0 (FALSE, failure, non-pregnant, etc.). The goal of logistic regression is to find the best fitting model to describe the relationship between the dependent variable (which is binary) and a set of independent variables.

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Covid-19 Data Analysis

Ms. Akanksha Kaple

ABSTRACT

COVID-19 outbreak was first reported in Wuhan, China and has spread to more than 50 countries. WHO declared COVID-19 as a Public Health Emergency of International Concern (PHEIC) on 30 January 2020. Naturally, a rising infectious disease involves fast spreading; endangering the health of large numbers of people, and thus requires immediate actions to prevent the disease at the community level. Therefore, Corona Tracker was born as the online platform that provides latest and reliable news development, as well as statistics and analysis on COVID-19.

This paper is done by the research team in the Corona Tracker community and aims to predict and forecast COVID-19 cases, deaths, and recoveries through predictive modeling.

The model helps to interpret patterns of public sentiment on disseminating related health information, and assess political and economic.

Keywords: SARS-COV-2, Data Analysis, Pandemic

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Smart Attendance System Using Face Recognition

Siddhesh R Kaple

ABSTRACT

Face recognition is a challenging problem for computer vision scientists for the last few decades. Hence it was the center of the attention for computer vision researchers. With the rapid technology advancement, face recognition system can be implemented in mobile device such as smart phones. This report will illustrate the process of face recognition in android devices starting from detecting a face until identifying the person when it sees them again. The recognition algorithm is being investigated in depth is the Haar Cascade algorithm. Furthermore the report will cover the literature review of the face recognition problems. The algorithm used in this system is Haar Cascade. The system is not only detecting the faces but also the distance of the facial characters under varying conditions. The proposed system provides the success rate at face recognition is around 93% to 95% and face identification is 99% and gives better result than the existing methods. Therefore, proposed system is more effective, always good in quality of recovering data compared to other existing attendance system. Thus the prospective of enhancing a private device, the management system is well-established on a private cloud sector by internal resources which can be recurrence easily and it makes system more comfortable.

Keywords: Student attendance, Face Recognition, Image Processing, biometric.

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Antimicrobial and Magnetic Studies Of 2-Hydroxy-5-Methyl-3-Nitro Acetophenone Thiazole Schiff Base Complexes of VO(IV), Zr(IV) and UO_2(VI)

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ABSTRACT

Coordinating metal complexes of VO(IV), Zr(IV) and UO2(VI) have been synthesized using 2-hydroxy-5-methyl-3-nitro acetophenone thiazole Schiff base ligand was derived from the condensation of 2-hydroxy-5-methyl-3-nitro acetophenone and thiazole. The Schiff bases behaved as charge bidentade ligand. The ligand was characterized by elemental analysis and spectral methods. Metal complexes characterized by elemental analysis, conductance measurements, molecular weight determinations and spectral studies. The Schiff base and their metal complexes have been evaluated for their antibacterial activities The synthesized products are coloured solids, soluble in DMF, DMSO and THF.

Keywords: Schiff base, Magnetic susceptibility, Antimicrobial

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Utilization of Green Electricity for Operation of Miniature Electronic Circuits

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ABSTRACT

On small scale basis, green electricity generation from trees or plants is possible. Almost all kind of the leaf contains trillions of plant cells. Throughout the process of photosynthesis, each cell of the leaf emits plenty of electrons. By the movement of these electrons, one can produce electricity called green electricity. In our day-to-day life, electric energy is playing a major and indispensable role for human being. Most all the fields are encompassed with electricity and related appliances. Also, there are number of ways by which electricity is being generated. To prevail the demand of electrical energy is ever growing problem and is creating several threats to the environment. To deal with the situation, various types of non-conventional and renewable energy sources are being invented and developed all over the world.

In this research paper, an influence is given to utilize the generated DC voltage from living plants like xerophytes and mesophytes. This kind of energy source is non-conventional as well as renewable energy source and is very useful. It is eco-friendly technique of low voltage generation and its utilization. The undertook research work describes the design aspect of low voltage energy source wherein various plants are used as natural electrolytes along with various electrodes and cells to operate miniature electronic circuits.

Keywords: Miniature circuit, Green electricity, eco-friendly, renewable source, electrodes and cells

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Generalization of Mittag-Leffler Function to Represent the Series $(1+x)^{-1}$ and Paper $(1-x)^{-1}$ this Series Converges for$|x|<1$

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ABSTRACT

In this paper we use the mittag leffler function of real variable x which is special case of mittag leffler function of complex variable zAnd we can add some factor to mittag leffler function of real variable And represents the two series in $(1+x)^{-1}$ and paper $(1-x)^{-1}$ this series converges for $|x|<1$,in this mittag leffler function which is generalization of mittag leffler function.i.e mittage leffler function is special case of this generalized function.

Keywords: Mittag-leffler function ,generalized mittag leffler function,mittage leffler function for real variables,

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A Deep Learning Approach for Human Activity Recognition Using Smart Phone

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ABSTRACT

Human Activity Recognition is an emerging field of study with a lot of innovations and applications. With digitalization, mobile development and advancement in technology taking over mankind, Smartphones have become an integral part of our life. We've been so dependent on Science and its innovations, that living without mobile phones is nearly impossible. With advancement in technology, comes the responsibility of providing mankind with efficient, conventional and sustainable resources. Our project aims to implement the idea of "Technology at your fingertips".

The number of elderly people is predicted to elevate over the years, "aging in place" (living at home regardless of age factors and other aspects) is becoming an important topic inthe area of ambient assisted living (AAL). Therefore, we have proposed a human activity recognition system based on data collected from Smartphone motion sensors for daily physical activity monitoring. The proposed approach implies developing a prediction model using mainly two sensors available on a smartphone: accelerometer and gyroscope.

We have chosen to implement our solution on mobile phones because they are ubiquitous and do not require the subjects to carry additional wearable or mountable devices or sensors that might impede their activities. For our proposal, we target six basic human daily activities walking, jogging, sitting, standing, ascending, and descending stairs. We evaluate the solution against two datasets (one using only accelerometer data and the other using only gyroscope data) with great effect. We've also implemented predictive models using Deep Learning approaches LSTM (Long Short- Term Memory) and CNN (Convolution Neural Networks). The predicted results show decent especially good and accurate results obtained for walking, running, sitting, and standing. The proposed system is fully implemented on a smartphone device as an Android application, which proves to be efficient, sustainable, and accurate.

This study revolves around Deep Learning methodologies and techniques, precisely an approach based on semantic analysis mimicking the human ability to perform various activities.

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Keywords: Human Activity Recognition, Real Time Activity Recognition, Long Short-Term Memory (LSTM), Deep Learning, Convolutional Neural Network (CNN), Gyroscope, Accelerometer, Smartphone Sensors.

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Preparation Goat Milk Whey Beverages by Using Medicinal Plant (Shatawari)

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ABSTRACT

Whey is the liquid milk has been curdled and strained its is by product of the manufacture of cheese or casein and several commercial uses. Sweet whey is manufacture during the making of rennet types of hard cheese like cheddar or Swiss cheese. Acid whey is a byproduct produced during the making of acid type of dairy products such as cottage cheese or strained yoghurt.

Keywords: Shatawari powder, whey, channa, goat milk, medicinal plants, physico-chemical properties

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Information Communication Technology in Library and Information Science Education: An Overview

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ABSTRACT

Information Communication Technology ICT plays an important role in society when we take into account the social, culture and economic role of computers and the Internet. Considering that all youngsters move through compulsory education, school is the appropriate place to develop crucial ICT competencies. The present paper focus on the What is ICT, concept of information technology, ICT in libraries, ICT and library professionals, objectives of ICT, advantages of ICT, ICT disadvantages/ limitations, components of ICT, library and information science education (India). Information and Communication Technologies (ICTs) have become central to education and training in Library and Information Science/Service (LIS) because of the great influence of these technologies on the professional world.

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Library Collection Development in Digital

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ABSTRACT

The time is changing and therefore requirements and environment of library staff, working condition, and user's demand are also changing. The impact of the internet and digital products on libraries has been widely discussed. Amazing growth of e-resources changed library operation dynamically. In today's period life is so fast and everybody wants to go fast. This paper contains the library collection and e-resource development in digital library and how they provide the services to the user's the paper further it discusses the e-resource types and its use for user and it also describes the advantages of digital facilities.

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Generalized Fractional Fourier-Wavelet Transform and its Applications

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ABSTRACT

The Fractional Fourier transform is a time frequency distribution and an extension of the classical Fourier transform. There are several known applications of the Fractional Fourier transform in areas of signal processing especially in signal restoration and noise removal. The Wavelet transform is useful for image processing to accurately analyze the abrupt changes in the image that is localize means in time and frequency. The aim of this paper is to present generalization of fractional Fourier-Wavelet transform.

Keyword: Fractional Fourier Transform, Wavelet Transform, Fractional Fourier-Wavelet Transform, Testing Function Space, Signal Processing

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Water Remediation Using Graphene-Based Materials

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ABSTRACT

Graphene-based adsorbents with three-dimensional (3D) porous structure inherit the perfect carbon crystal structure of two-dimensional (2D) grapheme sheets and reveals many advantages such as high porosity, large surface area and extremely low density. Such exceptional properties enable diverse organic contaminants to easily enter and diffuse into 3D networks, and make these materials perfect adsorbents demonstrating outstanding adsorption and recyclability. The synthesis and use of graphene-based materials for water remediation by adsorptive removal of organic pollutants is an emerging field of research. Functionalization of graphene-based adsorbents have received widespread attention and are largely explored for water purification to get the benefit of their improved properties resulting from synergistic effects. This review deals with the recent trends and progress in the rapid developing field of wastewater purification using graphene-based adsorbents for the removal of toxic organic pollutants. This review highlights the targets achieved, the comparison of structural performance, challenges, limitations and future research directions.

Key words: Graphene, Adsorption, Organic pollutants, Wastewater

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Analytical Structure of Mellin-Wavelet Transform

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ABSTRACT

Wavelets are mathematical tool which can be used to extract information from many different kinds of data including audio signals and images. The Wavelet transform decomposed the signal with finite energy in the spatial domain into a set of functions. The Wavelet transform has been shown to be a successful tool for dealing with transient signals, data compression, sound analysis, representation of the human retina. Mellin transform, a kind of nonlinear transformation, is widely used for its scale invariance property. The main objective of this paper is the generalization of analytical structure of Mellin-Wavelet transform.

Keywords:- Mellin transform, Wavelet transform, Testing function space, Mellin-Wavelet transform, signal processing.

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Bagged Decision Tree Algorithm Using Bloom Filters to Reduce the Cloud Storage Capacity

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ABSTRACT

One of the biggest achievements of IT developers around the world is cloud computing. It enables users to access extensible, distributed, virtualized, hardware or software infrastructure across the network. Cloud computing is fraught with security concerns. This research primarily focuses on building an optimal storage approach by reducing redundant data stored in geographically distant cloud data storage servers. According to the current technique, the system reduces security risks in hybrid clouds by protecting data and restricting data access based on space and time. There is an efficient method of storing secret keys in distributed hash tables and destroying them once they have been used to boost data security as a result. In order to achieve data deduplication, in addition to a distributed hash table, Attribute Based Encryption (ABE) is also used. Simulation is done in CloudSim using seven different parameters, namely accuracy, key computation time, kappa statistics, mean absolute error, root mean square error, encryption and decryption time.

Keywords: Cloud Computing, Security, Decision Tree, Bloom Filters, C4.5, Data Deduplication, Decryption Time, Decryption Time, Attribute Based Encryption.

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Synthesis of PANI/ZnO Composite and Study of DC Conductivity

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ABSTRACT

In the present study, novel electrically conducting material polyaniline(PANI) and PANI/ZnO composite is synthesized by chemical oxidation method using ammonium persulfate as oxidizing agent. The Zinc Oxide (ZnO) nanopowder is synthesized by in-situ method by using Iron Nitrate and ammonium bicarbonate solution. Various PANI/ZnO composites are prepared by varying the amount of ZnO (5, 10, 15, 20 and 25 wt% of aniline monomer). In the study DC conductivity was measured and the results showed that the D.C. electrical conductivity increases with increasing concentration of ZnO. The X-ray diffraction technique is used to determine the amorphous nature of the sample.

Keywords: Conducting polymer, Polyaniline, ZnO, DC electrical conductivity

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"Studies of Some Substituted Dihydropyrimidinones in DMF-Water Solvent by Viscometrically at Different Temperature"

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ABSTRACT

Measurements of density & Viscosity has been carried out for some substituted dihydropyrimidinones at different temperature in DMF-Water medium. Viscosities & densities of present system has been measured at 300K,305K, 310K, 315K. Using above data various parameters such as Relative Viscosity, Falkenhagen Coefficient A, Jones Doles Coefficient B, & Thermodynamic Parameters have been computed. The results are interpreted on the basis of solute -solvent & solute-solute interaction.

Keywords: Falkenhagen Coefficient A, Jones Doles Coefficient B, & Thermodynamic Parameters.

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Description of Some Plant Galls Found in Nanded District of Maharashtra State

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ABSTRACT

This contribution includes the description of plant galls found in different parts of Nanded district of Maharashtra, India. these plant galls were collected from different parts of Nanded District viz. Bhokar, Khandar, Vishnupuri, Naigaon

KEY WORDS: Plant Galls, Nanded District, Maharashtra.

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Barriers in Information Literacy Program at Our College

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ABSTRACT

Today's information literacy is very important aspect for the development of higher education, college and users. In this paper is an attempt to bring out the barriers in Information Literacy Program. Stressing the need for Information Literacy Program the barriers such as problems related to management of the educational institutions, financial problem, inhibition of the teachers, psychological problems of the users such as students, full-time research workers, teachers and employees have been enumerated. The problem related to the status of the Librarian has been touched as also his inhibition. Attempts have been made to touch on important issue related to the problem and development of the library. This paper is an attempt to give a brief overview of the various problems encountered in the implementation of information literacy program in our college.

Keyword: Information skills, Information Literacy, Financial Problem, Psychology Problems, Management Problems, Government Responsibilities.

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Dielectric and Structural Relaxation Studies Of 1,3-Butanediol-1,4-Dioxane Mixtures Using Time Domain Reflectometry Technique

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ABSTRACT

The complex permittivity spectrum of 1,3-Butanediol in 1,4-Dioxane have been measured in the frequency range of $0.01 \leq \nu/GHz \leq 50$, over the entire concentration range using time domain reflectometry technique at 25°C. The dielectric parameters such as static dielectric constant (ε_s) and relaxation time (τ in ps) are obtained from the complex permittivity spectra using nonlinear least square fit method. The 1,3-Butanediol-1,4 Dioxane mixture shows the Cole-Davidson type relaxation process. The molecularinteractions among1,3-Butanediol-1,4 Dioxane mixture have been studied using excess dielectric constant, excess inverse relaxation time and Bruggeman factor.

Keywords: Complex Permittivity Spectra, Dielectric relaxation, Time domain reflectometry Excess inverse relaxation, Bruggeman factor.

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Survey on Students' Choice on Career Opportunities after B.Sc

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ABSTRACT

After doing Graduation in B.Sc. there are so many Career Opportunities for Students. They can choose to do anything after Graduation. A survey was carried out on students studying in B.Sc. to study about their career Scheme and Choice after Graduation In Small Scale. Total 50 students were surveyed on. Students from B.Sc. 1st, 2nd and 3rd year were included from different colleges and having contrasting subjects currently taken by them. Findings in this study was that Major quantity of students ought to go for further Education after graduation i.e. M.Sc, Medium quantity of students want to give Competitive Exams & scant number of students want to go for other desperate fields. So, this study shows that what career path students choose after their Graduation.

Keywords: - Questionnaire, Career Opportunity, Survey, Graduation, Career Choice

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Information Literacy: The Need and Importance in College Library

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ABSTRACT

With the advent of information and communication technology in the twenty-first century, enormous changes have occurred in higher education, libraries, and information centres to which the library and information profession is no exception. Every student is expected to adapt sophisticated information gathering techniques to locate, organise, evaluate, and use information effectively in order to be successful in their individual endeavours in today's changing complex of globalization and Information explosion in the higher education sector and the College environment. The Information Literacy Programme teaches students how to use information effectively in the current educational system and prepares them to deal with contemporary learning obstacles by teaching them information literacy skills.

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Recognition of Typed Devnagari Characters Based on Linear Binary Pattern (LBP)

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ABSTRACT

The crucial issue of the character recognition is the identification of similar characters. In this paper, a character recognition technique is proposed for identification of similar characters by increasing commonly used feature of selected image with gradient features from potentially discriminative image regions. The crucial regions of identical characters sets are automatically detected here. Experimental results on Typed Devnagari Character using LBP demonstrate the capability of the proposed method in discriminating visually similar characters. The method also out performs existing character recognition methods by considerable margins. It has a great potential for character recognition of other alphabets.

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Physico-Chemical Characterization of Mine Water Produced During Various Mining Activities, Treatment and Possible Usage

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ABSTRACT

Investment plays a vital role in a developing country such as India, as it provides the necessary funds for undertaking productive activities to be circulated in the economy. Savings are our country's largest source of investment. Investments are assume they control their own destiny, whereas individuals with external LOC relate their experiences to destiny, luck or chance. Consequently, LOC has a great influence on an individual's investment decision-making behaviour. As a result, this study attempts to assess the LOC of an individual and segment the investors based on their level of internal and external LOC.

Keywords: Locus of control, Individual investor, Segmentation of investors.

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"Synthesis, Characterization, Magnetic Susceptibility and Antibacterial Screening of Novel Transition Metal Ion Complexes of (E)-2-(2-hydroxybenzylideneamino)-1H-purin-6(7H)-one"

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ABSTRACT

The novel transition metal ion complexes were synthesized by refluxing the ethanolic solutions of Schiff Base (E)-2-(2-hydroxybenzylideneamino)-1H-purin-6(7H)-one and Metal Acetates in 2:1 ratios respectively. The Structural confirmation and Characterization of synthesized complexes of Mn (II), Co (II), Ni (II),Cu (II) & Zn (II) were elucidated by using 1H NMR, FT-IR, UV-Vis, & X-Ray spectroscopic techniques. The synthesized compounds were also been screened against gram +ve and gram -ve bacteria. The novel compounds were further carried out for the study of magnetic susceptibility.

Keywords: Schiff Base; transition Metal ion complexes; Antibacterial Screening; Magnetic Susceptibility.

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Effect of Fungicide Bavistin on Growth and Chlorophyll Content in Triticum Aestivum L

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ABSTRACT

Fungicide Bavistin is widely used to control pests in crop plants. However, it has been reported that different fungicide may have negative effects on crop on growth and physiology of plant. An alteration in photosynthesis might lead to a reduction in photo assimilate production, resulting in a decrease in both growth and yield ofcrop plants. Systemic fungicides such as benzimidazoles, anilides, and pyrimidine are also phytotoxic, whereas azolesstimulate photosynthesis. Carbendazim is used for the control of a wide range of fungal diseases such as mold, spot, mildew, scorch, rot and blight in a variety of crops. In the present study, seeds of Triticum aestivum L. were treated with different concentration of Bavistin 0.2%, 0.4%, 0.6%, 0.8% and 1%., for the period of 12h. After three days germination percentage recorded, whereas 10 days seedling height and root shoot ratio recorded. After sowing seeds in small pots after 15 days chlorophyll content was recorded. The data obtained indicates that germination percentage of seeds and root shoot length of seedlings was decrease with increase in concentration of bavistin. The result showed that the percentage of germination, seedling growth and chlorophyll contentwas found to be decreasedas there is increase in concentration.

Keywords: Triticum aestivum, bavistin, fungicide, germination, seedling height and chlorophyll.

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Chemical Composition & Nutritional Assessment of Seeds of Underutilized Wild Legume Rhynchosia Lour

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ABSTRACT

The aim of the present research is to study the chemical composition and nutritional potential of immature and mature seeds of four species of Rhynchosia like R.cana, R.hirta, R.minima, R.rufescence. The preliminary phytochemical analysis was done by using four solvents systems, such as methanol, acetone, aqueous and chloroform. A high amount of phytochemicals like alkaloids, phenols, tannin, caumarin, and glycosides was found in the methanolic extract than the others. In proximate analysis high content of ash (4.5%), crude fat (6%) and protein (8.31%) were observed in immature seeds of R.cana, while dry matter (88%) was observed in mature seeds of R. hirta. A high amount of crude fibre content (17%) was observed in mature seeds of R.minima and moisture (40%) was noted in immature seeds of R.hirta .In mineral analysis High amount of nitrogen (1.33±0.014%), phosphorus (0.24±0.008%) and potassium (1.27±0.005%) were observed in immature seeds, whereas manganese(1220±0.005 mg/100g) in mature seeds of R.cana. A High amount of zinc (730±0.008 mg/100g) and calcium (1.8%) were observed in mature seeds of R.rufescence. In mature seeds of R.minima high magnesium content (9.11%) & copper (1113±0.001mg/100g) were observed, while iron content (6180±0.01mg/100g) in immature seeds of R.minima. From the above study, it is conclude that all four species of Rhynchosia are nutritionally rich, whereas R.cana having high nutritional content as compared to other three species which reviled that wild legume Rhynchosia is a rich source of phytochemicals and nutrition and provides possibilities for advancement as a stand-by for cultivated species as a vegetable.

Key words- Preliminary phytochemical & nutritional, Rhynchosia, immature &mature, wild vegetables

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Antioxidant Potential and Secondary Metabolites in the Fruits of Spondia Pinnata (L. F) Kurz

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ABSTRACT

Spondias pinnata L.(Family- Anacardiaceae) is often known as Indian hog plum. This plant is using traditionally in the treatment of infectious diseases like bronchitis, ulcer, dysentery and skin diseases. The aim of the present study was to evaluate the antioxidant potential and secondary metabolites of the pulp extracted from the fruits S. pinnata L. In the estimation of antioxidant analysis the highest antioxidant activity was found in reducing power assay in methanol extract of ripe fruit at 4 mg concentration (1853.44±0.1mg/100g) than the other antioxidant assays. In secondary metabolite assessment more activity was found in alkaloid at 4mg concentration (2094.47±0.88mg/100g) of methanol extract of ripe fruit than the flavonoid content. The present study demonstrates that the fruit pulp of S. pinnata can be considered as a valuable source of an antioxidant activity and secondary metabolite. In brief, all concentration manifests good antioxidant and secondary metabolite activity.

Key words- Antioxidant, secondary metabolite, ripe fruit, unripe fruit, S. pinnata

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"Sensory Evaluation of Murrah Buffalo Milk Dahi Prepared by Using Different Heat Treatments and Incubation Conditions"

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ABSTRACT

In the present investigation attempts were made to standardize the methods to improve sensory quality of dahi made from Murrah buffalo milk for its production under ordinary condition by giving different heat treatments and incubation conditions and by to employing suitable lactic cultures. The buffalo milk dahi maximum scoring was recorded at 8.41, 7.18, 8.32 ,8.37 and 8.39 respectively for general appearance, aroma, consistency , body and overall acceptability under the boiling treatment.
Within the incubation treatments, the incubation at room temperature for 10 hours was rated as the highest with the values at 7.99, 6.96, 7.92, 7.85 and 7.88 for the respective parameters. From the organoleptic and overall acceptability point of view boiling coupled with incubation at room temperature for 10 hours seemed to be very favorable to result into the dahi of desired attributes.

Key words: dahi, heat treatment, incubation condition, Murrah buffalo, sensory quality.

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Biochemical Composition and Nutritional Analysis of Leaves of Portulaca Pilosa L

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ABSTRACT

The Preliminary Phytochemical analysis shows the presence of Phenols, Flavones, Alkaloids, Carbohydrate, Glycosides, Tannin and Saponin. Flavones and saponins are observed in all three solvent systems namely Methanol, Acetone and Alcohol. The proximate composition of leaves of Portulaca pilosa L. has Total ash (10%), Crude Fat (20%), Crude fibre (13.5%), Crude Protein (14.81%), Dry matter (32%) and Moisture (68%). Mineral analysis showed highest amount of Potassium (42.3mg/g) followed by Nitrogen(23.7mg/g), Calcium(15.3 mg/g) and other trace elements. The Screening of Methanolic extract of leaves of Portulaca pilosa L. by Gas chromatography and Mass Spectrometry revealed the presence of fifteen bioactive compounds showing a wide spectrum of biological properties including antibacterial, anti-inflammatory, antioxidant, hypocholesterolemic etc. FTIR analysis shows the presence of different functional groups like Aromatic ether, Hydroxyl, Phosphate, Ester, Phenol, Nitrate, Saturated aliphatic alkanes etc., The results from present study offer a platform of using Portulaca pilosa L. leaves in pharmaceutical industries as well as for traditional practitioners for herbal drug formulations.

Key words: Bioactive compounds, P. pilosa, GC-MS, Nutritional analysis, Methanolic extract.

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Synthesis, Characterization and antibacterial activity of 2-aminopyridine based Schiff`s Bases

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ABSTRACT

Schiff`s bases play a vital role in the field of pharmaceutics. They are important class of molecules for the synthesis of novel drugs as intermediates. The present work involves condensation of 2-aminopyridine derivatives and salicylaldehyde to yield 2-{(Z)-[(3-methylpyridin-2-yl)imino]methyl}phenol and 2-{(Z)-[(3-methoxypyridin-2-yl)imino]methyl}phenol. This method is experimentally simple, clean, high yielding with reduced time period. The compounds are characterised by IR, 1HNMR, and elemental analysis. The final products are purified in ethanol and screened for biological activities by using broth dilution method.

Keywords: Schiffs base, 2-aminopyridine, SalicylaldehydeAntibacterial activity.

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Development of Singularities in Radiating Dyon Solution with Cosmological Constant in Higher Dimensional Space-Time

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ABSTRACT

We study here the development of singularities in radiating dyon solution with cosmological constant in higher dimensional space time and cosmic censorship violation in the gravitational collapse of radiating dyon solution in higher dimensional space-time. We study here the final outcome of the collapse does not depends on cosmological constant but it sensitively depends on electric and magnetic charge respectively. We expand the earlier work of gravitational collapse of radiating dyon solution in any arbitrary dimensions. Here is no restriction is adopted on the number of dimensions. This might be important that cosmological constant does not affect on the development of singularities.

Keywords: Gravitational constant, naked singularity, cosmological constant, Dyon.
PACS number(s): 04.20.Dw, 04.20.Cv, 04.70.Bw

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Libraries in the Cloud

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ABSTRACT

Cloud computing is a paradigm shift of computing and information technology to a new phase ofplatform to cater the clients in more sophisticated manner and also in more cost effective manner from acommon pool of service providers platforms. Cloud computing technology continues to grow at a rapidrate with new applications and architecture. It is used to practice of storing, accessing and sharing data,applications and computing power in cyberspace. This technological development has brought adramatic change in every field and libraries are not exception to it. Libraries have also started adoptingthis technology as cost effective tool which involves delivering hosted service over the web. Budgetaryprovision for building collection development and procurement of computing resources and peripheralshave been reducing gradually, so cloud computing is the best option for the libraries to solve the abovementioned problem. This paper aims to demonstrate and elaborate the journey of library from actual to virtual, itsuses in the field of library and information centers. This paper also tries to give a clear idea that how cloudtechnology helps libraries to provide a better service to the user community.

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Optically Stimulated Luminescence (OSL) Properties of Limgpo4:Tb3+, Al Phosphor for Radiation Dosimetry

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ABSTRACT

The polycrystalline sample of LiMgPO4:Tb^{3+}, Al phosphor was successfully synthesized by using solid state method. The X-ray powder diffraction, photoluminescence (PL) emission & excitation spectra and optically stimulated luminescence (OSL) were thoroughly measured. The PL spectra of as-prepared LiMgPO4:Tb^{3+}, Al phosphor showed characteristic blue-green emission, when excited by 224 nm under UV excitation. The LiMgPO4:Tb^{3+}, Al phosphor shows good OSL sensitivity, which was found to be more than α-Al2O3:C and LiMgPO4:Tb^{3+}, B phosphor. The effective atomic number of LiMgPO4:Tb^{3+}, Al phosphor (Zeff = 11.44) is nearly similar to Zeff of α-Al2O3:C phosphor (Zeff = 11.28).

Keyword: Radiation dosimetry; OSL; PL; Phosphate; LiMgPO4:Tb^{3+}, Al

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Google Tools Supporting 21-Century Education

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ABSTRACT

Digital technologies used in the precise way offer potential never before imagined. It is entangled with humans day-to-day activities, perception, and thinking in modern civilization. Digital predominance highly influenced key aspects of society as growth, sustainability, welfare, equality, security, economy, democracy and Education. It constitutes a strong and powerful influencing force on how education is to be carried out and what is expected for the future generation .hence students and teachers must have access to modern learning tools that are required for contemporary education. This paper discuss about the effectiveness of using the e-environment based on G Suit for Education.

Keywords: G Suit for Education Google tools, efficiency and student's attentiveness, teaching, learning, evaluation.

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Recognition of Devanagari CAPTCHA Code Using Novel Feature Extraction Methods and PNN Classifier

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ABSTRACT

The CAPTCHA is a test deployed on most of the websites to safeguard its services from illegal users.. It stands for Completely Automated Public Turing Test to Tell Computers and Humans Apart. The CAPTCHA test is used to classify between authentic user and unauthentic user. The authentic user is always a human and unauthentic user is an automated program called bot. The CAPTCHA code should be such that it can be easily recognized by a human, but at the same it must be difficult for illegal bots. Thus the CAPTCHA is like a gatekeeper who checks the legacy of the user. Some of the Indian government/non-government websites have started publishing the information and offering various online services in regional languages. Most of the regional languages are derived from Devanagari. But, the CAPTCHA employed during log-in time, is still in English script, which reduces the accessibility of websites. The native users are always comfortable if the CAPTCHA test is offered in their native language. Therefore, in order to simplify the task, this paper emphasize on employing a Devanagari CAPTCHA in place of English CAPTCHA. The recognition of Devanagari CAPTCHA code is always a challenging task. The work in this paper, proposed a system that use some novel feature extraction methods like various shape descriptors and a statistical method called moment invariant. In order to recognize the characters in Devanagari CAPTCHA code, the extracted features are classified by using Probabilistic Neural Network (PNN) classifier. The achieved recognition accuracy of the Devanagari characters by using PNN is better as compared to other techniques.

Keywords: PNN, Shape Descriptors, Devanagari, script.

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Efficacy of Different Grain Protectants on the Mortality of Adults, Emergence of F1 adults, Weight loss in Rice Grain and Infestation in Rice Grains of Rhizoperthadominica (Fabricius)

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ABSTRACT

To find out of some non-toxic material for the protection of stored rice against R. dominica, efficacy ofvarious grain protecants were evaluated.The rice grains treated with deltamethrin was found significantly superior (49.39 per cent) in comparison to all other protectants and untreated check. The response of protectants viz DDVP, neem oil, camphor and menta oil viz. 42.04, 35.33, 26.91 and 20.29 per cent, mortality, respectively, were also found significantly superior than diflubenzuron (13.53 per cent) and Tulsi oil (10.23 per cent).The protectants deltamethrin, DDVP, camphor, mentha oil neem oil after two month of application showed significant reduction in F1 adult emergence being 4.57, 6.33, 12.00, 12.33 and 13.33 adults in comparison to untreated check 114.67 adults. The grain protectants Tulsi oil, diflubenzuron and mercury tablets were proved to be at par regarding adult emergence of R. dominica giving 24.33, 36.67 and 44.33 adults, respectively.The loss in weight of rice grains in various protectants after 60 days of treatment due to attack of lesser grain borer are ranged from0.20 to 5.67 per cent. The minimum loss 0.20 per cent was observed in deltamethrin and it was significantly superior to DDVP, Tulsi oil, neem oil, camphor, mentha oil, diflubenzuron, mercury tablets and turmeric powder providing 1.81, 2.74, 3.24, 3.47, 4.04, 4.53, 5.54and 5.67 per cent, respectively. The protectants tulsi oil, neem oil and camphor were superior to mentha oil, diflubenzuron and mercury tablet which provide 2.74, 3.24 and 3.47 per cent weight loss.

Keywords: Grain Protectants,Diflubenzuron,Deltamethrin, Murcury tablet, DDVP, Camphor, Turmeric, Neem oil, Tulsi oil, Mentha oil.Rhizoperthadominica.

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Determination of Stability Constant of La (III), Pr (III) and Nd (III) Chelates with Some Substituted Pyrazole

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ABSTRACT

Substituted pyrazoles such as 1-phyenyl-3-(2-hydroxy-4-methyl phenyl)-5- methyl pyrazole – L1 &4-(benzole)-3-(4-chlorophenyl)-5-(o-hydrohydroxy phenyl) pyrazole – L2are synthesized in laboratory. The interaction of the above substituted pyrazoles have been studied with La (III), Pr (III), Nd (III) and Metal -ligand stability constants have been evaluated in 70 % dioxane-water mixture at 0.1 ionic strength. The ratio logK1 / logK2 is positive in all cases. This implies that there is little or no steric hindrance to the additions of secondary ligand molecule

KEYWORDS: Pyrazole, Lanthanide metal ions, Dioxane.

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A Study on Awareness about COVID 19 among Adolescent Girls

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ABSTRACT

Present study was carried out to assess an awareness about COVID -19 among adolescent girls from 11 and 12 standards (15 - 16 years) residing in Pusad taluka of Yavatmal district, Maharashtra State. Awareness about COVID-19 was assessed using a Pre tested questionnaire through a personal interview method. Data was collected, tabulated and frequency calculated. the findings of study showed that 70 percent of adolescent girls were aware about following three preventive measures to protect from COVID 19, also take proper care i.e., wash hand and legs immediately, cloth were washed and use sanitizer after coming outside to home whereas 70 percent of adolescent girls were aware about following three preventive measures to protect from COVID 19, also take proper care i.e., wash hand and legs immediately, cloth are washed and use sanitizer after coming outside to home. It was observed that 62 percent of adolescent girls used sanitizer. Among the respondents, 83.1% and 74.9% indicated they prefer frequent hand washing with soap and water and use alcohol-based sanitizer, respectively and only 31 percent adolescent girls were knowing exactly time sanitizer used to clean hand. Majority of girls were unaware about nutritional care i.e. need to be change in dietary pattern or food intake for improving immunity power and necessity of maintaining sound health.

Keywords: Adolescent girls, COVID-19, awareness, nutritional care, preventive measurements.

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Role of Digital Technology & Social Media in Higher Education

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ABSTRACT

In a digital technology world, Higher Education has undergone several changes. Digital platforms have simplified the way students can access to academic information. Therefore, the education industry can consider Social Media as a tool to effectively adapt business to students' needs. Social Media and its components have been emerging in Higher Education to improve its business practices. Therefore, institutions have been positive to endorse these mechanisms and implement them into their community structures. The use of online approach is a most favorable channel to attract students. Social Media has turned into the crucial tool to perceptively excel in the competition. This paper presents the analytical survey of Social Media for excelling Higher Education to potential users.

Keywords: Social Media marketing, Higher Education, Digital Education

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"Cultivation Practices Of Medicinal Plant": Phyllanthus Amarus Schum

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ABSTRACT

The resource pool of the medicinal plants were abundant in forest areas are dwindling fast due to anthropogenic pressure therefore the alternative means to generate more raw materials could be only through cultivation of medicinal plant in agriculture fields. National Medicinal plant board is working to promote cultivation under centrally sponsored scheme of National mission on medicinal plants since 2008-09.

Medicinal plants are valuable natural resources. Unplanned development & overexploitation put many medicinal plants on way to endanger. Excess use of weedicide in agricultural fields affected many weeds sp. which were used for their medicinal properties. Phyllanthus amarus schum is one of the medicinal plant naturally occurring as weed. It is a broad spectrum medicinal plant that has received worldwide recognition (Etta, 2008)

Phyllanthus amarus has been used in the Ayurvedic system of medicine for over 2,000 years and referdto as Bhumyamalaki, which is widely used to treat liver disorders, Bladdr infections & kidney related disorders.

The plant of the genus Phyllanthus are widely dismibuted in most tropical & subrtropical countries and have long been used in traditional medicine to treat chroinic liver disease (Liu etal., 2003) The plant is found growing abundantly through out India. The plant has antiseptic, direticantiviral, ant diabetic, hypertensive and antipyretic properties and also used in the treatment of Jaundice, diarrhea, dysentery, wound, ulcers & Urogenital diseases. (Calixto eta, 1998; santos etal., 1995)

Cultivation ensure botanical identity, genetic improvement, quality and continuity in supply of raw materials to Pharma Industries and also promote Socio-economic growth of farmers. The present paper gives details regarding cultivation parameters, cultivation details, harvesting techniques, Marketing, Chemical Composition, Medicinal use and productivity. The study conducted at Pusad, Dist. Yavatmal, Maharashtra The cultivation cost required for phyllanthus amarus is low, no extra expenses on pesticides & fertilizers Hence beneficial for grower.

Keywords: Cultivation, Medicinal plants, Harvesting, Marketing.

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Assessment of Water Quality Using Physico-Chemical Parameter from Lower Pus Dam Tahsil Mahagaon Dist- Yavtmal

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ABSTRACT

Water is one of the most important of all natural resources known on earth. It is important to all living things. The safety of drinking water is important for the health. The safety of drinking water is affected by various contaminants which included chemical and microbiological. Such contaminants cause serious health problems. Due to these contaminants quality of the Drinking Water becomes poor. Sometimes such poor quality water causes many diseases in the humans so that quality of the water must be tested for both the chemical as well as for the microbial contaminants. This study was aimed to estimate current status of physico-chemical characteristic of Lower pus dam tahsil Mahagaon Dist.Yavtmal , Maharashtra. During the study it was found that maximum number of physical and chemical parameter were within the desirable limit, as suggested by WHO.

Keywords: Physico-chemical parameters,TDS,Lower Pus Dam.

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Role of Library Professionals in Digital Era

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ABSTRACT

This paper explores the growing needs of information acquisition,processing, storage and dissemination, a large number of new technologies have been adopted and modified by library professionals in digital environment Hence todayLibrarian are known as Information Providers or knowledge officer. It's a refreshing change for library professionals So they need to improve their competences and learn ICT knowledge for their effective utilization to deliver high quality information service to the user community.

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Maintaining Physical Activity during the COVID-19 Crisis

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ABSTRACT

WHO defines Physical activity as any bodily movement produced by skeletal muscles that requires energy, expenditure Physical Activity refers to all movement including during leisure time, for transport to get to and from places or as part of a person's work. Both moderate and Vigorous-intensity physical Activity improve health.

COVID-19 Pandemic Presents many challenges to maintaining of physically active and healthy lifestyle. The closing of gyms, recreation centers, walking track Grounds and pools eliminates many of our favorite fitness options. The in ability to participate in Group bike rides roods races picklball, Tennis, golf outings recreation sports leagues and countless other activities has also taken away many of our favorite fitness and social outings so young and old people are most on important part of regular physical activity.

Countries and communities must take action to provide everyone with more opportunities to be active, in order to increase physical Activity.

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An Efficient Security Mechanism Using Blockchain Technology

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ABSTRACT

Now a days there is large amount of information is available with the world and is stored in the databases and applications. These databases may be centralized or distributed depending on the need of application but the primary concern here is to store such a large amount of data or information efficiently and effectively. Thus there is also an important aspect that has to be kept in mind while dealing with such a large volume and vast amount of data that is how it can be access whenever that data or information is in a distributed database. However it is also a challenging task that these things can be conveniently done without any hurdles.

There is need to develop necessary operations and applications which can work over this situation. The most important aspect of this scenario which we are going to discuss here is the issue related to the security of such vital and crucial information in terms of the various methods and parameters. Thus the proposed system tries to provide the highest level of security to the very large amount of information with great efficiency in terms of block chain technology.

Keywords: Blockchain framework, information security. Databases.

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Review on Challenges of Sentiment Analysis

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ABSTRACT

Now in this internet era everything is available in the form of websites, blogs, social networks, e-commerce etc. so there is a importance of reviews, opinions, feedbacks by users. These feedbacks generated by users plays important role for business, individuals, governments. Here comes the role of Sentiment Analysis on the basis of feedbacks given by users. But there are several challenges facing the sentiment analysis and its evaluation process.

In this paper presents different perspectives of challenges occurs while finding the accuracy and extract subjective information from text for sentiment analysis and defining its polarity.

Keywords: Sentiment Analysis,emotion analysis, social media, Sarcasm, Multilingual data, text mining, Machine Learning

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Survey of Problems Faced by Remote Area Students in Online Learning Apps

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ABSTRACT

Intend of this survey study to find out difficulties of spreading online education in the rural part of India. In this, we studied the problems faced by the students in the village in an online application like Zoom, Google meet, team Link & Microsoft team. Rural students are facing a lot of difficulties in the online education system. With this in mind, we asked the students in the village about the difficulties they faced in getting online education. We created a questionnaire on Google Forms and sent those questionnaires to college students in the village. It was found that, the maximum student's used Zoom as well as Google meet application. Rural students do not have enough Internet data, network to get online education also there are no electronic devices like mobile, laptops etc.

Key words: - Learning Apps, Zoom, Google meet, Team link, Internet network, Rural.

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Current Trends of Nanotechnology in Cancer Therapy: A Review

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ABSTRACT

Nanotechnology is one of the fastest developing areas in the 21st century. In diagnostics and therapeutics of various diseases, several different types of nanosystems are being used. Significant attention has also been given to nanotechnology to overcome the shortcomings of conventional anticancer therapy. Cancer nanotechnology is a comparatively recent interdisciplinary field of extensive research that links the fundamental sciences, like chemistry, biology, medicine, and engineering. In recent decades, several organic and inorganic nanomaterials have developed as pioneering tools for tumor diagnostics and therapeutics due to their novel features, including drug protection, solubilization effect, active/passive tumor targeting, controlled release of drugs, which lead to improved anticancer efficacy while minimizing the side effects. This review is an overview of nanomaterials' key characteristics, for example, size, surface characteristics, and tumor targeting. It also compiles the advances and prospects in applications of nanotechnology for anticancer therapy along with a brief overview of the preparation of different kinds of nanoparticles.

Keywords: Nanotechnology, Cancer, Drugs, Nanosystems, Nanomaterials, Nanoparticals

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Studies on Complexation of β-naptholazo dye and Pb2+ metal ion Spectrophotometricaly

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ABSTRACT

Complexing ability of Pb2+ metal ion with β- naptholazo dyeis established.The stoichiometry between M: L is 1:1 and effect of pH on complextion study have been established. IR spectra provide the complexing nature between the metal and ligand.

Keywords: Azo dye, Pb2+ metalion, I.R. spectra.

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Densites, Refractive Indices of Substituted Azomethine in Different Percent of Various Solvents

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ABSTRACT

Molecular interaction such as solute-solute, solute-solvent and solvent-solvent interactions in the substituted azomethine drug in the different percentage of organic solvent has been pointed out. In the present work refractive index and the densities of the substituted azomethine in different percent of various organic solvents were reported. The data thus helps to determines Molar refraction (Rm) and polarizability constant (α) of some different substituted azomethine in binary mixture. Observations showed that the molar refraction and polarizability constant of substituted azomethine drugs increases with increase in percent composition of organic solvents.

Keyword: Substituted azomethine, molar refraction (Rm), polarizability constant (α), refractometry. refractive index.

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Library Information Services In the Digital Age

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ABSTRACT

Library information services are a key component in libraries since the traditional times. Their important role is progressively becoming a live of the library's contribution to the transformation and development of a society and also the nation at large. The employment of data Communication Technologies (ICTs) has caused a change within the users' perception from what's being hosted in the library to however and once services are rendered to meet their requests. Consequently, libraries are getting slighter for the fabric they collect or house. Instead, their importance is being measured in regard to the fulfillment of the users' requests. The transfer of documents from publishers and their hosting "just in case" some users need is replaced by the delivery of documents from publishers "just in time" to meet the user's However, this transformation has posed a challenge in the field of library information services: to cope with the ever-accelerating complexity of information, to differentiate useful information from erroneous information, and to meet the growing expectations of library This paper will discuss the available technological opportunities that can be used by the library information services in addressing such challenges.

Key words: ICT, Library Services, Library Transformation

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A Virtual Study Meeting during the COVID – 19 Pandemic Systems for the New Age: Video Conferencing as a Mode of Communication

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ABSTRACT

Educational institutions (schools, colleges, and universities) in India are currently based only on traditional methods of learning, that is, they follow the traditional set up of face-to-face lectures in a classroom. The aim of the study is to analyses the opportunities and challenges of emergency remote teaching based on experiences of the COVID-19 pandemic.The sudden outbreak of a deadly disease called Covid-19 caused by a Corona Virus (SARS-CoV-2) shook the entire world. The World Health Organization declared it as a pandemic.Thissituationchallengedtheeducationsystemacrosstheworldandforcededucatorstoshift to an online mode of teaching overnight.This is work &study focuses on the Students, Teachers, Business Person & any other person on the impact is good, the bad and the ugly of using videoconferencing for work-related meetings during the COVID-19 pandemic.Three were tied to camera and microphone issues, two involved eating and meeting management issues.The article includes the importance of online learning and Strengths, Weaknesses, Opportunities, & Challenges (SWOC) analysis of e-learning modes in the time of crisis. The social challenges are mainly related to the lack of human interaction between teachers and students as well as among the latter, the lack of physical spaces at home to receive lessons and the lack of support of parents who are frequently working remotely in the same spaces.

KEYWORDS Education, Online Learning, Technological Challenges, Virtual Meeting, Videoconferencing.

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Synthesis, Characterization and Antibacterial Study of Schiff Base of 5-Nitrosalicylaldehyde with 4, 6-Dinitro-2-Aminobenzothiazole and Their Transition Metal Ion Complexes

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ABSTRACT

A compound 4,6-Dintro-2-aminobenzothiazole was reacted with 5-Nitrosalicylaldehyde under acidic condition. The novel imine product was synthesized by condensation method and their metal Ligand complexes were prepared by reflux the metal ion salt with Schiff base. The synthesized compounds were elucidated by UV-Vis, H1 NMR, and IR spectroscopic techniques. The prepared compound (Ligand) and metal ion complexes were screened against the Gram +Ve and Gram –Ve bacteria.

Key-words: 4, 6-Dintro-2-aminobenzothiazole, 5-Nitrosalicylaldehyde, Schiff bases, Transition Metal-Ligand complexes, Antibacterial Activity.

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Prevalence and Risk Factor of Soil-Transmitted Helminthes Infection among Z.P School Children's In Sarasvativadi, Taluka Deola of Nashik District, (M.S), India

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ABSTRACT

The study was designed to find out the prevalence and risk factors of soil-transmitted helminthes infection among Z.P school children's in Sarasvativadi, Deola taluka of Nashik district, Maharashtra, India. This school was randomly selected from Deola taluka and all the children's (n=30) of selected school were included in the study. Faecal samples were collected and examined by Kato-Katz techniques. Health related behavior data were obtained from the parents using interviewer questionnaire. Prevalence of soil transmitted helminths was found to be 14 (46.66%) in this study.

This study emphasizes the need for improved sanitation and better living condition for school-age children in rural area.

Key words- Prevalence, Soil -transmitted Helminthes, school children, Sarasvativadi.

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Change in Nutritive Value of Cabbage after Infection of Colletotrichum Dematium (Pers.) Grove

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ABSTRACT

Cabbage, Brassica oleracea is a leafy green vegetable. Maharashtra solely produce4.21lakh Metric ton 5% of total cabbage produced in India (NHB 2013) [1]. It mostly consumed by peoples of all over the world. It is very nutritive and consumed raw as salad or cooked as vegetable.

Colletotrichum dematium is a saprophytic as well as parasite in nature. It grows as parasite on many plants, cabbage is one of them. occur worldwide, grow in temperate regions. It grows luxuriously in temperate regions; the post-harvest condition is mostly responsible for severity of disease. Severely diseased cabbage is not look good and nutrients content also changes, it is perfectly unsuitable for consumption.

Keywords: Cabbage, Colletotrichum, Nutrient and Disease

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Pharmocognostic & Floristic Survey of SPM College Nandura (Rly) Campus Area

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ABSTRACT

Floristic studies has recently received much attention. Namdura has rich biodiversity including many Angiosperms. However in the last few years due to industrialization and urbanization many plants have been cut down and many exotic species have been planted. In the present study floristic explorations were made to college campus with the aim of collecting and identifying flora, Pharmacognastic studyof plants occurring in this campus.

The current piece of work is a focus on the flora of our college-campus at Nandura Dist. Buldana. The word "Flora" refers to the plants occurring within a given region as well as to the publication of scientific descriptions of those plants. A Flora may contain anything from a simple list of the plants occurring in an area to a very detailed account of those plants. Nandura Tahsil is situated along Satpuda mountain ranges. Our college campus has various trees, some are wild, some are forest herbs, some are flowering, some are aromatic some are shrubs. The plants belongs to different families like Mimosae, Amaranthaceae, Acanthaceae, Rutaceae, Liliaceae, Apocyanaceae, Meliaceae, Graminae, Bomcaceae, Cruciferae, Crassulaceae Luguminosae, Caeselpiniacea e, Myrtaceae, Cannabidaceae, Cappridaceae, Meliaceae, Umbelliferae, Solanaceae, Compositae, Verbenaceae, Boraginaceae, Euphorbiaceae, Zinziberaceae, Poaceae, Convolvulaceae, Poaceae, Amyryllidaceae etc and Labiatae families. Aromatic plants are a special kind of plants used for their aroma and flavor. Ocimum americanum, Latana camara, Hyptis plants in our college campus, are wild and they are well-known for their aromatic smell and are also used for medicinal purposes. Aromatic compounds are present in these plants i.e. in the root, wood, bark, foliage; flower, fruit, and seed etc. Many of them are also used for medicinal purposes. Aromatic plants are from a numerically large group of economically important plants. Some aromatic plants in our college campus like Ocimum, Latana, Hyptis are highly aromatic plants.

Key words: Floristic Diversity, Field surveys, Pharmacognastic study, SPM College Campus, Nandura.

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Acoustically Study of Internal Pressure and Gibbs Free Energy on Binary Liquid Mixture of 7-Hydroxy-4-Phenyl-2H-Chromen-2-One in Acetone-Water, DMF-Water DMSO-Water at 308.15K

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ABSTRACT

Due to the vast pharmacological activity of Coumarins derivatives the viscosity, ultrasonic velocity and density of 7-hydroxy-4-phenyl-2H-chromed-2-one has been measured in 70:30 (v/v) Acetone–water, 70:30 (v/v) NNDMF-water and 70:30 (v/v) DMSO-water with different concentration of 7-hydroxy-4-phenyl-2H-chromene-2-one at temperature 308.15K.To know the various interaction with the various Thermo acoustical parameters internal pressure, Gibb's free energy was calculated from experimental data of ultrasonic velocity, viscosity, and densities. The changes in values of this parameter with the change concentration of solute represent the different types of interaction like solute-solvent interaction, solvent-solvent, and dipole-dipole interactions present in the solutions.

Keyword:- 7-hydroxy-4-phenyl-2H-chromen-2-one, Acetone, DMF, DMSO, internal pressure, Gibb's free energy.

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Thermo Acoustical Study of 7-Hydroxy-4-Phenyl-2H-Chromen-2-One in Acetone-Water, DMF-Water and DMSO-Water at 308.15K

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ABSTRACT

Due to the vast pharmacological activity of Coumarins derivatives the viscosity, ultrasonic velocity and density of 7-hydroxy-4-phenyl-2H-chromen-2-one has been measured in 70:30 (v/v) Acetone–water, 70:30 (v/v) DMF-water and 70:30 (v/v) DMSO-water with different concentration of 7-hydroxy-4-phenyl-2H-chromen-2-one at temperature 308.15K.To know the various interaction the various thermo acoustical parameter like free volume, isentropic compressibility, Relative association, acoustic impedance are calculated from experimental data of ultrasonic velocity, viscosity, and densities. The changes in values of this parameter with change concentration of solute represent the different types of interaction such as solute-solvent interaction, solvent-solvent and dipole-dipole interactions present in the solutions.

Keyword: 7-hydroxy-4-phenyl-2H-chromen-2-one, Acetone, DMF, DMSO, thermo acoustical parameter.

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"Relationships between Algal Taxa and Physico-Chemical Characteristics of Kapshi Lake, Kapshi Dist. Akola (M.S)"

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ABSTRACT

A study of algae flora was performed on 3 samples collected from 3 different sites of every month during June 2012 to May 2014 of Kapshi Lake in order to evidence the relationships between algae assemblages and physico-chemical parameters of the sphere. A total of40 algae species were identified, the most represented class being Chlorophyceae (16 Species), Cyanophyceae 8 species) Bacillariophyceae (3 species), followed by the Characeae (2species) and finally Euglenophyceae (1 species). Physicochemical analysis of water samples suggest evidences of organic pollution related to anthropogenic activities, running waters being less affected than stagnant ones. This organic pollution is inferred from highest values of TDS and conductivity. The Correspondence Analysis (CA) displayed four groups of algae on the two first axes. On axis 1 the discriminating factor is the current, because running water sites are opposed to stagnant water ones. Unfortunately measured values of water current are not available to precise that hypothesis, our interpretations in this paper are based on relative data. The second axis reveals the opposition between oligotrophic and eutrophic waters, and could be considered as a gradient of organic pollution. The species Navicula, Nostoc sp., Amphora sp., Pinnularia sp. and Lyngbya sp. are associated to low values of TDS and conductivity while Closterium sp., Euglena sp. thrive better in high polluted waters. The distribution of these algae identified as indicators of high organic pollution, evidenced a spatial variability of organic pollution in accordance with thewater physicochemical parameters monitored. This variability is probably modulated by the presence in the sampling sites of macrophytes that are efficient in removing pollutants.

Key words: Kapshi Lake, algae, Physico-chemical. Organic pollution.

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Cloud Computing in Digital Library

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ABSTRACT

Cloud computing is the essence of future computing needs that has emerged to be a savior for library professionals. It is an emerging technology characterized by an element of novelty where the research community has recently embarked. There has been drastic shift in the trinity of libraries: books which have become electronic, user which prefers web resources than print and the staff which has become cybrarian. In this changed library landscape there is need to shift our competencies for the challenges offered by IT. Availability of independent computing components on demand like cloud as CPU, Storage in cloud has removed the web of IT and librarians can focus on their mission and services

KEYWORDS: Cloud computing, Literature review, Libraries, Cloud computing in libraries

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Check List of Snakes Rescued from Kalamb Dist. Yavatmal Maharashtra with Important Records of Albino Cobra, Indian Egg Eater, Silver Braminus Worm Snakes

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ABSTRACT

In India presence of snakes are very common for people as a result, farmers are frequently recognized to admire certain species of snakes for predatory nature. The conflict between snakes and human's is one of the major examples of human-animal conflict in India today. The largest number of deaths due to animals in India is caused by snakebites. So the present work was carried out to know the assemblage of Snakes with respect to their diversity in around the outskirt of Kalamb. The survey was conducted during September 2020 to August 2021, Snakes were observed sometime rescues mostly from Residential area, back yard or front yard, Garden, trees, ground of farm, beneath stones and in curled and dry leaves along with fencing of farms. Total 25 species were rescued on call during the survey which includes 5 venomous 3 Semi venomous and 17 Non venomous snakes.

Key words: Biological control, Diversity, Non-Venomous, Semi venomous, Snakes

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Social Support for Post COVID-19 and Mental Health Recovery- Review

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ABSTRACT

Social support really plays a core function- managing medium in welfare and gruelling task to deal with Corona extremity. Social distancing and face masking are the major precautionary measures for reducing the spread of COVID-19. In the recent covid-19 epidemic situations during lockdowns the world has experienced the great significance of the social support and healthy relationships for mental peace. In this paper, social support is considered Psychological First Aid and skills for Psychological Recovery, to inform people to change their typical ways of connectedness, access to technology during isolation andpost-isolation. Hence the future generation needs to be socially connected, and to maintain their social support effectively and efficiently developing confidence among the society to face such extreme challenges to humanity.

Keywords: COVID-19, isolation, mental health, social support

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Temperature and Thermal Stress Problem of Hollow Cylinder on a Certain Steady-State

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ABSTRACT

In this paper, an attempt has been made to solve the problem of thermo elasticity and determine the unknown temperature, displacement and stress components. In this problem the zero temperature is maintained on the lower surface and third kind boundary condition is maintained on lower and upper surface. The governing heat conduction has been solved by using finite Hankel transform technique unknown temperature found on the lower surface of the hollow cylinder. The results are obtained in series form in terms of Bessel's functions and have been computed numerically and illustrated graphically.

Key words: Steady- state, Thermoelastic problem, Hankel transform, Hollow cylinder.

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Impact of Machine Learning in Traditional Web Caching Replacement Techniques

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ABSTRACT

WWW has become an essential tool for accessing information and interaction among people on the globe. It provides a wide range of Internet-based services including shopping, banking, entertainment, education, governance, etc. WWW traffic has been increasing rapidly due to web applications on every web site. The fast growth of online applications is making network traffic congested and increase serve load which delays response, thereby annoying the web user. Caching the popular web objects, is an efficient solution to the latency problem which bring documents closer to the web users. Traditional techniques such as LRU, LFU, SIZE, GD-Size and GDSF are used to enhance the performance of web system. This paper discusses the impact of machine learning techniques like Support Vector Machine (SVM) and Naïve Bayes (NB), Decision Tree (DT) along with traditional algorithms in reducing the user perceived latency and in improving the Hit Ratio (HR) and Byte Hit Ratio (BHR).

Keyword:- Internet, WWW, Web caching, Machine learning.

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Studies on Some Ethno Medicinal Plants In and Around Pusad Tahsil, Dist. Yavatmal

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ABSTRACT

Since the beginning of human civilization, medicinal and aromatic plants have been used by mankind for its therapeutic value. Nature has been a source of medicinal agents for thousands of year and one impressive number of modern drugs has been isolated from natural sources. Pusad is a city in the Yavatmal district located in vidarbha region of Maharashtra state of India. It is named after the pusriver its ancient name was “pushpawanti”. In the area like Pusad Tahsil variety of medicinal plant and aromatic plants are found.Somemedicinal and aromatic plants Studied Curcuma longa.L. Azadiracta indicaL. Eucalyptus globusL. Tridax procumbance L. Withania somniferaL.Dunal, Ocimum sanctum L. Emblica officinalis L. About 25 plants species belonging to about 21families were studied.Themedicinalplanthascontributeda rich help to human beings,therefore there is a necessity to conserve the medicinal plants.

Key words- Ethno Medicinal, floweringplants, Pusad, medicinal herb Aromatic Plants, Ayurveda

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Morphotaxonomic Studies of Diversity of Genus Panicum of Family Poaceae of Nagpur Division, Maharashtra

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ABSTRACT

Nagpur division is the part of vidarbha it includes about 6 districts. Survey of grasses biodiversity of study area conducted during 2014-2018, reported 168 species belonging to 70 genera. Panicumis the second largest genus of study area. It has 9 species which belong to subfamily panicoideae. The aim of our study is morphotaxonomic revision of family poaceae and details of macro and micro morphology of some important grasses.

Key words – Vidharba, Biodiversity, Grasses, Morphology

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Development and Validation of Stability Indicating RP-HPLC Method for the Estimation of Levetiracetam by Forced Degradation Studies

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ABSTRACT

Literature survey reveals the availability of various analytical methods for the analysis of Levetiracetam in biological samples by RP-HPLC. And there is no spectrophotometric method is available for estimation of Levetiracetam in bulk and pharmaceutical dosage form. There are few RP-HPLC methods are in simultaneous estimation available for this Levetiracetam. Hence there is a need to develop spectrophotmetric and RP-HPLC method for the estimation of Levetiracetam in bulk and pharmaceutical dosage form.

The present a novel developed analytical method for utilizing the Methanol: OPA: Distilled Water (80:10:10) on a Hi Q Sil C-18 (250×4.6mm, 5.0µm)column by using a flow rate 0.7 mL/min where an excellent resolution with sharp peaks of Levetiracetam was obtained.

The UV method employed was absorption maxima method having absorbance measurement at 221 nm.Retention time was found to be 2.7 min for Levetiracetam. Linearity was observed in the concentration range of 10-90µg/ml (r^2 = 0.9999) for UV spectrophotometry and RP-HPLC. Levetiracetam solutions were exposed to acid and alkali hydrolysis, oxidation by hydrogen peroxide, neutral hydrolysis and photo degradation. Statistical analysis proves that the method is repeatable, selective and accurate for the estimation of Levetiracetam.The methods were successfully validated as per ICH guidelines in terms of precision, robustness and recovery.The methodcan be used in pharmaceutical industries for routine analysis of drugs in pharmaceutical dosage forms.

Keywords: Levetiracetam, Method development, Validation, UV-spectrophotometry, RP-HPLC, force degradation, Levetiracetam and ICH guidelines.

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Wet Chemical Synthesis and Characterization of Zirconia: As A Biomaterial

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ABSTRACT

The objective of the following study was synthesis of zirconia by wet chemical method and evaluation of its structural and biological properties. The sample was characterized by powder X-ray diffraction (XRD), Field Emission Scanning Electron Microscopy (FESEM) and evaluated the antibacterial property are investigated by spread plate method against E. coli bacterial pathogen and studied for degradation using phosphate buffered saline (PBS) solution. The XRD pattern shows that the monoclinic phase of zirconia was obtained. The FESEM images showed that the prepared sample consists homogenous particle size distribution. The sample of zirconia inhibited the bacterial growth. The sample shows stability at physiological condition and does not show degradation.

Keyword: Zirconia, wet chemical synthesis, biocompatibility, biomedical application

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Phenotypic Characterization and Primary Metabolite Profiling Of Black Cherry Heirloom Tomato

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ABSTRACT

Tomato (SolanumlycopersiconL.) is an important vegetable crop with numerous uses with a high nutritional value as dietary carotenoids serve as the precursor for vitamin A and prevent several chronic-degenerative diseases. Carotenoid profiling is necessary to understand its importance on human health. In tomatoes, carotenoids are important concerning major breeding traits such as fruit color and human health. In our study, we have selected black cherry and black pear heirloom tomatoes and ArkaVikas as control. To investigate these heirloom lines we have framed our objective in two parts (I) phenotypic characterization of these heirloom lines and (II) metabolite profiling of the lines to understand the development of fruit ripening and which metabolite play an important role in phenotypical character and also levels of primary metabolites by GC-MS. In our study Black Pear, a transition from mature green to red ripe took almost double time. , In the ripening stage of Black Cherry and black pear phytofluene level is completely absent and lycopene level is 3-fold less in comparison to ArkaVikas.

Keywords: Black Cherry, Carotenoid, Primary metabolites, Arkavikas (AV), Black cherry (BC), Black Pear (BP)

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Generalization of Mittag-Leffler Function to Represent the Series $(1 + x)^{-1}$ and Paper $(1 - x)^{-1}$ This Series Converges for $|x| < 1$

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ABSTRACT

In this paper we use the mittag leffler function of real variable x which is special case of mittag leffler function of complex variable z And we can add some factor to mittag leffler function of real variable And represents the two series in $(1 + x)^{-1}$ and paper $(1 - x)^{-1}$ this series converges for $|x| < 1$,in this mittag leffler function which is generalization of mittag leffler function.i.e mittage leffler function is special case of this generalized function.

Keywords: Mittag-leffler function ,generalized mittag leffler function,mittage leffler function for real variables,

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Studies on Complication of B-Naptholazo Dye and Pb2+ Metal Ion Spectrophotometricaly

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ABSTRACT

Complexing ability of Pb2+ metal ion with β- naptholazo dyeis established.The stoichiometry between M: L is 1:1 and effect of pH on complextion study have been established. IR spectra revealed thecomplexing nature between the Pb2+ and azo dye.

Key Words: Azo dye, Pb2+ metalion, I.R. spectra.

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Library Consortia: A Need of Hour

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ABSTRACT

The concept of library consortia and library networking to aid information resource sharing and support activities in libraries has become a real necessity in India. This paper briefly discusses the concept, need, factors, advantages, disadvantages of library consortia and it gives brief information about Main Consortium likeCSIR,INDEST, INFLIBNET consortia in IndiaThis paper covers various models and the benefits of e-journals consortia. It also discussesthe existing environment about users preferences and difficulties.

Keywords: Library Consortia, CSIR,INDEST, INFLIBNET, E-Journal;

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E- Learning Tools for Distance Education in COVID – 19: An Effective Delivering of Online Classes during Lockdown Using various ICT Tools

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ABSTRACT

The world as we know it has changed over a short period of time, with the rise and spread of the deadly novel Corona virus known as COVID-19, the world will never be the same again. This study explores the devastating effects of the novel virus pandemic, thus the need to transform the offline classroom into an online classroom. It explores and describes the numerous online teaching platforms, study materials, techniques, and technologies' being used to ensure that educating the students does not stop. Furthermore, it identifies the platforms, technologies which can be used to conduct online examination in a safe environment devoid of cheating. Additionally, it explores the challenges facing the deployment of online teaching methods. The results indicate that students prefer the multimedia means of studies. As a result of binary logistic regression, poor internet connection, awareness on COVID19, enough sources of materials, recommends massive open online course, favorites online methods, and satisfaction with online study are significant in the model or attitudes towards delivering of online classes during lockdown COVID-19 pandemic at 5% level of significance. Yet, they perceived many challenges during online learning like lack of face-to-face interactions, lack of socialization, distraction by social media, technology related issues etc. Students also opted for a combined approach of learning in the post pandemic period.

KEYWORDS: - COVID-19, E-learning tools,Online learning, Classroom learning, Binary logistic regression.

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Toxic Effect of Root Extracts of Balanitesaegyptiaca on Liver of Fresh Water Fish Catlacatla

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ABSTRACT

The study examined the toxic effect of root extract of Balanitesaegyptiacaon fresh water fish Catlacatla. The corresponding effect of this plant extract on health status of the Catlacatla were similarly studied using their histopathological profiles.The experiment is carried out at the research laboratory of J. D. PatilSanglutkarmahavidyalaya, Daryapur Dist. Amravati (M.S.). Fish were acclimatized for one week and fed twice daily at the rate of 2% body weight. Water in tank was replenished daily. Total of 10 fish of CatlaCatla were exposed to concentration of 09.00 mg/l13.00 mg/l13.00 mg/l root extract of Balanitesaegyptiaca set up in three replicates. Histology of liver showed variations in distortion and damages to the tissue; with observed severity increasing with increase in extract concentrations. This study suggested that the 96-h LC_{50} of Balanitesaegyptiaca could be greater than 5 g L^{-1}. The study concluded that caution must be taken in the disposal of this plant in water bodies as extended exposure time and at higher concentrations could pose adverse effect on the fish Catlacatla.

Key words: toxicity, Balanitesaegyptiaca, Catlacatla, histopathalogy

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Another New Definition of Fractional Derivative I.E Generalization of Comfortable Fractional Derivative

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ABSTRACT

In this paper we define new definition of fractional derivative i.e Generalize comformable fractional derivative and verify its validity for Linearity property, product rule, Quotient rule, and verify derivative of some Standard function. The definition satisfies the previous results for ordinary derivative and derivative of some standard function .

Keywords: fractional derivative, new approach of fractional derivative.

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A Pharmacophoric Pattern for 6-Nitro-2,3-Dihydroimidazo [2,1-B][1,3]Oxazoles for Leishmania Infantum

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ABSTRACT

The present work is a first ever attempt to identify a common pharmacophoric pattern for Leishmania infantum inhibitory activity of 6-Nitro-2,3-Dihydroimidazo [2,1-b][1,3]oxazole derivatives. The dataset used in this work covers a wide chemical space and contains 224 molecules. The analysis reveals that the activity has link with the presence of nitro group, imidazole and oxazole rings. The results of present analysis could be useful to develop a better derivative of 6-Nitro-2,3-Dihydroimidazo [2,1-b][1,3]oxazole having augmented activity against Leishmania infantum.

Keywords: modeling,6-Nitro-2,3-Dihydroimidazo [2,1-b][1,3]oxazole, Leishmania infantum

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Study of Household Bagworms (Psychidae- Lepidoptera) from Dongarkharda Village of Yavatmal District, Maharashtra, India

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ABSTRACT

Yavatmal district is the third largest district after Nagpur and Amravati in Vidarbha by population which is surrounded by dense forest. Total forest area in Yavatmal district is 2508.010 Sq/km which is 18.46% of the geographical area of the District. Kalamb is one of the Taluka of Yavatmal District rich in both flora and fauna including Durug, Madkona, Zadkinhi, Devnala, Potgavhan & Dongarkharda are the well-known forests of the district. Trees like teak, bamboo, Tendu, Hirda, Apta and moha available in the forests. Wild-bear, Deer, Nilgai, Sambar and Hyena are some of the animals found in the forests. Bag worm protecting themselves by closing in a bag, so it is sincere attempt to find out about Creature (bagworms) from my village started survey of houses from my surroundings during September – October 2020 daily from 10 AM to late Evening. In search of bagworms 10 houses were surveyed and found bagworms were reported from only 3 houses. In current study total 47 species were reported and 13species were successfully recognized from 5 different genera.

Key Words: -Bagworm, Case, Dongarkharda,

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Best and ICT based Practices in Phulsing Naik Mahavidyalaya, Library, Pusad

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ABSTRACT

The Present research paper discusses on the best and ICT Practices conducted in Phulsing Naik Mahavidyalaya, Pusad (P. N. College) respectively. This college conducted the following best and ICT Practices as per the NAAC indications. Some Special Best and ICT based practices followed by the College libraries successfully, effectively and efficiently in the libraries as well as its impact on library use.

Key Word – College Library, Best and ICT Practices, Special Services, NAAC

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Big Data Security: An Overview

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ABSTRACT

Data is one of the most important resources in every field. The continuous growth in the importance and volume of data has created a new problem. It cannot be handled by traditional analysis techniques. This problem was, therefore, solved through the creation of a new paradigm: Big Data. However, Big Data originated new issues related not only to the volume or the variety of the data, but also to data security and privacy. In order to obtain a full perspective of the problem, we decided to carry out an investigation with the objective of highlighting the main issues regarding Big Data security, and also the solutions proposed by the scientific community to solve them. In this paper, we explain the results obtained after applying a systematic mapping study to security in the Big Data ecosystem. It is almost impossible to carry out detailed research into the entire topic of security in a Big Data system, along with the principal solutions to them proposed by the research community.

Keywords: Big Data; Security; Systematic Mapping study

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Research Paper Title: Online Services of Library and Role of Academics during Pandemic

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ABSTRACT

Currently we are facing the pandemic situation in the world and there is lockdown situation in the education system like schools and colleges are physically closed now. Now there is need of specify the role of libraries and academics in the pandemic situation. This research study focuses on the problems of the online sources and the implementation of the online library services by libraries. Also author give an example of their own library Bharatiya Mahavidyalaya, Amravati's Central Library's example how the online services are running during pandemic.

Keywords: Academic libraries, Online services by libraries, E-resources

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Diversity of Snake Species from Pusad Region, Maharashtra, India

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ABSTRACT

The diversityof venomous, semi venomous and Non venomous snakes species by different habitat from the Pusad region (Vidarbha), and common species found like Common kukri, Common Wolf snake, Green keelback, Russell's viper, Worm snake, Bamboo pit viper, Common trinket, Indian rat snake, total seventeen species observed survey conduct day time and night time, from study period during July 2017 to August 2018. The study is essential for the enrichment of the individual species survival and will helps to provide information, awareness and conservation of snake species from Pusad Tahasil of Maharashtra state, India

Keywords: snakes, Pusad region, Maharashtra.

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Dielectric Parameters of Aniline, N-Methyl Aniline, N, N-Dimethylaniline with 1, 4 Dioxane Using Time Domain Reflectometry

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ABSTRACT

The dielectric relaxation measurement of Aniline, N-methyl aniline,N, N-dimethylaniline with 1, 4 Dioxanemixtures have been carried out over entire concentrations, at temperatures 250C using picoseconds time domain reflectometry technique in the frequency range of 10 MHz to 30 GHz. The complex permittivity spectra of Aniline, N-methyl aniline,N, N-dimethylaniline with 1, 4 Dioxanemixtures were fitted using Havriliak-Negami equation. Kirkwood correlation factor for all concentrations have determined using least square fit method. The variations in Kirkwood correlation factor with molecular size is studied.

Keywords: Dielectric Relaxation, time domain reflectometry, Kirkwood correlation factor.

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"A Simple, Solvent Free Synthesis of 3-(Bis(4-Chlorophenyl) Metheylene) - Ethoxy-5-Oxopentanoic Acid and its Antimicrobial Activity"

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ABSTRACT

A Simple and solvent free synthesis of alkylidene acid esters by using a mixture of 4, 4 -dichloro-benzophenone and Diethyl succinate was treated with tert.potassium butoxide at room temperature. The synthesis of alkylidene acid esters and their different compounds are very popular in the world of synthetic organic chemistry due to their activities such as antibacterial, antiviral and anti-inflammatory. The reaction remained ignored almost for a century, but with the confirmation that alkylidene acid esters possess diverse and important biological properties, the intrest in their synthesis has been greatly increased from last decade.

In the conclusion, we have developed a simple and solvent free method for the synthesis of compounds containing benzophenone moieties were successfully synthesized in excellent yield and their structures are elucided using elemental analysis and FTIR, 1H-NMR spectral analysis. The result of antimicrobial activity reveals that the newly synthesized compound found to have moderate to outstanding antimicrobial effect against various bacteria at all concentrations analyzed.

Keywords: Benzophenone, tert. potassium butaoxide, diethyl succinate, 4,4 dichlorobenzophenone, antimicrobial activities etc.

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Synthesis of Formazan 1 N-(4-Methoxyphenyl)(Phenyl-Diazynl) Methylene)-4-Methyl Aniline

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ABSTRACT

In the present work first the schiff base is synthesisedthrough refluxing 4-methoxy benzaldehyde and 4-methyl aniline in presence of glacial acetic acid.Theschiff base so obtained on treatment with diazxonium chloride gives the desired formazan.This procedure gives an alternation of using 1 butanol instead of ethanol.

Key words: -Formazan, 1-butanol,diazotisation.

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Palynological Investigations of Cleome Viscosa Linn- A Medicinal Plant

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ABSTRACT

Pollen is appropriately referred by some as 'Golden dust' extremely valuable on account of their tremendous applications in science, industries and public health. No other plant part even though extremely tiny in size is packed with so much information and power. For the breeders the pollen is a discrete mobile male partner of the fertilization process in higher plants. It carries the genotype of one partner of the pollination process, which is in fact the process which the breeder manipulates. In the present study Palynological investigations of Cleome viscosa Linn.- an annual weedy herb medicinal plant was carried out. Cleome viscosa Linn. the whole plant and its parts like leaves, seeds and roots are widely used in traditional and folkloric system of medicine. In traditional systems of medicine, the plant is reported to possess beneficial effects as an anthelmintic, antiseptic, carminative, antiscorbutic, febrifuge, and cardiac stimulant.

In the present study, Pollen phenology, pollen morphology, pollen physiological studies like pollen production, viability, germination – in vitro and in –vivo etc., total pollen protein estimation, histochemical studies of germinated pollen grains of Cleome was investigated.

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Removal of Dyes in Water by Adsorption Method Using Zeolite as Adsorbent

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ABSTRACT

There are various industries that make use of dyes for various application and Residual solution put back in the river which pollute the water. These dyes are toxic and health hazardous so the objective of research work is to remove this type of dye by using adsorbent (zeolite) via adsorption process.Intend of this study is to evaluate adsorption process of absorbent i.e., Zeolite and adsorbent i.e., Methyl orange dye at three different parameters such as time, concentration of adsorbent and PH of solution.

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Induced Mutation for Improvement in Nutritional Quality of Pulse Crops

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ABSTRACT

Pulses have an important role in daily diet and about 60 grams of pulsesare necessary for good heath of human being (WFP).They are great source of protein, high insoluble and non-soluble fiber content, vitamins and minerals - iron, potassium, magnesium, zinc etc. As per WHO, pulses particularly helps to fight against some non-communicable diseases by improving the immune capacity.

As per IAEA, 3290- mutant varieties were developed through induced mutagenesis. Out of which, in pulse crop- 460 mutant varieties were developed throughout the world while India contributed 57mutant varieties. The improved characters were early maturity, high yield, high protein content, disease resistant, resistant to biotic and abiotic stresses etc. Likewise, 1161 and 1,026 mutant varieties were developed for improvement in quality and nutritional traits as well as for high yield respectively. (IAEA https://mvd.iaea.org).

Improving nutritional quality by lowering anti-nutritional factors through induced mutagenesis beneficial to increase consumption and to fulfill nutritional demand of increasing population, helps to reduce malnutrition among the poor's especially in women and also beneficial to ensure additional income to the farmers.

Keywords: Pulse Crop, Nutritional quality, induced mutations

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Properties, Characterization and Effect of Stilbite Zeolite on Growth and Yield of Mushroom

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ABSTRACT

Zeolites are crystalline hydrated aluminosilicates of alkali and earth metals. Properties of the aluminosilicates, framework and presence of well defined channel systems make it possible a variety of application such as agricultural, industrial, and medicinal etc. Zeolites have many more useful properties with high ion exchange and retention capacity. Due to such fascinating properties of zeolites the plant growth, yield of crop have been increased by the application of zeolites and the work has been reported in many national and international journals. Taking this fact in to consideration, we have planned to focus on the characterization, properties of natural zeolite Stilbite and to study their application on the growth and yield of Mushroom.

Natural zeolite Stilbite crystals were collected from Fardapur, near Ajanata cave, District Aurangabad from the Marathwada region of Maharashtra state, India. Characterization XRD and IR of Stilbite were carried out. The powdered form of Stilbite were applied in various proportions to study the germination period, growth and yield of Mushroom. We found the growth and yield of Mushroom increased relevantly on the application of natural zeolite Stilbite.

Keywords: Stilbite, Zeolites, Fardapur, Ajanta caves, Mushroom.

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Determination of Some X-Ray near Edge Parameters of Nickel (II) Complexes of Schiff Base Ligands

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ABSTRACT

Three nickel (II) complexes of Schiff base ligands, L1 =(P-methoxy anilino)-P- methoxy phenyl acetonitrile, L2 = (P-methoxy anilino)- phenyl acetonitrile and L3 = (P- methoxy anilino) –P– chloro phenyl acetonitrile have been prepared by the condensation of P-methoxybenzaldehyde , benzaldehdye and P-chloro-benzaldehyde with P-anisidine respectively. The mentioned three ligands L1, L2 and L3 were used to prepare three nickel (II) complexes Ni-21 = [Ni2(p-Methoxy ben)(p-Ani)](NO3)2 , Ni-22 = [Ni2(ben) (p-Ani)](NO3)2 and Ni-23 = [Ni2(p-Chloro ben)(p-Ani)](NO3)2 respectively. X-ray k-Absorption Near Edge (XANES) spectra of these three complexes have been recorded at RRCAT (Raja Ramanna Center for Advance Technology), Indore, M.P, India by using Synchrotron radiation source. Various X-ray absorption parameters e.g., chemical shift, edge-width and shift of the principal absorption maximum have been obtained with the help of XANES spectra. Data analysis program Athena and the computer software Origin 6.0 professional have been used to processed the obtained data. The results of the study have been reported in this paper.

Keywords: Schiff base, XANES, RRCAT, Athena, Origin 6.0

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Study of Adiabatic Compressibility and Excess Adiabatic Compressibility in Ternary Liquid Mixtures of Alcohol + Triethylamine + Acetic Acid

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ABSTRACT

The acoustical parameters like density, viscosity and ultrasonic velocity have been measured experimentally for the ternary liquid mixture of alcohol, tri-ethylamine and acetic acid at three different temperatures 30o, 35o and 40o. The samples were prepared by mixing the components in volume proportion. From the measured parameters adiabatic compressibility and excess compressibility have been calculated. Non linear behaviour of the parameters gives the assurance of presence of molecular interaction.

Keywords: Molecular Interaction, Ternary Liquid Mixture, Adiabatic Compressibility, Excess Adiabatic Compressibility

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Behaviour Dielectric spectroscopy of Isatin in DMSO through Time Domain Reflectometry

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ABSTRACT

Structural and dynamical properties of heterocyclic organic compound Isatin in DMSO has been studied in the frequency range of 10MHz-50 GHz over the temperature range of 273.15K-298.15 K using Time domain Reflectometry. Dielectric parameters such as static dielectric constant (ε0) and relaxation time (τ0), has been evaluated. Along with this parameters thermodynamic parameters such as molar enthalpy (ΔH), molar entropy (ΔS), molar free energy has also been calculated. The dielectric permittivity spectra and relaxation behaviour of Isatin at different concentrations with DMSO was analyzed using Cole-Davidson model. Two relaxation peaks i.e high frequency relaxation and low frequency relaxation has been observed for Isatin+DMSO. The low frequency relaxation peak is attributed to Isatin molecule while high frequency relaxation peak is attributed to the reorientation of DMSO molecule. With increasing concentration dielectric loss peaks shifted towards lower frequency side at all the studied temperature and concentrations. Dielectric constant was found to be increasing for all the concentrations except at 0.2265M concentration while it is decreasing for all the temperatures.

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A Review on Progress in Innovations Based on Synthesis of Carbon Dot's

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ABSTRACT

In Recent Years Carbon and carbon materials attracted many researcher due to their eye catching properties and their utilization in variety of applications. Literature survey revealed that macroscopic carbon materials have less abilities those as compared to nano scale materials due to low band gap and poor stability. In current review we have made an attempt to summarize the properties and application of one such nano scale product of carbon known as carbon dots.

Carbon dots are characterized by a carbon rich core which is highly functionalized by nitrogen and oxygen containing functional surface groups, and displaying strong optical absorption and tunable emission transition in the visible range. Carbon dots are a unique class of emitters with size tunable emission wavelength, saturated emission colors, near unity luminance efficiency, inherent photo and thermal stability and excellent solution processability. Carbon dots have attracted broad research interest for years, because of their diverse physicochemical properties and favorable attributes like good biocompatibility, unique optical properties, low cost, small size, Eco friendliness, abdunt functional groups (e.g. amino, hydroxyl, carboxyl), high stability and electron mobility.

In the field of material science synthesis of materials plays a vital role in extraction of required application from the material. Thus, the synthesis of carbon dots is an important parameter to analyse, hence the current review have an importance in the area of research as it has a summarized description on synthesis approaches for carbon dots, their evaluation as technology and current treads in the area of research based on carbon dots.

Keywords: Carbon Materials, Carbon Dots, Fluorescent Material, Nanotechnology

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One New Gall Midge Species of Indian Cecidomyiidi, (Diptera: Cecidomyiidae) From Maharashtra, India

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ABSTRACT

This article embodies the descriptions of two new gall-midges species collected “at light” belonging to Streptodiplosis, Felt & Sitodiplosis,Kieffer, supertribe Cecidomyiidi (Cecidomyiidae:Diptera) from Maharashtra, India. Key for both genera are also provided.

Key words: One new Cecidomyiini flies, Maharashtra, India.

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Seed mycoflora associated with Pigeon pea (Pisum sativum) in Maharashtra

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ABSTRACT:

The seed borne mycoflora of Pigeon pea (Pisum sativum) was examined using blotter, agar plate and seed washate method. A total of 21 species belonging to 13 genera of fungi were isolated which includes Fusarium oxysporum, Fusarium moniliforme, Alternaria alternata, Trichoderma sp., Curvularia lunata, Macrophomina phaseolina, Rhizoctonia sp. and saprophytic fungi like Aspergillus niger and Aspergillus flavus were pre-dominant.

The part plating of Pigeon pea seed showed that seed coat and cotyledons were infected by greater number of fungi followed by radicle and plumule. Macrophomina phaseolina and Rhizoctonia sp. were isolated from seed coat, cotyledon radicle and plumule of seed. The fungi species were reduced in surface sterilized seeds which indicate that most of the fungi were located on seed coat.

Exploration of the potential of plantar ridge density for sex determination. Anil N. Khade1 Kanchan S. Kotwale2 Vidya Pradhan3 Shri Vitthal Rukhmini College Sawana Taluka Mahagao District Yavatmal, (MS) India. Dr. Rafiqe Zakaria college of Women Aurangabad, Maharashtra, kkskotwale@gmail.com Dr. Rafiqe Zakaria college of Women Aurangabad, Maharashtra, drvidyapradhan@gmail.com AbstractThe palmar and plantar surface of human skin contains arrangement of ridges. This ridges friction during walking or gripping. The patterns produced by these ridges are unique to a person as evident from their origin. This uniqueness of the ridges is much useful in case of personal identification. The impression of the ridges left at crime scene, is match with the known prints to establish the presence of a person at the scene. This technique becomes estimation of gender of the donor. A total of 144 footprints were collected from the 76 males and 68 females. The ridge density of individual foot is calculated from the ridges of the ball region and relative difference is calculated among male and female. In the present investigation the mean ridge density of male is 18 ridges/20 mm2 and that of females is 23 ridges/20 mm2 was found. Maximum ridge density was found in males 22.8 and in the female 28.6. While 12.5 in males and in females 19.6 ridge density was observed. The details are explained in the text. Keywords: Palmar, plantar, ridges, footprint, ridge density

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Temperature Dependent Structural Behavior of DMSO Using Dielectric Spectroscopy

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Abstract: Low temperature dynamics of dimethyl sulfoxide (DMSO) have been studied through dielectric spectroscopy using Time Domain Reflectometry techniques in the frequency region of 10 MHz to 50 GHz and in the temperature range 289.15 K -273.15 K. Dielectric properties such as Static permittivity (ε'), static dielectric constant (ε_0), relaxation time (τ) and dipole moments (μ) have been calculated in order to study the structural properties of DMSO as a function of temperature. Two relaxation peaks one towards lower frequency side around 6-7 GHz (τ_1-relaxation or slow relaxation) and other towards higher frequency side around 25-28 GHz (τ_2-relaxation or fast relaxation) have been observed for DMSO towards low temperature. Dielectric constant (ε_0) and both the relaxation times τ_1 and τ_2 including dipole moments (μ) were observed to be increased towards the low temperature side. These observed dielectric properties have been corroborated with the thermodynamic parameters such as Enthalpy of activation (ΔH), entropy of activation (ΔS) and free energy of activation (ΔF) and discussed in terms of molecular dynamics of the system.

Keywords:

Dimethyl Sulfoxide; Dielectric properties; thermodynamic parameters; Time domain Reflectometry.

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Formation of Singularities in Higher Dimensional Husain Space-time.

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Abstract

We study here the formation of singularities in gravitational collapse of an Higher dimensional Space-time. What will happened after the end of collapsing star? Is the question arises in mind, whether it is black hole or naked singularity that we have to investigated here. It is found that the formed singularities may be naked in higher dimensions but it depends sensitively on the electric and magnetic charge parameters. The formation of naked singularity violets the cosmic censorship hypothesis.

Keywords: Cosmic censorship, naked singularity, gravitational collapse.
PACS numbers: 04.20Dw, 04.20Cv, 04.70Bw

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HPTLC PROFILING AND ANTIMICROBIAL STUDIES OF SOME COMMONLY USED INDIAN SPICES

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Abstract

Indian medicinal system is one of the most believable and traditional system of medicine in the world where we find importance of spices and condiments in daily life. Spices have been in use as food additives since ancient times. They are used as flavoring agent and also as preservatives. Most of the spices are indigenous in origin with characteristic aroma and strong taste. These spices not only add flavor to dishes but also they have lots of medicinal properties. By considering their polyvalent significance in present investigation we have made an attempt to study antimicrobial potential and HPTLC profiling of Curicuma longi, Cinnamomum verum, Cuminum cymenium, Piper nigrum. Chromatographic analysis (HPTLC) showed presence of several phytochemical compounds with variable Rf valus and concentration. The antibacterial activity showed significant growth inhibition against Escherichia coli, Staphylococcus aureus, Staphylococcus epidermidis, Pseudomonas aeruginosa, Streptococcus pyogenes, and Streptococcus pneumoniae. The mixture of phytochemical compounds present in the extracts might be responsible for the antibacterial activity against these bacteria. The results obtained support the application of these spices in several traditional ethnomedicinal applications. Furthermore, HPTLC fingerprint developed may be useful in the correct identification of these spices and in detecting adulterations in preparation of commercial spice pockets.

Key Words: HPTLC, Antimicrobial Activity, Spices.

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Exploring the antioxidant status and phytoremediation potential of Solanum virginianum (L.) cultures in textile dyes

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Abstract:

Many textile industries in the country which pollute the water bodies with the dye in the effluent released. Majority of them are mutagenic and carcinogenic. Solanum virginianum(L.) belonging to family Solanaceae, shows potential to overcome this problem through phytoremediation which is an eco-friendly technique. The in vitro plants in the phytoremediation deals with the pollution control. The plants treated with Torquoise Blue H5G dye were further used in antioxidant studies and it shows that, in the Biotic Control, TPC,TFC and DPPH shows highest activity in distilled water (179.58mgGAE/100gmFW, 15.76mgRE/100gmFW, 8.98% respectively) while FRAP shows highest activity in methanol(78.70mgAAE/100gmFW). However the TPC in acetone(10.86mgGAE/100gmFW), TFC in n-Hexane(0.09mgRE/100gmFW), DPPH in n-Hexane(3.95%) and FRAP in chloroform(70.87mgAAE/100gmFW) shows lowest activity. Whereas in the plant treated with different concentration of Turquoise Blue H5G dye, the TPC activity is highest in Methanol(321.37 mgGAE/100gmFW) for 150mg/l and lowest in chloroform(16.76 mgGAE/100gmFW) for 110mg/l, the TFC activity is highest in distilled water(53.75 mgRE/100gmFW) for 150mg/l and lowest in ethanol(0.8 mgRE/100gmFW) for 90mg/l, the DPPH activity can be seen highest in n-Hexane(37.64%) for 150mg/l and lowest in Chloroform(1.09%) for 130mg/l and the FRAP activity can be seen highest in methanol(69.85 mgAAE/100gmFW) for 130mg/l and lowest in distilled water(1.39 mgAAE/100gmFW) for 90mg/l. The present study indicates that the plant does not lose their potential even after treated with textile dyes and hence the plant can be successfully use in phytoremediation.

Keywords: Phytoremediation, Antioxidant activity, Turquoise Blue H5G dye, Mutagenic, S. virginianum, etc.

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CLOUD COMPUTING IN DIGITAL LIBRARY

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ABSTRACT:
Cloud computing is the essence of future computing needs that has emerged to be a savior for library professionals. It is an emerging technology characterized by an element of novelty where the research community has recently embarked. There has been drastic shift in the trinity of libraries: books which have become electronic, user which prefers web resources than print and the staff which has become cybrarian. In this changed library landscape there is need to shift our competencies for the challenges offered by IT. Availability of independent computing components on demand like cloud as CPU, Storage in cloud has removed the web of IT and librarians can focus on their mission and services

KEYWORDS : Cloud computing, Literature review, Libraries, Cloud computing in libraries

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Utilization of green electricity for operation of miniature electronic circuits

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Abstract:

On small scale basis, green electricity generation from trees or plants is possible. Almost all kind of the leaf contains trillions of plant cells. Throughout the process of photosynthesis, each cell of the leaf emits plenty of electrons. By the movement of these electrons, one can produce electricity called green electricity. In our day-to-day life, electric energy is playing a major and indispensable role for human being. Most all the fields are encompassed with electricity and related appliances. Also, there are number of ways by which electricity is being generated. To prevail the demand of electrical energy is ever growing problem and is creating several threats to the environment. To deal with the situation, various types of non-conventional and renewable energy sources are being invented and developed all over the world.

In this research paper, an influence is given to utilize the generated DC voltage from living plants like xerophytes and mesophytes. This kind of energy source is non-conventional as well as renewable energy source and is very useful. It is eco-friendly technique of low voltage generation and its utilization. The undertook research work describes the design aspect of low voltage energy source wherein various plants are used as natural electrolytes along with various electrodes and cells to operate miniature electronic circuits.

Keywords: Miniature circuit, Green electricity, eco-friendly, renewable source, electrodes and cells

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A Review on Medicinal Botany (Ayurvedic Herbs) and it's Significance

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Abstract:

The usage of plants in the medical systems is of great significance in almost all countries and the medicinal plants became part of many modern medicines. There are many phytochemicals and metabolites isolated from plants including steroids, terpenoids, carotenoids, flavonoids, alkaloids, tannins and cardiac glycosides. Plants that are used as medicines have been referred to as "herbs" Originally, the term "herb" only applied to non-woody plants. Today, "herb" refers to any part of any plant used for aroma, flavoring or medicine, including those that come from trees and shrubs. An "herb" may be a fruit, a bark, a flower, a leaf, or a root, as well as a non-woody plant. Although the term "herb" can also be used with food spices, it is generally used in reference to any plant, or any part of a plant, having nutritional and/or medicinal values. Most of the Ayurvedic herbs, thus formulated, are free of side effects or reactions. This is the reason why Ayurveda is growing in popularity across the globe. The Ayurvedic herbs that have medicinal quality provide rational means for the treatment of many internal diseases, which are otherwise considered incurable in other systems of medicine. Go through the following lines to learn all about the importance of herbs in order to lead a healthy, peaceful and disease-free life.

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In vitro antimicrobial activity of 3-thio-4-aryl-5-tolyl-[1, 2, 4]–Dithiazolidines [Hydrochloride]

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Abstract:

A series of novel 3-thio-4-aryl-5-tolyl-[1, 2, 4]-dithiazolidine [hydrochloride] have been synthesized by the interaction of several Ammonium aryl dithiocarbamate with N-p-tolyl-S-chloro isothiocarbamoyl chloride in refluxing chloroform medium. These compounds were screened for their antibacterial and antifungal activities against–E. coli, P. vulgaries, S. aureus, S. typhimurium, K. pneumonie, Ps. aeruginosa, A. niger and C. albicance.The newly synthesized compounds have been characterized by analytical and IR, ^{1}H NMR and Mass spectral studies.

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Exploration and Assessment of wild vegetables of Jalgaon jamod, Dist. Buldhana (Maharashtra)

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ABSTRACT

Wild vegetables those occur naturally not only provide source of carbohydrates and proteins but also help to fill up deficiencies of many micronutrients, vitamins and minerals, which are not present in our regular vegetables. Present investigation concerns with exploration of such wild edibles from Jalgaon jamod region. About 40 different wild vegetables contributed to 29 families scored during the investigation. These annual or seasonal vegetables make part of regular diets of local inhabitants and tribal peoples. Maximum vegetables were belonged to amaranthaceae (10%) family followed by caesalpiniaceae (8%), euphorbiaceae (8%), portulacaceae (5%), malvaceae (5%), rutaceae (5%) and fabaceae (5%). While about 21 remaining families contribute only 3%. Present research will provide visibility to these wild nutritional crops and encourage their further evaluation for possible nutritional and pharmaceutical benefits.

Keywords: Wild vegetables, Jalgaon jamod, Annual, Seasonal, Tribal peoples, Amaranthaceae etc.

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Development of Cu-Stilbite Thick Film Ethanol Sensor

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Abstract: The study deals with natural zeolite commonly named as Ca-Stilbite. Ion exchange process is carried out for partial exchange of calcium ions by copper ions. Ion exchanged stilbite is characterized by different spectroscopic techniques as XRD, FTIR, and SEM/EDS technique. The sintered films are finally used for ethanol detecting. The Cu-stilbite films showed good ethanol detectors. The Operating temperature, ethanol response, recovery nature are observed to be function of concentration of copper ions. Higher the copper concentration (0.2M) lower is the operating temperature (90^0C) and higher is ethanol sensitivity (233). It can be conclude that partial replacement of calcium by copper ions in stilbite leads change in operating temperature and sensitivity.

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Study of some domestic animal diseases and awareness among the people from Sillod tehsil in Marathwada region.

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Abstract: Domestic animal diseases are the major constraint these diseases transmits between animals and human being vice versa. Recent study reveals that the human being gets infect various infectious diseases. In the livestock sector these practices are highly connected to the agents of the animal diseases. Various foodborne disease currently continuously occurred in most of the developing countries. The cross sectional study was done from different villages of Sillod tehsil in Marathwada region. Peoples from various sectors participate as a respondent from different age groups during the study period and including from both sexes male and female. Peoples of the study area are aware about various common diseases that are spreading by the domestic animals but some of the uncommon diseases peoples are not aware. Results of the present study shows that variation among the responded peoples according to their local or tribal knowledge in the study area. Other details will be discuss in the text.

Keywords: Animal diseases, awareness, people, Sillod, Marathwada.

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Biodiversity of Gall-midge Fauna From Nanded District Of Maharashtra State.

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ABSTRACT

Present research article describe the gall-midge fauna of Nanded district of Marathwada region of Maharashtra state. For the assessment of Gall-midge fauna of Nanded district extensive research work carried out by V.D.Deshpande and his students. Nanded district has huge midge fly population.

Family Cecidomyiidae order Diptera worldwide distributed. These Insects commonly known as gall midges. They are also known as plant gall makers. They produce galls on both dicotyledons and monocotyledons plants. Gall forming midge belongs subfamily Cecidomyiinae, Subfamilie Lestremiinae & Porricondylinae do not produce galls. few are serous pests of Grass, jowar, rice, bajra, wheat; mango, citrus, papaya; linseed, safflower. Some of them are predators of Aphids (Aphidomyia) , Scale insects, and mites also. Thus certain gall-midge species have role in biological control of a few serous insect pests. Larvae of gall midge show peculiarity of feeding habits as fungivory, herbivory, and predators of many arthropods.

Gagne (2004) reported 5451 species of from world. Majority of the gall-midge species are associated with flowering plants. Numerous species of gall midge are yet to be discovered from the world.

This article illustrate 20 species of gall-midges from different parts of nanded district. these 20 species belongs to both subfamilies Cecidomyiinae, Lestremiinae & Porricondylinae of Family Cecidomyiidae.

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ANTIOXIDANT POTENTIAL AND SECONDARY METABOLITES IN THE FRUITS OF SPONDIA PINNATA (L. F.) KURZ

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Abstract

Spondias pinnata L.(Family- Anacardiaceae) is often known as Indian hog plum. This plant is using traditionally in the treatment of infectious diseases like bronchitis, ulcer, dysentery and skin diseases. The aim of the present study was to evaluate the antioxidant potential and secondary metabolites of the pulp extracted from the fruits S. pinnata L. In the estimation of antioxidant analysis the highest antioxidant activity was found in reducing power assay in methanol extract of ripe fruit at 4 mg concentration (1853.44±0.1mg/100g) than the other antioxidant assays. In secondary metabolite assessment more activity was found in alkaloid at 4mg concentration (2094.47±0.88mg/100g) of methanol extract of ripe fruit than the flavonoid content. The present study demonstrates that the fruit pulp of S. pinnata can be considered as a valuable source of an antioxidant activity and secondary metabolite. In brief, all concentration manifests good antioxidant and secondary metabolite activity.

Key words- Antioxidant, secondary metabolite, ripe fruit, unripe fruit, S. pinnata

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Anti-inflammatory potential of plant Polygala persicarifolia DC

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Abstract

Traditionally Polygala persicarifolia DC has been used as folk herbal medicine in the treatment of different diseases. In the present study phytochemical, antioxidant, and anti-inflammatory analysis of stem and leaf by using water and methanol as solvents. Fresh and dry extracts were prepared in respective solvents. The aqueous dry leaf extract contains highest amount of phenolics 133.54 mg GAE/gm and alkaloid contents 38.52 mg CE/gm, methanol fresh leaf extracts possess high flavonoids 135.38mg GAE/gm and terpenoid contents 165.26mg UAE/gm whereas methanol fresh stem has highest saponin content i.e., 85.11mg UAE/gm respectively. The methanol dry leaf extracts show highest DPPH scavenging activity of 76.66% while in aqueous solvent leaf has more scavenging activity of ABTS 62.78%. as compared to other extracts. Aqueous dry leaf extract has the highest ferric reducing potential 142.28± 0.05mM AAE/gm. Overall leaf has the highest phytoconstituents. Primarily plant parts were screened for their anti-inflammatory potential by using HRBC, BSA denaturation inhibition and trypsin inhibition assays. 81.57% of membrane stabilization in HRBC assay and 70.54 % of trypsin inhibition observes in stem methanol extracts whereas dry methanol leaf shows 90.90 % BSA denaturation inhibition. Indomethacin (standard drug) having 97% of inhibitory effect. Methanol dry leaf extract has been elected among the other extract after screening and tested against RAW 264.7 macrophage cell lines where with increasing concentration of extract decrease in the production of NO observed i.e., 22.5µg/ml, 14µg/ml and -19 µg/ml at 25µM, 50µM and 100µM respectively. Obtained results indicates that plant possess anti-inflammatory activity.

Keywords: - Phytoconstituents, Antioxidant, RAW 264.7 cell line, Anti-inflammatory

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Synthesis and thermal study of 1-Naphthol-4-sulphonic acid based copolymer

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ABSTRACT:

The novel copolymer (1-N-4-SAHDF) has been synthesized by polycondensation of 1-Naphthol-4- sulphonic acid and p-Phenylene diamine with Formaldehyde in an acidic medium with molar proportion of reactants (2:1:3). To reveal the structure of the resin, the resin was characterized by elemental analysis and a spectral method, i.e. composition of copolymer has been determined on the basis of its elemental analysis. The copolymer resin has been characterized by FT-IR, NMR (1H and13C) spectra and by SEM. For thermal decomposition studies, 1-N-4-SAHDF copolymer has been studied by Thermo Gravimetric Analysis (TGA) at heating rate 10°C min-1 in nitrogen atmosphere. Detailed thermal degradation studies of the 1-N-4-SAHDF copolymer has been carried out to ascertain its thermal stability. Thermal degradation plot has been discussed in order to determine their mode of decomposition, order of reaction(n), thermal activation energy(Ea), frequency factor(Z), free energy change(ΔF), entropy change(ΔS). Freeman – Carroll and SharpWentworth methods have been applied for the calculation of kinetic parameters while the data from the Freeman – Carroll method has been used to determine various thermodynamic parameters. Thermal activation energy (Ea) values determined by these two methods were in good agreement with each other

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"Anthracnose", a disease retards the economic value of Brassica oleraceae L.

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Colletotrichum dematium (Pers.) Grove., a pathogen causing anthracnose disease on cabbage. This disease is mostly occurred during hot and humid weather condition, found in both pre harvest as well as post-harvest condition. In this study pathogen is collected from overall Maharashtra and then grow on PDA medium and finally pathogenicity is confirmed after artificial inoculation on heathy vegetable. The anthracnose Acervulli developed within a 3 to 4 days of inoculation. This study is also confirming the retardation of economic value of cabbage. The free amino acid and protein level is slightly elevated in diseased part of vegetable. Vitamin C, Chlorophyll and Lipid level is highly affected and found to be absent in diseased part. Carbohydrate, reducing sugar and fibre is dramatically decreased during disease development.

Keyword- Anthracnose, Brassica, PDA, Pathogen etc.

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Protein Profile Pattern in gamma irradiated wild Pea

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Abstract

Genetic Variation in germplasma has important role in identification of varieties. Electrophoretic pattern of protein fraction are directly related to the genetic background of the protein and be used to certify the genetic make-up SDS-PAGE (SDS-Polyacrilamide gel electrophoresis) is valid technique increasingly being utilized as an approach for species identification, Each variety or an approach for species identification .Each variety or a group of varieties exhibit characteristic protein banding Pattern thus on the basis of the pattern they can be identified accordingly.

Key words: SDS- PAGE, Protein, Banding pattern

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ASSESSMENT OF HEMOGLOBIN LEVEL IN THE RURAL AREA WITH SPECIAL REFERENCE TO MALE HUMAN BEINGS.

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ABSTRACT

Blood is a Fluid connective tissue in higher animals that Transports necessary substances viz., Oxygen, Carbon dioxide, Nutrients, Hormones etc. Hemoglobin (Hb) is a globin protein which plays a vital role in the transport of substances. Abnormal level of hemoglobin causes disorders like Anemia, Sickle cell anemia and Viral diseases. The percentage of Hb is differ in different age, sex, ethnic background, body build and social, nutritional and environmental factors. Anemia is a condition where there is decrease in the level of Hb the cut –off levels of Hb, which is given by WHO. In this study we analyzed the Hb (g/dl) in the different groups like Male – female etc.

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BIOCHEMICAL COMPOSITION AND NUTRITIONAL ANALYSIS OF LEAVES OF PORTULACA PILOSA L.

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ABSTRACT

The Preliminary Phytochemical analysis shows the presence of Phenols, Flavones, Alkaloids, Carbohydrate, Glycosides, Tannin and Saponin. Flavones and saponins are observed in all three solvent systems namely Methanol, Acetone and Alcohol. The proximate composition of leaves of Portulaca pilosa L. has Total ash (10%), Crude Fat (20%), Crude fibre (13.5%), Crude Protein (14.81%), Dry matter (32%) and Moisture (68%). Mineral analysis showed highest amount of Potassium (42.3mg/g) followed by Nitrogen(23.7mg/g), Calcium(15.3 mg/g) and other trace elements. The Screening of Methanolic extract of leaves of Portulaca pilosa L. by Gas chromatography and Mass Spectrometry revealed the presence of fifteen bioactive compounds showing a wide spectrum of biological properties including antibacterial, anti-inflammatory, antioxidant, hypocholesterolemic etc. FTIR analysis shows the presence of different functional groups like Aromatic ether, Hydroxyl, Phosphate, Ester, Phenol, Nitrate, Saturated aliphatic alkanes etc., The results from present study offer a platform of using Portulaca pilosa L. leaves in pharmaceutical industries as well as for traditional practitioners for herbal drug formulations.

Key words: Bioactive compounds, P. pilosa, GC-MS, Nutritional analysis, Methanolic extract.

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Dielectric and structural relaxation studies of 1,3-butanediol-1,4-dioxane mixtures using time domain reflectometry technique

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Abstract: The complex permittivity spectrum of 1,3-Butanediol in 1,4-Dioxane have been measured in the frequency range of $0.01 \leq \nu/\text{GHz} \leq 50$, over the entire concentration range using time domain reflectometry technique at 25°C. The dielectric parameters such as static dielectric constant (ε_s) and relaxation time (τ in ps) are obtained from the complex permittivity spectra using nonlinear least square fit method. The 1,3-Butanediol-1,4 Dioxane mixture shows the Cole-Davidson type relaxation process. The molecularinteractions among1,3-Butanediol-1,4 Dioxane mixture have been studied using excess dielectric constant, excess inverse relaxation time and Bruggeman factor.

Keywords: Complex Permittivity Spectra, Dielectric relaxation, Time domain reflectometry Excess inverse relaxation, Bruggeman factor.

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Eco-friendly Synthesis of Quinoxaline derivatives catalysed by zinc triflate

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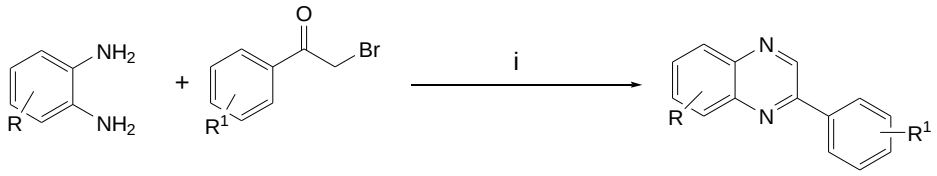
Abstract:

Quinoxaline nucleus based nitrogen containing compounds have wide applications in pharmaceutical and paint industries. Some antibiotic structures constitute the quinoxaline moiety. For the synthesis of such important class of derivatives, a simple and efficient method is developed. The reaction between substituted phenacyl bromide and benzene 1,2 diamine catalysed by Zinc triflate in water solvent. The method is eco-friendly; require mild reaction condition, easy work up procedure and good yield are the main features of the method.



1 2 3a-3x

Scheme 1: Reagent and conditions: (i) 10 mol% $Zn(OTf)_2$, 5 mL water, 70-80^{0}C.

Keywords: quinoxaline, phenacyl bromide, benzene 1, 2 diamine, zinc triflate.

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"Effects of Pesticides on Diversity and Assemblage of Spiders (Araneae) of Cotton Agroecosystems from Outskirt area of Kalamb city, Dist. Yavatmal Maharashtra India"

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Abstract: -

The present work was carried out to know the effects of pesticides on the assemblage of spiders concerning for their diversity in Cotton agro-ecosystems from outskirt areas of Kalamb city. The survey was conducted in 10 different cotton farms for the diversity of spiders from August to December 2019, every weekend in the day time from 8 am to 6 pm. The spider fauna was collected mostly from Cotton trees, a ground of farm, beneath stones and in curled and dry leaves along with fencing of farms. In the Current study, we recorded the effect of locally used Pesticides Monosil, Asetap, and profenofos on the mortality, escaping behavior, feeding habits and activity of Acetylcholine esterase and Carboxyl esterase in two different spider's species namely Neoscona theisi and Plexipus paykulli. Utmost casualty (85%) in Neoscona theisi was reported against Profenofos, While Monosil was found to be least toxic. Spider Spent less time on insecticides or herbicide applied farm surfaces. Insecticides treated Neoscona theisi feed on less prey than naturally control spiders. Similarly, when Neoscona theisi were allow consumed insecticide treated prey, they feed considerably less. The outcome of the study revealed that Profenofos is more harmful to spiders as compared to Monosil and Asetap. It is recommended that the effect of all pesticides used in agro-ecosystem on beneficial arthropods must be evaluated before using them in the fields.

Key Words: - Asetap, Insecctiside, Monosil, Pestisides, Profenofos

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Morphological and cuticular studies in Ledebouria revoluta (L.f.) Jessop (Asparagaceae) in India.

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Abstract: Ledebouria revoluta (Asparagaceae) is distributed throughout the Old World mainly in Madagascar, Sub-Saharan Africa and India. The species shows great variation in its leaf morphology. A total of 27 populations of L. revoluta collected from various geographical locations showed significant variations with reference to shape, size and blotching pattern of leaves. The size of leaves ranged from 3.3 – 33.7 × 0.4 – 4.0 cm. Different types of shapes such as ovate-obovate, narrowly to broadly lanceolate, linear-lanceolate, oblong, elliptic are found in the species. In the present communication data on stomatal frequency, epidermal cells frequency, stomatal index, stomatal and epidermal cell size are provided. The stomatal length ranged from 30.10 ± 1.51 µm – 49.17 ± 2.64 µm on the upper surface and 29.79 ± 1.22 µm – 49.90 ± 1.93 µm on the lower surface. Stomatal frequency on upper surface ranged from 26.40 ± 6.31/mm^2 – 137.20 ± 21.34/mm^2 and 31.20 ± 7.73/mm^2 – 100.80 ± 4.54/mm^2 on the lower surface. Leaves were amphistomatic and the stomata anomocytic in all the populations.

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An Analysis of a Two Dimensional Continuous Non-linear Dynamical Systems

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Abstract: The prediction of physical phenomenon commonly observed in nature has been a tough challenge before the scientists and mathematicians all over the world. A careful mathematical modeling of such events has helped us to predict the physical state of a system given the current state. Non-linear dynamical systems like mass-spring systems, electrical circuits, chemical reactions, predator-prey models, Lorenz equations, damped driven pendulum, Van der Pol oscillator, and many more have been studied by many mathematicians and physicists and the strange behavior, so called chaos, has been observed in such systems. As an example of a chaotic dynamical system, we have considered the Duffing oscillator, which is an extremely forced and damped oscillator. In this paper, we have analyzed the dynamics of the Duffing oscillator. We have constructed the differential equation of the motion of the Duffing oscillator, obtained its critical points and classified them in reference to their stability. Also, we have obtained the solutions for different initial conditions and different ranges of parameters and concluded that the system exhibits chaotic behavior.

Keywords: Dynamical systems, nonlinear oscillators, equilibrium points , period doubling, chaos.
Mathematics Subject Classification: 37, 37C, 37C05, 37C10, 37C20, 37C25, 37C27, 37C35, 37D, 37G.

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NOVEL SYNTHESIS AND ANTIMICROBIAL ACTIVITY OF IMINO PYRIMIDO PYRIMIDINE AND THEIR DERIVATIVES.

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ABSTRACT:

A series of novel 2-(4-chlorophenyl)-6-imino-8-(methylthio)-4-phenyl-1, 6, 9, 9 a-tetrahydro-2H-pyrimido [1, 2-a] pyrimidine-7-carbonitrile [3] and its derivatives [3a-3j] were prepared from 3-(4-chloro phenyl)-1-phenyl prop-2en-1-one (1) (chalcone) is synthesized by Claisen-Schmidt condensation reaction using 4-chlorobenzaldehyde and acetophenone in presence of ethanoic KOH. After purification and characterization by physical and spectral methods of synthesized chalcone have been converted into 6-(4-chlorophenyl)-4-phenyl-1, 6-dihydropyrimidin-2-amine (2) by treating with 3-(4-chloro phenyl)-1-phenyl prop-2en-1-one and guanidine nitrate in presence of alkali the structure (2) also confirmed by spectral Characterization. The synthesized (2) reacting with 2-(bis (methylthio) methylene) malononitrle in the presence of catalytic amount of potassium carbonate in DMF under reflux condition. All synthesized compounds were characterized on the basis of IR, NMR, Mass, spectroscopic data and elemental analysis. The compound (3) possesses replaceable methylthio (-SCH_3) group at 8 position. The compound (3) reacting with various nucleophiles like substituted aromatic amines, aromatic phenols, heteryl amines, active methylene compounds to give 2-(4-chlorophenyl)-6-imino-8-(Substituted)-4-phenyl-1,6,9,9 a-tetrahydro-2H-pyrimido[1,2-a] pyrimidine-7-carbonitrile in good yields. All the title compounds were tested for their antimicrobial activity. All tested compounds showed significant antimicrobial activity.

KEYWORDS: Claisen-Schmidt Condensation, Michael addition reaction, 2-(bis (methylthio) methylene) Malononitrle, guanidine nitrate, antimicrobial activity.

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Preparation of Chitosan clay Sulfentrazone nanocomposite and their Characterization

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Abstract

Natural polymer chitosan shown excellent results in drug delivery and chitosan based nano composites may reduce the leaching potential and save ground water contamination. Selective herbicide Sulfentrazone widely used in agrochemical for crop protection having very low Koc of 34 is potential candidate to leach ground water and chosen to make nanocomposites. Chitosan clay nano composites has been made with different ratio of chitosan and clay. The clay used for this research programme is bentonite. The best ratio of chitosan bentonite clay nanocomposites is loaded with Imazethapyr. Thermal Gravimetric (TGA) and Fourier-transform infrared spectroscopy (FTIR) has been used to characterize the nano composites. Different loading of Sulfentrazone has been loaded on chitosan clay nano composites and their percentage w/w is confirmed by High pressure liquid chromatography (HPLC) technique.

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Effect of aqueous root extract of Alternanthera sessilis on seed germination of Andrographis paniculata

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The present investigation was attempted to study the effect of aqueous root extract of Alternanthera sessilis (L.) R.Br. ex DC. on seed germination of an important medicinal plant, Andrographis paniculata. The concentrations of aqueous root extract used were 10, 20, 30, 40 and 50 %. The seeds of Andrographis paniculata were soaked in these above-mentioned concentrations for 12 hrs along with control. After treatment, seeds were washed under running tap water and then placed in sterile petri-plate on germination paper for germination. The data on seed germination and seedling growth were recorded after 10 days. The results obtained, indicated that, only 10% conc. were stimulatory effect, while the remaining concentrations were inhibitory for seed germination and seedling growth of Andrographis paniculata.

Key words: Seed germination, Andrographis paniculata, root extract- Alternanthera sessilis (L.) R.Br. ex DC.

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Simplified Fractional Fourier Transform and Optical Implementation

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Abstract:

A generalization of Fourier transform, the fractional Fourier transform (FRFT) was first introduced by Victor Namias. The linear canonical transform is a further generalization of fractional Fourier transform. All these generalizations are powerful mathematical tools and are widely used for spectrum analysis, signal processing and optical system analysis. The literature of Fractional Fourier transform deals exclusively with fractional of infinite Fourier transform (range of integral $(-\infty, \infty)$). In this study we generalize Simplified fractional Fourier transform (SFRFT). There are several types of simplified fractional Fourier transform (SFRFT). Such transforms are all special cases of a linear canonical transform they have the same capabilities as the original FRFT for design of fractional filters or for fractional correlation. But they are simpler than the original FRFT in terms of digital computation, optical implementation, implementation of gradient-index media, and implementation of radar systems.

In this work, generalization of simplified fractional Fourier transform is presented. Testing Function space is proved through kernel method. Analyticity theorem is proved also discuss some applications.

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Evaluation of Antibacterial and Antioxidant Properties of Indigenous Cow Urine

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Abstract
The article was emphasized on evaluation ofantibacterial and antioxidant potential of indigenous cow urine.Cow urine collected from rural area undertaken for analysis to establish antibacterial and antioxidant activity using agar well diffusion as well as DPPH assay. The zone of inhibition against test bacterial strains and DPPH assay has revealed promising results which confirms that the cow urine as a potent therapeutic agent. The presence of lipase enzyme in urine makes it highly potential anticancer agent which can be detectedby performing thin layer chromatography (TLC) and titrimetric method.

Keywords: Cow urine, antibacterial activity, antioxidant activityetc.

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PHYTOCHEMICAL CONSTITUENTS AND NUTRITIONAL COMPOSITION OF BRIDELIA MONTANA (ROXB).WILLD LEAVES AND STEM BARK

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ABSTRACT:

Bridelia montana (ROXB) WILLD is a large shrub or small tree usually growing up to ten meters tall but occasionally upto twenty meters.The present investigation access the mineral composition of leaves and stem bark of B.montana. In present work highest amount of Nitrogen (2.61%) & Phosphorus (0.35%) were found in leaves of B.montana and higher amount of Potassium (1.32%), Calcium (0.76%) and Magnesium (0.47%) were recorded in stem bark of B.montana respectively. In the present study we found that, ash (20 %), dry matter (59.5%), and crude Protein (16.31 %) in the leaves were more as compare to stem bark of plant as well as crude fiber (40%), crude fat (65.4%) and moisture (65.7%) were more in stem bark. The acetone, alcohol and distilled water extract shows highest phytochemicals than that of the others. In fluorescence analysis it was observed that, green colour for leaf and brown colour for stem bark was found frequently in visible range. In fresh plant antioxidant analysis leaves contain high amount of carotenoid (6.86mg/100gm) than the stem bark as well as stem bark shows higher amount of polyphenol (19.52mg/100gm) and ascorbic acid (20.8mg/100mg) content.

KEYWORD: B. montana, Mineral analysis, Proximate analysis, fluorescence study, etc.

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Tsunami of psychiatric illness & Post COVID-19 recovery-Review

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Abstract-

COVID-19 has affected daily life in unprecedented ways. Dramatic changes in physical activity, sleep, time use, and mental health. For understanding the mental health impacts of COVID-19, as the pandemic has tightened the link between lifestyle behaviors and depression. Disruptions to physical activity and mental health are strongly associated, but restoration of physical activity through a short-term intervention does not help improve mental health. These results highlight the large impact of COVID-19 on both lifestyle and well-being and offer directions for interventions aimed at restoring mental health. Large disruptions to physical activity, sleep, time use, and mental health. At the onset of the pandemic, sleep increases per night, time spent t0 s0cialize declines, and screen time more than doubles per day. The purpose of the article is to search impact of covid -19 and psychiatric illness. Disruption to physical activity is a leading risk factor for depression during the pandemic. However, renewal of those habits through a short-term mediation does not meaningfully improve mental well-being as well as social support.

Key words-Mental health, social support, psychiatric illness

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Study of Different Machine Learning Techniques for Sentiment Analysis

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Abstracts:

As increasing use of mobile and internet and specially social networking, people are sharing and posting lot of information on social media as well as there are lots of data on web which require analysis in order for them to become useful. So for analyzing the comments, feedbacks of users or customers plays important role for individuals, business, governments by sentiment analysis. Sentiment Analysis is used for identifying and classifying opinions or sentiments expressed by people in the form of text. In this paper studied and presented a review of how efficiently classifying and identifying sentiments behind the text by using different machine learning techniques i.e supervised and unsupervised learning and also discussed lexicon based method, also explained its areas open for research.

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Application of N-list E-resources Of Shri D.M. Burungale College,Library.

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Abstract - The Project entitled "National Library and Information Services Infrastructure for Scholarly Content (N-LIST)", being jointly executed by the UGC-INFONET Digital Library Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium, IIT Delhi provides for i) cross-subscription to e-resources subscribed by the two Consortia, -AICTE resources for universities and UGC INFONET resources for technical institution; and This paper focuses on the use of electronic resources available in N-LIST Programme by the Undergraduate Students of Shri D.M. Burungale colleges library. The aim of this paper is to examine the use of various e-resources by their UG students. The N-LIST Programme is providing 31,30,500 e-books and 6000 e-journals for the college libraries at the national level. The study shows that, UG students of colleges are using e-resources available in N-LIST Programme. The study covers different aspects of the e-resources under the N-LIST Programme and is very helpful for college librarians to examine their e-resources very effectively.So Todays need of N-list Application.

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Structural Properties of Aqueous PVP Using Dielectric Spectroscopy

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Abstract:

Dielectric measurements were made on aqueous polyvinylpyrrolidone (PVP K-30) of average molecular weight 40,000 g mol^{-1} over a frequency range from 10MHz to 30GHz Using time domain reflectometry technique. Temperature and concentration dependent values of dielectric permittivity ε' and dielectric loss ε'' of aqueous PVP solution were measured in the temperature region 298.15K-283.15K. The dielectric permittivity spectra and relaxation behavior of PVP in different concentrations was analyzed using Cole-Cole model. Dielectric permittivity of an aqueous PVP solution increases with increasing PVP concentration. Dielectric parameters such as static dielectric constants ε_i, high frequency limiting static dielectric constant ε_∞, relaxation time τ_i and distribution parameter α and thermodynamic parameters such as enthalpy of activation ΔH_i, free energy of activation ΔF_i and entropy of activation ΔS_i were measured. The average enthalpy of activation was found to be 4.209 kcal mol^{-1} and free energy of activation was found to be in the range 2.37-2.659 kcal mol^{-1}. The entropy of activation was found to be in the range 2.20-9.38 cal mol^{-1} k^{-1} and positive values of entropy shows the more disordered structure of aqueous PVP.

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"Studies of Some Substituted Dihydropyrimidinones in DMF-Water Solvent by Viscometrically at Different Temperature"

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Abstract : Measurements of density & Viscosity has been carried out for some substituted dihydropyrimidinones at different temperature in DMF-Water medium. Viscosities & densities of present system has been measured at 300K,305K, 310K, 315K. Using above data various parameters such as Relative Viscosity, Falkenhagen Coefficient A, Jones Doles Coefficient B, & Thermodynamic Parameters have been computed. The results are interpreted on the basis of solute -solvent & solute-solute interaction.

Keywords : Falkenhagen Coefficient A, Jones Doles Coefficient B, & Thermodynamic Parameters.

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Embryo morphology of Indian Aponogeton species

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Abstract:-

Aponogeton L.f. (Aponogetonaceae Planch) is an aquatic genus comprising about 60 species distributed in tropical and subtropical regions of the Old World. In India, 10 species are reported. The present paper aims to study the embryo morphology of Indian Aponogeton species and A. decaryi Jum. ex Humbert from Madagascar. The size, shape, position of plumule, nature of embryo exhibited significant variation across species. Embryos with appendages were observed in three species, viz. A. appendiculatus, A. nateshii and A. wolfgangianus. A. nateshii has unique embryo morphology. Transverse section of embryos showed non grooved cotyledon which is circular in outline in A. bruggenii, A. decaryi, A. natans and A. lakhonensis, broad concave grooved cotyledon semi-circular in outline in A. crispus and A. microphyllus and thinly grooved in A. appendiculatus, A. satarensis, and A. wolfgangianus. had thin grooved cotyledon. The size of fruit and embryo, shape of embryo, position of plumule and other embryological characters of 11 species are discussed here. Embryo morphology is found to be significant in delimitation and identification of Indian Aponogeton species.

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Comparative Analysis on Indian Sign Language Recognition System

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Abstract: - Sign language is a way of communication among Hearing and Speech Impaired Persons. Normal peoples cannot understand sign language and it is not feasible for deaf-dumb people to bring translator with them in every place. So, for bridging this gap many systems have been developed. Sign Language recognition systems which can convert Sign into text or Speech and vice-versa. Sign language recognition system work in five steps are: data acquisition, pre-processing, feature extraction, classification and recognition. This paper discussed the Indian sign language recognition system. In this paper, a comparative analysis of various gesture recognition techniques involving Artificial Neural Network, Convolutional Neural Networks Hidden Markov Model and PCA has been discussed with its accuracy. This comparative study came across that much work has been done in alphabet and numeric level but work in word and sentence level is less. Sign language recognition for static signs has been done by many researchers but dynamic sign recognition systems have scope of development. A Comparative study is utilized to find out research gaps in existing systems and give inspiration to develop interpreters for Indian Sign Languages. Keywords: sign language, ISLR, ISL, HMM, PCA, ANN, CNN, vision based, glove based.

Effect of aqueous root extract of Hibiscus cannabinus L. on seed germination of Macrotyloma uniflorum (Lam.) Verdc. Rutuja Pradip Bhosale and Sushama Kirtane Department of Botany, Yashwantrao Chavan College of Science, Karad Dist. Satara, MS, India- 415124 The objective of present investigation was to determine impact of the aqueous root extract of Hibiscus cannabinus L. on seed germination and seedling growth of Macrotyloma uniflorum (Lam.) Verdc. . The concentrations of aqueous root extract used were 10, 20, 30, 40 and 50 %. The seeds of Macrotyloma uniflorum were soaked in these above-mentioned concentrations for 12 hrs along with control. After treatment, seeds were washed under running tap water and then placed in sterile petri-plate on germination paper for germination. The data on seed germination and seedling growth were recorded after 10 Days. The results obtained, indicated that, the seed germination and seedling growth were decreased with increasing concentrations of the aqueous root extract of Hibiscus cannabinus L.

Key words: Seed germination, Macrotyloma uniflorum (Lam.) Verdc., root extract of Hibiscus cannabinus L.

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Study of food packaging materials, its importance and effect on the living system.

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Abstract: In this techno world the development is continuously found in any type of packaging materials that are used for different purposes particularly in food materials. In recent years, the demand for ready prepared food materials for consumption has mostly increased day by day due to the busy and modern lifestyle. In this light use and through food packaging materials commercially manufactured by using different advanced technology in various companies. Eating habits of the peoples in various places in our country shows both types from vegetarian and non-vegetarian food materials. For the purpose of carrying the food products, the necessity to use proper packaging material for the quality of food ultimately helps to the living system. These packaging materials are manufactured in different forms for the food products according to the demand of modern society, various small scale units from the industrial sectors take efforts continuously to provide natural or good quality of packaging materials for the health of the living system. The use of natural materials in the food packing has increased with the help of developing technology. It plays an important role in the quality and safety of food materials, it will be helpful to the life of the food industry and living systems. The present study indicates the importance of the packaging materials and its effects on the living system. This study helps to improve the overall properties of food packaging materials.

Keywords: Food, Packaging materials, Importance, Effect, Living system.

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Growing Tasks of Academic Libraries and E- Resources

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Abstract: -

The need for e-information services to the Users are also growing and becoming very essential. The collision of web-based e-learning and teaching environment has influenced every aspect of library and information services in academic libraries and providing new opportunities and challenges to the library authority for participation in the knowledge-based society along with electronic and multimedia publishing, Internet based-information services, global networking, web situated digital resources etc.

Librarians are accused with selecting and organizing resources and instructing patrons on how to detect and use these, and preserving information regardless of format or technology. The information revolution and the knowledge that is available on the Web have built new challenges to these traditional authority ethics. The appear challenges of acquiring and providing access to electronic knowledge resources require librarians to modify their tasks from traditional librarian to information scientist by learning and applying new skills to understand the evolving technologies to manage and provide quality on-line information service to the knowledge society. So the picture of the future academic library authority must be to create a World Class Networked Global Library and Information Centre to provide timely web based excellence information service to the user in duration in the e-leaming environment. The future need for changes in academic libraries, trends and challenges before the library authority in the e-leaming environment and the various growing tasks of the academic library authority also have been discussed in this study.

Keywords: Information Technology, Academic Library Authority, Web Technology, Technology Challenges, E-Resources, E-Leaming Environment.

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C_5H_2 molecule in cosmic objects

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Abstract :

C_5H_2 Pentatetraenylidine is one of a molecule detected in cosmic objects. Four isomers of C_5H_2 molecule have been observed in laboratory by Travers et al.(1997), Mc.Carthy et al. (1997), and Gottlieb et al. (1998). They suggested for detection of the ring chain isomer of C_5H_2 (c- C_5H_2) in cosmic objects as it is the most stable one in comparison to others.

Out of more than 150 molecules detected in cosmic objects, most of them are hydrogen- carbon compound. After detection of C_3H_2 both linear as well as cyclic isomers in the cosmic objects, astronomers are keenly interested in the search of C_5H_2 molecule.

Key words: C_5H_2, cosmic object, molecules.

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Habitat Preference and Maintenance of freshwater Crab Barytelphusa cunicularis in concrete tank culture model

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Abstract

This study aims to habitat preference in constructed concrete tank of 10X8X5 for captive maintenance and culture aspects of Barytelphusa cunicularis, the study was conducted during 2015-2016. Habitat preference of the freshwater Crab B. cunicularis was investigated when offered three different habitat Models by maintaining water level and water quality, food and shelter. Trial 1-(open compartmentalization) was having three sub compartment containing Sand, mud and Stones respectively. Trial 2- (Bamboo cages). Trial 3-(close compartmentalization) was having two sub compartment containing mud and water. Experiments in concrete tank showed that Trial 2-was not suitable for this crab due to escaping and aggressive behaviour and high mortality rate when one pair of male and female kept in one bamboo cage due to competition. Maintenance in close compartment also failed due to competition and escape behaviour. Open compartment - mud flat and stony habitat was most preferred due to having protection, hide and burrow preparation chances, movement, searching of food and moulting etc. These issues are discussed and the habitat preference by this species was confirmed in captive culture condition. Different problems identified in the culture of this crab species are also discussed. The findings include important primary data to develop a crab culture model in the backyards of aqua culturists and small scale farmers.

Keywords: freshwater, crab, B. cunicularis, culture model.

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Studies on Ethnomedicinal Properties and Ecological aspects Of Leucas aspera Linn Plant

By

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Abstract-

This study indicates that Leucas aspera extracts have good antidiabetic activity. Ethanol and Petroleum ether extracts of Leucas aspera exhibited significant anti-hyperglycemic activities. The current piece of work is a focus on micro level study and is purely based on contents in leaf of **L. aspera** in Nagpur region which is use in medicine as well as cosmetics. Basically Aromatic plants of family Lamiaceae that is **L. aspera** have aromatic smell and its aroma which is a characteristic features of family Lamiaceae. **L. aspera, is** commonly known as **Dronapushpi**. In this work I got six compounds in leaves of L.aspera which is use as medicine as well as cosmetics industry. These are **9,9 trimethyloctahydrbenzo(d) cycloprop(c) oxepin-2,4-dione,3-Buten-2-one,3-methyl-4-(1,3,3-trimethyl-7-Oxabicyclo[4.1.0]heptan-1y, Tetratriacontane ,Hexacosane, Heptacosane, Tetratetracontane** Also I got 1.33 % gm of aroma oil found in 100 gm leaves of L. aspera. L. aspera is a wild herb or shrub which is having medicinal value to a great extent and is available abundantly in field of India **Conclusion-** Natural herbs help in preserving and enhancing the beauty and personality of human beings. Natural Cosmetics and personal-care products may contain ingredients whose safety is unknown or which are known to create health risks. The present review focuses on the ethnobotnical potential of herbal extracts for cosmetic purposes. Natural cosmetics general term applied to all preparation and external conditioning and beautifying the body.

Key Words: Leucas aspera ,Ethnobotany, Cosmetics, antidibetic activity.

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Impact of ICT on Teaching-Learning Process

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Abstract:

Information and communication technology (ICT) is a wide category of technical tools and resources that are used to communicate as well as generate, transmit, store and manage data. Every area of life and society is influenced by ICT in some manner. In this sense education is no exception and the educational process is currently in transition phase with old approaches being challenged in favor of the incorporation of ICT technologies in the teaching, learning and research process. ICT has been recognized as a potentially effective instrument for educational transformation and reform because it helps to increase the education quality by making teaching-learning and research a more engaging, exciting and vibrant process. ICT-assisted teaching-learning and research acknowledge that are many different learning paths and different methods of articulating and manifesting knowledge as it empowers concerned to investigate and distinguish.

Almost every educational institute spending a significant amount of money to create an ICT environment and train concerned to function well with ICT integrated in education. Different ICT tools can help to extend access to education, boost the relevance of education in an digital workspace and improve educational excellence when utilized appropriately. It should be regarded as one of the most significant factors in altering the country for future growth. This paper will explore status, need, challenge and worth of integrating different ICT tools in teaching-learning process.

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SCREENING OF SECONDARY METABOLITES FROM HELICTERIS ISORA LINN AND HOLARRHENA ANTIDYSENTERICA L.

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Abstract

For a long period of time plants have been a valuable source of natural products for maintaining human health, especially in last decade with more intensive studies for natural therapies. Plants are rich source of therapeutic compounds that's have tremendous applications in pharmaceutical industry. Secondary metabolites are compounds which biosynthetically derived from primary metabolites. This biochemical of plants are used as chemical feed stock or as row material for various scientific investigation and number of pharmaceutical compounds.

The present investigation is designed in screening of secondary metabolites present in the fruits of Helicteris isora belonging to the family (Malvaceae) and Holarrhena antidysenterica leaves and stem bark belonging to the family (Apocynaceae). The qualitative analysis for secondary metabolites was performed with different solvents such as ethanol, ethyl acetate, acetone, chloroform and distilled water. Phytochemical analysis revealed the presence of various chemical compounds like glycosides, protein, tannin, phenolic compound and steroids in Helicteris isora. Holarrhena antidysenterica showed phenol, tannin, reducing sugar and alkaloids.

Key Words: Helicteris isora, Holarrhena antidysenterica, phytochemical, secondary metabolites.

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Yield Performance and Nutritional content of Pleurotus florida Cultivated on Different Agro-wastes.

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ABSTRACT:

Pleurotus florida (Mont.) Singer was cultivated on different agro-wastes viz. soybean straw, paddy straw, wheat straw and their combination in 1:1 proportion to determine the effect of these agro waste on yield, moisture content, crude protein, total carbohydrates, fat, crude fiber, ash and minerals like Ca, P, Fe content. Soybean straw showed significantly highest yield (with 89.50% B.E.) with maximum crude protein (26.50%), carbohydrate (57.85 %), ash (8.00 %) and maximum phosphorus (890 mg/ 100 mg of dry mushroom) content. Maximum moisture (91.45 %), and crude fiber content (8.20%) in the fruiting bodies was recorded on Paddy straw cultivation. The combination of Soybean straw + paddy straw showed significantly highest fat (2.70%), Calcium (330 mg / 100gm) and Iron (12.55 mg/100gm of dry mushroom) content.

Keywords: Pleurotus florida, B.E. (Bio efficiency), agro-waste, fruiting body.

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Gender and Age Detection – A Python Project

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ABSTRACT:

The human race has advanced technology to the extent that the 21st century is the crack of the dawn for unimaginable achievements. The gender and age detection using Python - technology can be used for the benefit in identifying one's age and even their gender just based on their glimpse from a camera, image and even a video. This research paper will precisely chalk out the whole procedure, multiple methodologies and algorithms that can be used, which one is the most accurate and how it all comes together. It will also emphasis on its importance and how it can be implemented for the benefit our day to day life.

The principal objective of the paper is to build a gender and age detector that can approximately guess the gender and age of the face of an individual in a picture using Deep Learning on the Adience dataset using PyCharm IDE. Moreover, to get the most effective predictions and result by overcoming the problem of accuracy and time, this technology can be used to look at the huge spectrum where it can be implemented: ranging from security services, CCTV surveillance and policing to dating applications, matrimonial sites.

Keywords : Image Processing, OpenCV, Deep Learning, CNN, NLP.

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Study of Aqueous Alanine in the GHz Region:An Approach Using Dielectric Spectroscopy (DRS)

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Abstract: Dielectric relaxation of aqueous alanine have been studied in the temperature region 303.15 K to 283.15 K using Time Domain Spectroscopy (TDS) covering the frequency range of 10 MHz to 30 GHz and molar concentration of $0.18708 \leq c/M \leq 0.74831$. Two relaxation processes namely the low frequency relaxation and the high frequency relaxation(primary relaxation process) has been detected for the aqueous alanine. The low frequency dispersion of relaxation time (τ_l) observed at all the measured temperatures and for the used concentrations is mainly attributed to the rotational motion of alanine molecules while the high frequency dispersion of relaxation time (τ_h) is attributed to the reorientation of bulk water. Static dielectric constant (ε_j) observed for both the relaxation processes was observed to be increasing with increasing concentration and towards lower temperature of the solute molecule. Relaxation time was also found to be higher for low frequency relaxation process (τ_l) as compared to high frequency process (τ_h) and was observed to be increasing towards the measured low temperature over all the used concentrations. On the other hand, dielectric relaxation time (τ_h) measured over all the used concentrations was observed to be slightly decreasing towards lower temperature over the used concentration region. Correlation factor (g_l) gives valuable information regarding orientational correlation between dipoles of alanine and nearest neighbor molecules. Observations suggest strong possibility of antiparallel alignment of dipoles between alanine and surrounding molecules towards higher concentrations which seem to be less affected by the variation in temperature and leads strong association between alanine molecules towards higher concentrations. Decrease in the values of effective dipole moments($\hat{u}$) obtained using Cavell equation towards higher concentration boost the possibility of antiparallel alignment of dipoles of alanine; but the increasing dipole moment towards low temperature region suggest slight weakening of association between alanine molecules due to hydrophobic interaction. Number of water molecules that are irrotationally bond by the solute molecules (Z_{ib}) were also determined and expressed in terms of hydration dynamics. Dielectric parameters have been corroborated by thermodynamic parameters.

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The genus Scleria Berg. (Cyperaceae) in Peninsular India and Maharashtra

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Abstract

About 24 taxa of Scleria s. l. occurring in Peninsular India and Rest of Maharashtra have been critically studied on morphological ground. With reference taxa, the present paper is the first attempt in India to focus on the generic limit of Scleria Berg. Diplacrum R. Br. And Sphaeropus Boeck. The separation of these genera is based on very narrow distinction of one or two characters.

These groups of cyperlogist divided opinions in accepting generic and infrageneric delimitation of this genera. Some cyperlogist accept Scleria and Diplacrum as two distinct genera merging Sphaeropus in the later genus, while others take Scleria in broad since, treating the former two infragenerically as its Sections, Boeckeler alone considers three distinct genera. Observations based on different taxa of the study regions clearly reveal continuity of characters in these genera. Hence, it is provisionally accepted that a single genus Scleria be better treated with broad generic limit merging other two genera in it.

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Seed germination studies in Withania coagulans (Paneer phool)

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Abstract:-

In Charaka Samhita, Withania coagulans Dunal, belongs to family Solanaceae is mentioned as Brihaniya Mahakashaya and Madhur skandha dravya. It is one of the most important plants, which is used to control diabetes. Due to the property of coagulating milk, it is also known as cheese maker (Paneer phool). It is native to Afghanistan, Pakistan and the Indian subcontinent. Seed germination is most important physiological process of plant life. It affects both crop yield and quality. Soaking of seeds in cow dung slurry has been proved to be a efficient method for maximum seed germination and is an ancient Indian traditional method. Keeping this view in mind, present investigation deals with seed germination studies in Withania coagulans Dunal. Seeds of Withania coagulans Dunal were soaked in cow dung slurry for 12 hours and then kept for gemination in sterile petri-plate along with control. Results obtained indicated that, soaking in cow dung slurry, was very effective treatment to enhance seed germination percentage i.e. 94.12% as compared to control. The days required for germination also reduced as compared to control. The root, shoot length and vigour index was also increased.

Key words: Withania coagulans Dunal, Cow dung slurry, seed germination.

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Agro Medico study of Melghat region.

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Abstract –Melghat is known as paradise of Vidharbh . Melghat means the 'meeting of Ghats 'which is just what the area is, a large tract of unending hills .The forest of Melghat is mostly of the Dry Mixed Deciduous type and one of the important forests of Vidharbh region .The Melghat forest has great diversity of medicinal plants. Present study includes the study of agro medico study of this region.

Key words : Medicinal plants, Melghat Forest.

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Using Machine Learning Techniques to Detect Distributed Denial of Service Attacks

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Abstract— Machine learning (ML) is used for network intrusion detection because it is predictable after training with relevant data. ML provides a great way to detect new and unknown attacks. There are many types of network intrusion attacks; however, this document focuses on distributed denial of service (DDoS). DDoS attacks are the most destructive attacks, which will disrupt the safe operation of basic services provided by different organizations in the Internet community. These attacks are becoming more and more complex, and the number is expected to increase, which makes detecting and combating these threats challenging. Therefore, an advanced intrusion detection system (IDS) is needed to identify and recognize abnormal behavior of Internet traffic. This research combines well-known clustering methods such as Naive Bayes, Multilayer Perceptron (MLP), and SVM, uses decision trees and various classification algorithms, to detect DDOS attacks.

Keywords: Classification, Distributed Denial of Service, Machine Learning,

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COMMON FIXED POINT THEOREM FOR A MAPPING IN B - METRIC SPACES

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Abstract: The Aim of this paper is to obtain the common fixed point theorems for a mapping on two different b-metric spaces induced on same set X. In this paper we prove that on the set X two b-metrics are defined to form two different b-metric spaces and the mapping defined on X have unique common fixed point in both the spaces. Also, an example is discussed to verify the main result.

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Chemical composition & nutritional assessment of seeds of underutilized wild legume Rhynchosia Lour.

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Abstract: -

The aim of the present research is to study the chemical composition and nutritional potential of immature and mature seeds of four species of Rhynchosia like R. cana, R. hirta, R. minima, R. rufescence. The preliminary phytochemical analysis was done by using four solvents systems, such as methanol, acetone, aqueous and chloroform. A high amount of phytochemicals like alkaloids, phenols, tannin, caumarin, and glycosides was found in the methanolic extract than the others. In proximate analysis high content of ash (4.5%), crude fat (6%) and protein (8.31%) were observed in immature seeds of R. cana, while dry matter (88%) was observed in mature seeds of R. hirta. A high amount of crude fibre content (17%) was observed in mature seeds of R. minima and moisture (40%) was noted in immature seeds of R. hirta. In mineral analysis High amount of nitrogen (1.33±0.014%), phosphorus (0.24±0.008%) and potassium (1.27±0.005%) were observed in immature seeds, whereas manganese (1220±0.005 mg/100g) in mature seeds of R. cana. A High amount of zinc (730±0.008 mg/100g) and calcium (1.8%) were observed in mature seeds of R. rufescence. In mature seeds of R. minima high magnesium content (9.11%) & copper (1113±0.001mg/100g) were observed, while iron content (6180±0.01mg/100g) in immature seeds of R. minima. From the above study, it is concluding that all four species of Rhynchosia are nutritionally rich, whereas R. cana having high nutritional content as compared to other three species which reviled that wild legume Rhynchosia is a rich source of phytochemicals and nutrition and provides possibilities for advancement as a stand-by for cultivated species as a vegetable.

Key words: Chemical composition & nutritional, Rhynchosia, immature &mature, wild legume.

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Thermal Stress Analysis of Simply Supported Steady State Rectangular Plate with Variable Thickness

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Abstract.

This article deals with the determination of displacement and stress distribution of simply supported rectangular plates with variable thickness subject to thermomechanical loads. The temperature field is expressed as a duplicate harmonic series, where as a nonlinear temperature profile along the thickness is determined by solving the steady state 3D heat conduction equation. The solution of displacements and stresses of the plate, which satisfy the

governing differential equations and boundary conditions at four edges of the plate. The results are obtained in series form in terms of circular functions. The results for displacements and stresses have been computed numerically.

Keywords: Rectangular Plate, Thermal Stresses, Steady State, Thermomechanical Load.

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