Department of Biochemistry

1. **Dr.V.Bharathi et al.** -"HPLC Analysis Of Calendula Officinalis And Azadirachta Indica", World Jouranl of Pharmaceutical Research, www.wjpr.com, UGC, Google Scholar, Scopus, IF: 8.074, ISSN: 2277-7105, Vol 7, Issue 15, July 2018.

   Abstract:

   Medicinal plants have been found useful in the cure of a number of diseases including bacterial diseases. Medicinal plants are a rich source of antimicrobial agents. Almost every part of the tree is bitter and finds application in indigenous medicine. Natural drugs have been a part of the evolution of human, healthcare for thousands of years. Nowadays nearly 88% of the global populations turn to plant derived medicines as their first line of defence for maintaining health and compacting diseases. One hundred and nineteen secondary plant metabolites derived from plants are used globally as drugs, 15% of all angiosperms have been investigated chemically and of that 74% of pharmacologically active plant derived components were discovered. In the Current study, isolation of active components through Thin Layer Chromatography (TLC) and High performance liquid chromatography (HPLC).

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2. **Dr.V.Bharathi et al.**- "Phytochemical Composition and Larvicidal Efficacy of Calendula Officinalis and Azadirachta Indica", World Jouranl of Pharmaceutical Research, www.wjpr.com, UGC, Google Scholar, Scopus, IF: 8.074, ISSN: 2277-7105, Vol 7, Issue 15, July 2018.

   Abstract:

   Mosquitoes are the major public health problem throughout the world. Among the 3492 Species of mosquitoes recorded worldwide, more than a hundred species are capable of transmitting various diseases in human and other vertebrates. One of the most effective alternative approaches under the biological control programme is to explore the floral biodiversity and enter the field of using safer insecticides of biological origin as a simple and sustainbale method of mosquito control. The effects of botanical derivatives against mosquito have been reviewed. In the present study to identify alternative natural eco-friendly larvicidal agent using Calendula officinalis and Azadirachta indica formulation.

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3. **Dr.V.Bharathi**, **Dr.S.Shanthi**, **et al.**- "Green Synthesis of Silver Nano Particle Using Senna Alata", World Jouranl of Pharmaceutical Research, www.wjpr.com, UGC, Google Scholar, Scopus, IF: 8.074, ISSN: 2277-7105, Vol 7, Issue 15, Page No: 507-517, July 2018.

Abstract:
There is an increasing commercial demand for nanoparticles due to their wide applicability in various areas such as electronics, catalysis, chemistry, energy, and medicine. This work deals with the synthesis and characterization of silver nanoparticles using Senna alata. The synthesized nanoparticles were characterized by using UV–Vis absorption spectroscopy, FT-IR and SEM analysis. The reaction mixture turned to brownish gray colour after 5 hrs of incubation and exhibits an absorbance peak around 450 nm characteristic of Ag nanoparticles. Scanning Electron Microscopy (SEM) analysis showed silver nanoparticles was pure and polydispersed and the size were ranging from 10-40 nm. The approach of green synthesis seems to be cost efficient, eco-friendly and easy alternative to conventional methods of silver nanoparticles synthesis.

4. **Dr.V.Bharathi, Dr.S.Shanthi et al.-** "Phytochemical and Antimicrobial Analysis of Senna Alata Leaves Extract", World Jouranl of Pharmaceutical Research, www.wjpr.com, UGC, Google Scholar, Scopus, IF: 8.074, ISSN: 2277-7105, Vol 7, Issue 14, Page No: 1030-1044, July 2018.

Abstract:
Objective: Ethanolic extract of *Senna alata leaves* leaves was investigated for antimicrobial activities.
Methods: The well diffusion method was followed for antibacterial assay. Antimicrobial activity of the leaves extract (200µg, 400µg, 600µg, 800µg) using well diffusion method. In this disc was prepared by using whatmann No.1 filter paper. Then, the filter paper disc of 5mm diameter were sterilized and soaked in the different concentration of plant extract.
Result: The increase in prevalence of multiple drug resistance has slowed down the development of new synthetic antimicrobial drugs and has necessitated the search for new antimicrobials from alternative Sources. In the present investigation, preliminary phytochemical analysis was carried out in the extracts of *Senna alata.*
Conclusion: In the present investigation, preliminary phytochemical analysis was carried out in the extracts of *Senna alata*. The extracts showed the presence of alkaloids, reducing sugar, coumarin, tannin and phenolic compounds.

5. **Dr.T.Karpagam, Dr.B.Varalakshmi, Ms.S.Gomathi and Ms.A.Shanmugapriya et al.-** "Studies on Hepatoprotective and Anti-Inflammatory Activity of *Coix Lacryma-Jobi (Linn)*", Asian Journal of Pharmaceutical and Clinical Research, www.ajpcr.com, Peer reviewed, UGC, Google Scholar, ISSN(Online): 2455-3891, ISSN(Print): 0974-2441, Vol 11, Issue 11, Page No: 289-293, July 2018.

Abstratct:

Objective: In the present study, evaluation of hepatoprotective activity of Coix lacryma-jobi by CCI_4-induced hepatotoxicity test, and evaluation of anti-inflammatory activity of by egg albumin-induced paw edema, and complete Freund's adjuvant-induced arthritis model were done.

Methods: Plant extract was prepared by mixing ethanol with powdered plant seeds and experiment was done as per the procedures of above-mentioned three models.

Results: C. lacryma-jobi test extracts out of two doses, 400 mg/kg exhibited a significant reduction in serum cholesterol level as 33 mg/dl when campared to control groups. C. lacryma-jobi seed extract has restored various serological alterations following CCI_4- induced hepatotoxicity and was capable of reversing the toxic effects of CCI_4 on liver cells. Considerable reduction in the paw volume of exudates observed with C. lacryma-jobi extract, indicating significant anti-inflammatory activity.

Conclusion: Therefore, this study shows that C. lacryma-jobs seed extract have anti-inflammatory activity in the models studied.

6. **Dr.V.Bharathi et al.** -"Efficacy of Cellulose Degrading Bacteria from Soil in Production of Cellulase from Corn Waste", Research journal of Pharmaceutical Technology, www.rjpt.org, UGC, Scopus, ISSN: 0974-3618, 0974-360X, Vol 11, Issue 9, Page No: 4024-4028, Aug 2018.

Abstract:

Cellulases are enzymes acts on plant cell wall material and are also synthesized by microorganisms during their growth on cellulosic materials. The cellulose enzymes have attracted considerable attention in recent years due to their great biotechnological and industrial applications. In the present study, soil bacteria were isolated and screened for cellulose degrading activity. They are further analysed to produce cellulose enzyme from corn waste. The exzyme production was optimized under various conditions such as pH, temperature, substrate and inoculums concentration. Total of 50 bacterial strains, only 12 strains were selected and when comparing 12 cellulolytic bacteria, Pseudomonas sp. Showed highest zone formation with increased enzyme production by using corn waste as substrate. The different parameters effect on cellulose production were evaluated and optimized. Thus, the present study confirms that the corn waste can be used as an alternative carbon source for production of cellulose at high yield.

Department of Business Administration

1. **Ms.P.Shobana et al.**- "Work Life Balance On Women Police in Tiruchirappalli City", International Journal of Management, www.ijm.com, Peer reviewed, UGC, Google Scholar, IF: 2.26, ISSN: 2321-4643, Vol 6, Page No: 15-23, Dec 2018.

   Abstract:

   The concept of women working in Indian heritage environment has always been challenging and much more of those women working in people force. A study of this research covered the challenges being faced by women police in Tiruchirappalli, South India. This research addressed the challenges on women police family bonding, women police stress, and health. A survey is conducted with 100 police personnel to perform quantitative analysis.

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2. **Ms.P.Shobana et al.**-"Preliminary Analysis of Work-Life Balance (WLB) on Women Police in Tiruchirappalli", International Journal of Science and Research, www.ijsr.net, Peer reviewed, IF: 7.426, ISSN: 2319-7064, Vol 8, Issue 3, Page No: 690-695, March 2019.

   Abstract:

   Women empowerment is needed both in work and personal life. In today's life circumstance, women are deemed necessary to contribute their duties, skills talents equally both in work and personal life. Striking a balance between work and in personal life is of utmost importance. Therefore, the need of a good Work-Life Balance (WLB) is gaining importance among the employees. This paper covers the challenges being faced by women police in Tiruchirappalli, South India, specifically addresses the impact of recruitment, training, and welfare programs towards work-life balance. This paper also addresses how discipline and performance expectancy are vital towards a successful WLB. A survey was conducted with 100 police personnel to perform the quantitative analysis.

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3. **Dr.R.Balasaraswathi**-"A Study on Cottage Industries in Tiruchirappalli Corporation", Review of Research, UGC, IF: 5.7631, ISSN: 2249-894X, Vol 8, Issue 8 Page No: 1-4, May 2019.

   Abstract:

   Small scale Industries play a vital role in the development of economy, mainly in developing countries. Home-based business are the missing majority in entrepreneurial research. Economic development generally refers to the quantitative and qualitative changes in the economy to promote the standard of living and economic health of a specific area. This studies focuses on the role of cottage industry in economic development. The researcher has identified various

factors of economic development on which the cottage industry is contributing a lot. To explain it primary data has been collected through structured questionnaire. This study also discusses the problems associated with cottage industry. Five sectors of cottage industry have been included into this study. This study focuses on the contribution of each sector to the economic development of Tiruchirappalli Corporation. Finally, some recommendations are put forth for the development of cottage industry so that this industry can thrive and contributes more to the economic development of Tiruchirappalli Corporation.

Department of Chemistry

1. **P.Lakshmi Prabha**-"Graphene oxide encapsulated 3D porous chalcopyrite (CuFeS2) nanocomposite as an emerging electrocatalyst for agro-hazardous (methyl paraoxon) detection in vegetables", www.sciencedirect.com, Peer reviewed, UGC, Scopus, Page No: 268-276, Oct 2018.

   Abstract:

   Methyl paraoxon (MOX) is a highly toxic organophosphate pesticide. It is recently reported that, MOX can enter the human body through ingestion, inhalation, or by dermal penetration. Due to its high non-degradability, it can bind to the tissues of fruits and vegetables. When it is consumed, it can imposes sub-chronic and chronic diseases, by the inhibition of acetylcholinesterase in human metabolism. Therefore, for the first time, we reported a detection of non-enzymatic electrochemical sensor based on 3D porous phase graphene oxide sheets encapsulated chalcopyrite (GOS@CuFeS2) nanocomposite.

2. **Dr.N.Manimaran & Dr.A.Angelin Prema et al**.-"Structural Properties of Lead Doped CDS Thin Films Prepared with different concentration of Ammonia by Chemical Bath Deposition Method", International Journal Research and Analytical Reviews, www.ijrar.com, Peer reviewed, UGC, Google Scholar, E-ISSN: 2348-1269, ISSN(Print): 2349-5138, Vol 5, Issue 4, Page No: 107-115, Nov 2018.

   Abstract:

   Lead doped CdS thin films were prepared on microscope glass slides using chemical bath deposition method (Silar Method) with concentration increases from 0.5, 1.0, 1.5, and 2.0 of NH_3. The structural properties of Lead doped CdS film were examined using X-ray Diffraction (XRD), Scanning Electron Microscopy (SEM), Atomic Force Microscopy (AFM) and Energy Dispersive X-ray Analysis (EDAX). The XRD images show that the peaks are not sharp indicating that the average crystallite size is small. The magnified microphotographs of lead doped CdS thin films reveals that the grains are quite small with unequal size dense composed of largely irregular shaped. Also the results of the Atomic Force Microscope (AFM) the Root Mean Square and Roughness of the lead doped CdS thin films was found to vary with the concentration of NH_3. EDAX analysis reveals that the films are cadmium rich. This may be due to the fact that the reactivity of cadmium is greater than lead and sulphur.

3. **Dr.N.Manimaran & Dr.A.Angelin Prema et al.** - "Optical and electrical Properties of Pb Doped CdS Thin Films Prepared with different concentration of Ammonia by Chemical Bath Deposition Method", International Journal Research and Analytical Reviews, www.ijrar.com, Peer reviewed, UGC, Google Scholar, IF: 5.75, E-ISSN: 2348-1269. ISSN(Print): 2349-5138, Vol 5, Issue 4, Page No: 1505-1514, Dec 2018.

Abstract:

Lead doped CdS thin films were prepared on microscope glass slides using chemical bath deposition method (Silar Method) with concentration increases from 0.5, 1.0, 1.5, and 2.0 of NH_3. The optical and Electrical properties of Lead doped CdS films were examined using Photoluminescence Spectra (PL), UV-VIS-NIR Spectrophotometer, FT-IR Spectroscopy and Electrical Resistivity Analysis. The Photoluminescence spectra reveal that the emission peak was observed at 515.445 nm and corresponding band energy is 2.392.eV. The optical absorption spectrum was decreases exponentially with an increase in wavelength. Also the results of FT-IR Analysis the absorption peaks in the range 1750-1600 cm^{-1} are assigned to N-H bond. The Electrical analysis observed that the resistivity decrease with increase in temperature. The Activation energy varies with increase in concentration of Ammonia.

Department of Commerce

1. **Ms.R.Vani et al**.-"Investor's Contemplation of firms Positions and Stock Returns in the Open-Ended Mutual Fund Scheme", International Journal of Advanced Scientific Research & Development, www.ijasrd.org, Peer reviewed, Google Scholar, IF: 1.47, E-ISSN: 2395-6089, P-ISSN: 2394-8906, Vol 5, Issue 3, Page No: 32-39, March 2018.

   Abstract:

   Mutual Fund investments are in limelight these days for providing the best investment options for the long-term creation of wealth. It is one of the best decisions to earn high returns while avoiding tax payments at the same time. Also, known as Equity Funds, mutual funds are more popular because people of any and every walk of life can invest in it easily. Moreover, the internet boom makes it easier for investors to take advantage of the ease of access by investing in mutual funds and make extra earnings. This article analyses the investors attempt to study the firms position and the stock return while investing their money in the open-ended mutual fund.

2. **Dr.M.Umamaheswari et al.**-"A General Study About the National Stock Exchange(NSE) and Bombay Stock Exchange", Journal of Emerging Technologies and Innovative Research, www.jetir.com, UGC, Google Scholar, IF: 5.87, ISSN: 2349-5162,Vol 5,Issue 9, Page No: 201-205, Sep 2018.

   Abstract:

   Stock exchange provide that platform to buyers and sellers to exchange their financial assets at stock markets. The study pertains too general study about National Stock Exchange and Bombay Stock Exchange. Stock Exchanges are now crossing national boundaries to extend their service areas and this has led to cross border integration. This not only increased the appear of the exchange investors but also attracted more volume of trading. The Indian stock exchange (NSE) holds a place of prominence not only in Asia, but also at global level. Stock exchanges play a cicial role in the promotion of capital market through consolidation of national economy in general and in the development of industrial sector in particular. Especially in the developing countries like India.

3. **Dr.M.Uma Maheswari & B.Saranya**-"A Study of Brand Preference of Two Wheeler Vehicles of Girl Students and Women in Tiruchirapalli", International Journal of Research and Analytical Reviews, www.ijrar.org, Peer reviewed, UGC, Google Scholar, IF: 5.75, E-ISSN: 2348-1269, P-ISSN: 2349-5138,Vol 5, Issue 4,Oct 2018.

Abstract:
In Indian Scenario brand preference of two wheelers has become a necessity and a special impact on consumer life. In recent times it has become a gain to mankind and very convenient means of transport. Women are now an important driven factor in the economy. The brand preference is effectively related to brand choice that facilitates consumer decision and brand purchase. The study was carried out to assess brand preference of two wheeler vehicles of girl students and women in Tiruchirappalli District.

4. **Dr.M.Umamaheswari, Ms.N.Bhuvaneswari et al.**-"A Common Study on Value Proposition of UBER", International Journal of Research and Analytical Reviews, www.ijrar.org, Peer reviewed, UGC, Google Scholar, IF: 5.75, E-ISSN: 2348-1269, P-ISSN: 2349-5138,Vol 5, Issue 4, Page No: 905-910, Oct 2018.

Abstract:
A value proposition is an assurance by a company to a customer or market segment. It is easily understandable reason why a customer should purchase a product or service from that specific business. A value proposition should be in a clear statement and explains how a product resolves a problem, communicates the specifics of its added benefit and states the reason why it's far better than similar products on the market and also the purpose why this product should be used. The ideal value proposition is concise and appeals to a customer's strongest decision-making drivers. This paper reveals the common or general study on value proposition of Uber and why uber is unique from other taxis. Uber now plays an important role.

5. **Ms.N.Bhuvaneswari et al.**-"The Study of Top Most Influential Women in Indian Banking", International Journal of Research and Analytical Reviews, www.ijrar.org, Peer reviewed, UGC, Google Scholar, IF: 5.75, E-ISSN: 2348-1269, P-ISSN: 2349-5138,Vol 5, Issue 4, Page No: 159-162, Nov 2018.

Abstract:
The general impression is that women are becoming incrementally more successful in the workforce-and some of the news is good. Women are represented in the workforce in greater numbers than ever and holding a higher percentage of managerial and executive jobs than in the past. Women-owned businesses have doubled in the last dozen or so years. This articles tells about the top most influential women in Indian Banking.

6. **Dr.M.Umamaheswari et al.**-"A Study on Government Support for Promoting the Women Entrepreneurs(MSME) Through Loan Schemes in India" Journal of Emerging Technologies and Innovative Research, www.jetir.com, UGC, Google Scholar, IF: 5.87, ISSN: 2349-5162,Vol 5,Issue 11, Page No: 538-542, Nov 2018.

Abstract:

In Indian society, women are traditionally discriminated against and excluded from political and family related decisions. Despite the large amount of work women must do on a daily basis to support their families, their opinions are rarely acknowledged and their rights are limited. But now Globalization arrived in india through an external and internal alignment of political and economic forces that led to the opening of the country to the outside world. Women are voicing out their opinions and has become the global leaders and surviving in the striving competition. They play in important role in MSME. For women there are schemes provided by MSME. This paper focuses on the schemes available for women entrepreneurs in MSME.

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7. **Dr.M.Umamaheswari et al.**- "The Study on the Applications and Users of Machine Learning in Finance" International Journal of Research and Analytical Reviews, www.ijrar.org, UGC, IF: 5.75, E-ISSN: 2348-1269, P-ISSN: 2349-5138,Vol 5, Issue 4, Page No: 163-166, Nov 2018.

Abstract:

Machine learning is the science of designing and applying algorithms that are able to learn things from historical data. And construction of algorithms that can learn from and make predictions on data. This allows ML programs to respond to different situations even though not being explicitly programmed. Increasing reduction of human effort is the main aim of data scientists with implementing ML. This paper focuses on the applications and uses of machine learning in finance.

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8. **Dr.M.Umamaheswari, N.Bhuvaneswari** -"General Effect of GST in Hospitality and Tourism Industry", Journal of Emerging Technologies and Innovative Research, www.jetir.com, UGC, Google Scholar, IF: 5.87, ISSN: 2349-5162,Vol 5,Issue 12, Page No: 244-250, Dec 2018.

Abstract:

Goods and Services Tax (GST) is an indirect tax which was introduced in India on 1 July 2017 and was applicable throughout India which replaced multiple cascading taxes levied by the central and state governments. It was introduced as The Constitution (One Hundred and First Amendment) Act 2017, following the

passage of Constitution 122nd Amendment Act Bill. In this paper we will know about the general effect GST in tourism and Hospital industry and its fact about world tourism. In this paper, the study is about the rates pertaining to the GST in Hospitality and Tourism Industry. To know about the facts and its contribution towards GDP.

9. **Dr.M.Umamaheswari et al.-**"Management Efficiency Ratios(MER) of Britannia Company Limited" Journal of Emerging Technologies and Innovative Research, www.jetir.com, UGC, Google Scholar, IF: 5.87, ISSN: 2349-5162,Vol 6, Issue 3, Page No: 161-166, Mar 2019.

Abstract:

Rations are actually is an expression of relationship between two terms in mathematical terms. Management efficiency ratio helps to measure the company to use its assets and manage the liabilities effectively. They mainly measure how the company assets can be used to generate revenue and how to manage the assets and use it productively. This helps to analyse the ratio of the company with another competitor in the same industry. Businesses mostly exist for the purpose of generating profit and satisfying the consumers' needs. It is the role of the management to ensure such objectives are attained, and hence must gather sufficient data to inform them how the business is doing. Britannia company Ltd comes under the sector of food Processing. Food industry has huge opportunities for investment, and stimulates growth in the competitive environment. This paper focuses particularly on Britannia Company Ltd pertaining to Management efficiency ratios. This analysis is a medium to understand the financial weakness and soundness of an organization. Keeping in mind the objective of analysis, I have selected appropriate data to calculate appropriate ratios.

Department of Computer Science

1. **Ms.N.Vijayalakshmi & J.Polley Amilya**-"Application of Knowledge Engineering for Prediction of Lung Cancer", International Journal of Computer Sciences and Engineering, www.ijcseonline.org, Peer reviewed, UGC, Google Scholar, ICI, IF: 3.022, ISSN: 2347-2693, Vol 6, Issue 7, Page No: 957-960, July 2018.

   Abstract:

   People suffering from Lung cancer are commonly found throughout the world. There are many people who die of this fatal ailment every year. Even though there are many reasons for the occurrence of this disease, it is difficult to say if a person is suffering from lung cancer, unless we test for it. This is costly. It would be highly useful if we could identify significant symptoms in a person that could help to predict the possibility of occurrence of this disease in them. With this objective in mind, we have used a dataset consisting of values of 16 significant symptoms in people who were diagnosed and tested for lung cancer. Based on knowledge of various factors leading to lung cancer and the general symptoms in people suffering from lung cancer, we have chosen these biomarkers.

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2. **Ms.N.Vijayalakshmi & P.Nithya**-"Information Retrieval From Thyroid Database Through Data Mining", International Journal of Computer Sciences and Engineering, www.ijcseonline.org, Peer reviewed, UGC, Google Scholar, ICI, IF: 3.022, ISSN: 2347-2693, Vol 6, Issue 7, Page No: 126-130, July 2018.

   Abstract:

   Thyroid disorders occur due to dysfunction of the thyroid gland or pituitary gland, iodine deficiency, cancer in some parts of the body, or due to side-effects from other medications. Hyperthyroidism, Hypothyroidism, Goitre, and Thyroid cancer are some of the ailments that result due to thyroid disorders. Some other reasons like pregnancy, or medications for other illnesses may also show abnormal levels of thyroid hormones. This research study aims to identify conditions based on which we could predict the type of thyroid disorder in patients. This could help in further diagnosis and treatment. We study various attributes commonly found in patients with thyroid disorders to identify those attributes that may specifically discribe the type of thyroid disorder in a person.

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3. **Dr.G.Srinaganya** –"Simulation of Stochastic Geometric Brownian Motion of Stock Market-using R Programming", International Journal of Computer Sciences and Engineering, www.ijcseonline.org, Peer reviewed, UGC, Google Scholar, ICI, IF: 3.022, ISSN: 2347-2693, Vol 6, Issue 7, Page No: 156-160, July 2018.

Abstract:
In the prediction of total stock index, many are faced with some parameters as they are uncertain in future and they can undergo changes, and this uncertainty has a few risks, and for a true analysis, the calculations should be performed under risk conditions. The empirical tests suggest that the stochastic differential equation of GBM model can be used to predict the direction of stock price movement. In terms of predicting the stock price values, the empirical findings suggest that the GBM model performs well in stock market.

4. **Dr.G.Srinaganya**-"Exchanging Secure Data in Cloud With Confidentiality and Privacy Goals", International Journal of Engineering and Technology, www.irjet.net, Peer reviewed, Google Scholar, IF: 7.211, E-ISSN: 2395-0056, ISSN(Print): 2395-0072, Vol 5, Issue 8, Page No: 769-772, Aug 2018.

Abstract:
Hazardous development in the quantity of passwords for online applications and encryption key for outsourced information stockpiling very much surpass the administration furthest reaches of clients. Along these lines outsourcing keys (counting passwords and information encryption keys) to proficient secret key directors (fair however inquisitive specialist organizations) is drawing in the consideration of numerous clients. In any case, existing arrangements in convential information outsourcing situation can't all the while meet the accompanying three security prerequisites for keys outsourcing 1). Confidentiality and protection of keys: 2) Search security on personality ascribes attached to keys.

5. **Dr.K.Menaka** –"Encrypting Information Using DNA Sequences With Matrix Algebra", International Journal of Research in Electronics and Computer Engineering, Peer reviewed, UGC, Google Scholar, IF: 4.305, ISSN: 2348-9028, Vol 6, Issue 3, Page No:1586-1590, Sept 2018.

Abstract:
Cryptography with DNA sequence is a newly emerging technique that helps for the secured transmission of data. With the help of the biological properties of the DNA sequences, it is possible to enhance the security of a message with minimum cost and reduced computational time. DNA cryptography show how powerfully the cryptographic methods can be used to work along with DNA sequences. The main aim of DNA computing is to provide more security to the information being transferred with less time and space complexities. Matrix algebra is the most influential among mathematical tools that are available for the investigation of linear networks. This paper proposes a novel idea of using transposition

proposition matrix along with DNA sequencing concept for the secure and effective transmission of data.

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6. **Dr.M.Manimekalai & S.Regha-** "Anchoring Your Big Data Environment" International Journal of Computer Sciences and Engineering, www.ijcseonline.org, Peer reviewed, UGC, ISSN: 2347-2693, Vol 6, Issue 11, Dec 2018.

   Abstract:

   Security and protection issues amplified by the volume, assortment, and speed of Big Data. The decent variety of information sources, arrangements, and information streams, joinExternalize data security when possible and d with the gushing idea of information procurement and high volume make one of kind security dangers. This paper points of interest the security challenges when associations begin moving touchy information to a Big Data store like Hadoop. It distinguishes the diverse danger models and the security control structure to address and alleviate security hazards because of the recognized risk conditions and use models. The system laid out in this paper is likewise intended to be circulation skeptic.

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7. **Dr.M.Manimekalai & S.Regha**-"Approval of Data in Handoop Using Apache Sentry", International Journal of Computer Sciences and Engineering, www.ijcseonline.org, Peer reviewed, UGC, ISSN: 2347-2693, Vol 7, Issue 1, Page No: 583-586 Jan 2019.

   Abstract:

   Huge Data has turned out to be progressively famous, as it can give on-request, dependable and adaptable administrations to clients, for example, stockpiling and its preparing. The information security has turned into a noteworthy issue in the Big information. The open source HDFS programming is utilized to store tremendous measure of information with high throughput and adaptation to internal failure and Map Reduce is utilized for its calculations and handling. Be that as it may, it is a noteworthy focus in the Hadoop framework, security demonstrate was not structured and turned into the real disadvantage of Hadoop programming. As far as capacity, meta information security, touchy information and furthermore the information security will be a difficult issue in HDFS. With the significance of Hadoop in the present undertakings, there is likewise an expanding pattern in giving a high security includes in ventures. Over ongoing years, just some dimension of security in Hadoop, for example, Kerberos and Transparent Data Encryption(TDE),Encryption procedures, hash methods are appeared for Hadoop.

This paper, demonstrates the endeavors that are made to exhibit Hadoop Authorization security issues utilizing Apache Sentry in HDFS.

8. **Dr.K.Menaka & M.Vishalini**-"A Hybrid Cryptographic Algorithm Based on Matrix Algebra using DNA sequences and S-Boxes", International Journal of Research in Electronics and Computer Engineering, www.ijrece.com, ISSN: 2393-9028(Print), ISSN:2348-2281(Online), Vol 7, Issue 1, Jan 2019.

Abstract:

Cryptography using DNA sequence is an emerging area which has facilitated a massive impact in the field of information security. The DNA sequences possess many significant properties which now help the cryptographic algorithms for secure data transmission. This kind of approach in using the properties of DNA sequences for hiding the message is a promising approach in this era. In traditional cryptograph. S-Box (also called Substitution Box) is a basic component for performing substitutions in symmetric key algorithms. This paper thus proposes a novel hybrid algorithm which uses the properties of DNA sequences with some concepts of Hill Cipher and S-Boxes combined with the power of matrix algebra for the secure transmission of data.

9. **Dr.Menaka & B.Keerthanakani –**"Predicting the Birth of Healthy Babies with Gestation Period Observations using Machine Learning Algorithms", International Journal of Computer Science and Engineering, www.ijcse.com, Peer reviewed, UGC, Google Scholar, IF: 3.022, ISSN: 2347-2693, Vol 7, Issue 3, Page No: 271-275, March 2019.

Abstract:

Machine learning is the most familiar division of Artificial Intelligence to perform exploratory data analysis tasks and to work out a variety of problems such as weather forecasting, drug discovery, encrypted image detection etc., This paper discusses about varieties of data mining classification algorithms that are commonly used to extract considerable knowledge from huge volumes of data. Identification of the healthiness of a baby with the observations during the gestation period of a mother requires various parameters to be taken into consideration during that period. Decision Tree (DT) algorithms could be very much helpful in predicting the healthiness of a baby. The numerical form of the data sets are taken and are fed to the DT algorithms to make calculations for the prediction of the healthiness of the baby. The data sets are taken and analyzed in the Waikato Environment for Knowledge Analysis (WEKA) platform.

10. **Dr.G.Srinaganya**-"Poisson Process Based Predictive Model Application for Online Customer Purchasing Behavior", International Journal of Scientific Research in Computer Science Applications and Management Studies, Peer reviewed, UGC, IF: 0.654, www.ijsrcsams.com, ISSN: 2319-1953, Vol 8, Issue 2, March 2019.

Abstract:

This paper addressing the very common real-world problem on online purchasing that will improve the revenue of the retailers. Current days, buying the product through online become more importance to every human. Because it gives Quality and readability products to the consumer in minimum cost with/without complement. According to a study, companies with accurate sales of their products predictions are 10 % more likely to grow their revenue year-over-year. Before sales of the product, retailer should understand the consumer attitude during online purchasing. This paper proposes Poisson process based predicting model to carry out the online live customer purchasing behavior to understand the consumer attitude in online purchasing. So, this paper helps to the online retailers to take a decision on the online consumer purchasing and provide the services to the consumers based on their buying performance. Performance of customers at online purchasing is randomness, which is does not have any certain structure or pattern.

11. **Dr.G.Srinaganya, A.Kiruba**-"A Survey on Heart Disease Prediction using Data Mining Techniques", International Journal of Computer Sciences and Engineering, www.ijcsonline.org, Peer reviewed, ICI, Google Scholar, ISSN: 2347-2693, Vol 7, Issue 5, Page No: 877-880, May 2019.

Abstract:

The health care environment is found to be rich in information, but poor in extracting knowledge from the information. This is because of the lack of effective analysis tool to discover hidden relationships and trends in them. By applying the data mining techniques, valuable knowledge can be extracted from the health care system. Heart disease is a group of condition affecting the structure and function of heart and has many root causes. Heart disease is the leading cause of death in the world over past ten years. Researchers have been made with many hybrid techniques for diagnosing heart disease. This paper deals with an overall review of the application of data mining in heart disease prediction.

Department of Economics

1. **Ms.R.Latha et al-** "An Economic Study of Jasmine Cultivation in Ettarai Village in Tiruchirappalli District", International Journal of Research and Analytical Reviews, www.ijrar.com, UGC, IF: 5.75, E-ISSN: 2348-1269, ISSN: 2349-5138, Vol 5, Issue 3, July 2018.

   Abstract:

   Floriculture has become an important commercial trade in agriculture. Flowers are not only beautiful to look at, growing them in a large scale can be a good business proposition. Flowers are highly perishable in nature. This paper is mainly concentrates on the study area of flower cultivators, who are mostly cultivate Jasmine, Rose, Ixora, Chrysanthemum, Tuberose, Kanagambaram, Marigold and Sunflower. Most of the cultivators are highly focus on the Jasmine flower cultivation. Jasmine is one of the oldest fragrant flowers that is cultivated by man. So this study is an attempt to analyse the economic status of Jasmine cultivation in Ettarai village in Tiruchirappalli district agriculture.

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2. **Ms.R.Latha et al**.-"Employment Opportunities of women in flower cultivation at Andanallur Block in Tiruchirappalli District", International Journal of Research in Engineering Application and Management, www.ijream.com, Peer reviewed, UGC, IF: 5.646, ISSN: 2454-9150, Vol 4, Issue 5, Page No: 151-154, Aug 2018.

   Abstract:

   Agriculture is an important engine of growth and poverty reduction in countries where it is the main occupation of the poor people. In India, most of the people engaged in agriculture in which women contribution is comparatively higher than men. They are extensively involved in agriculture activities all over the world women have undertaken various agricultural activities like sowing, weeding, transplanting, plucking, fertilizer application and post harvest operation. They get more employment opportunities in flower cultivation. This study is an attempt to find out the employment opportunities for women in flower cultivation.

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3. **S.Rengalakshmi**-"Constraints of Building Construction Workers in Srirangam, Application and Management, Tiruchirappalli District", International Journal of Research in Engineering, www.ijream.com, Peer reviewed, UGC, IF:5.646, ISSN: 2454-9150,Vol 4, Issue 6, Sep 2018.

   Abstract:

   Construction workers are to be considered as the pillars of the construction industry. The significant and sizeable contribution of the sector towards the GDP

of the nation and economic development is highly adorable. But practically; they are not recognized for their work status, as they are categorized as unorganized workers. The workers of the industry are scattered. Due to the insecure and erratic nature of employement they could not avail any legal and social security measures provided by the state and central governments. Since, majority of the workers are illiterate, they are not in the position to get entitled in any union for collective bargaining. This paper strive to enlist the constraints of the construction workers such as, Non availability of social security measures, sporadic job availability, ambivalent working hours, occupational health hazards, long travels and expenditure, low wage and recurrent injuries.

Department of Management Studies

1. **Dr.V.P.T.Dhevika & Ms.J.Saradha**-"Health Awareness about Organic Cereals and Millets among Women College Teachers in Tiruchirappalli", Journal of Exclusive Management Science, www.jems.net.in, ISSN: 2277-5684, Vol 7, Issue 10, Page No: 1-8, Oct 2018.

   Abstract:

   This study is a case study on Health Awareness about Organic Cereals and Millets among Women College Teachers in Tiruchirappalli Town. The objectives of the study are to find out the factors influencing health awareness of organic millets and cereals and to study the relationship between personal profile and factors influencing health awareness of organic millets and cereals. Questionnaires are tested through Cronbach alpha which 0.7242 which shows that the questionnaire is reliable. Data are collected through both primary and secondary sources. Primary data is collected through questionnaire method and secondary data is collected through magazine, journal, website and text books. Sampling size consist of 50 respondents. Convenient sampling method is used based on the convenience of the respondents. Data are analysed through SPSS- version 20 and tools like percentage analysis, chi- square test, t-test, and one way ANOVA are used to test the hypothesis framed for the purpose of the study. The most important factor influencing health awareness about Organic cereals and Millets by the respondents are- "Consumption of organic Cereals & Millets prevents high blood pressure" and the least important factor influencing health awareness about Organic cereals and Millets by the respondents are – "It helps to improves Immune system, prevent cancer and promotes the good respiratory system". The health awareness is high for the respondents whose educational qualification is PG with M.Phil Degree and whose years of experience are between 15 to 20 years and who are serving in Arts department. Out of four hypotheses framed three is accepted and one is rejected. There is a significant association between age, educational qualification, years of experience and Health Awareness. There is no significant difference between Nature of Department and Health Awareness.

2. **Ms.J.Saradha & S.Radha**-"Corporate Governance Practice in Private Sector Banks with Special Reference to City Union Bank Ltd", International Journal of Management Studies, www.ijms.org, UGC, IF: 2.26, E-ISSN: 2231-2528, ISSN: 2249-0302,Vol 6, Issue 1(3), Page No: 97-101, Jan 2019.

Abstract:
Banks are the most trusted financial institutions of our country. They mobilize and dispense the funds required for economic development. The financial development of a country greatly depends on the investor protection. Corporate Governance is such a tool to ensure investor protection through effective supervision and collaborating the working relationship between management and the supervisors. This paper aims at evaluating the Corporate Governance practices in private sector banks with special reference to City Union Bank. The Bank's practices regarding Shareholding pattern, Board practices, Board committees, Disclosures and Transparency of information during the financial year 2016-2017 as reported by the Bank in their Annual Reports was evaluated. It is observed that the City Union Bank has complied with the mandatory requirements of Clause 49 of the listing agreement.

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3. **Ms.J.Saradha** & **P.Kavitha** -"Green Human Resource Exercise its Attentiveness and Working in the Industry in Trichy", International Journal of Research and Analytical Reviews, www.ijrar.org, Peer reviewed, UGC, Google Scholar, IF: 5.75, ISSN: 2349-5138, Page No: 111-113, Jan 2019.

Abstract:
The Green HRM is the requisite of 21st Century as day in and day out, it is report in the newspaper that because of the overload utilization of natural assets as a raw substance by the industries and other trade organization there is remarkable stress on natural resource of plant Earth. The Green HRM plays an essential role in manufacturing to promote the environment related issues by adopt it, in management philosophy, HR policy and exercise people and working of laws related to surroundings protection. The accountability of the in attendance generations, HR managers is to create attentiveness amongst the teenagers and among the public operational for the association and keep hold of the natural resources for our future generation i.e. sustainable development.

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4. **Ms.J.Saradha** & **K.Sonia Nancy**-"Customer Preference Towards Reliance Jio Network with Reference to Trichy City", Indian Acadamic Researchers Association, www.iaraindia.com, Peer reviewed, UGC, IF: 2.014, ISSN(Print): 2250-1940, ISSN(Online): 2349-1647, Vol 7, Jan 2019.

Abstract:
The study focus to identify the factors which makes the customers to prefer the Reliance JIO network and their satisfaction level in Trichy city. This study is carried out from 50 respondents. The results are analysed using chi square test. The study makes effort to ascertain the preference level of customers of reliance JIO. Through this study, the company would be able to come up to the expectation

level of its customers. The findings states that the promotional offers makes the most of the customers to prefer this service provider. Reliance JIO has already placed the one third of the market share within a span of 5 months, and their marketing strategy plays a important role in it. So, the present study made an effort to reveal the impact on customer's preference and satisfaction level in Reliance JIO Network.

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5. **Ms.J.Saradha** & **S.Radha**-"An Empirical study on the Performance of Selected Large Cap Mutual Funds in India", Indian Acadamic Researchers Association, www.iaraindia.com, Peer reviewed, UGC, IF: 2.014, ISSN(Print): 2250-1940, ISSN(Online): 2349-1647, Vol 7, Jan 2019.

Abstract:

Investments can be defined as the savings for the future which provides good return, capital appreciation along with liquidity. The investors could broadly be classified as two categories as individual investors and corporate investors. Our Indian Financial system provides many investment options for the investors. One of such recently preferred investment option is the mutual funds. Through it has been made available to the investors so many decades earlier, the preference has gained momentum very recently. Though different investment schemes are available in mutual funds. This paper aims at evaluating the performance of selected Large Cap mutual funds in India. Large Cap mutual funds invest the major proportion of their corpus in trustworthy, reliable, strong large market capitalized companies. Investor's most preferred three large cap mutual funds ICICI Prudential Top 100 Fund, IDBI India 100 Fund, UTI Top 100 Equity Fund are selected for the performance evaluation for the study period of January 2017 to Novemeber 2017.

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6. **Dr.J.Francismary et al.**-"Corporate Governance Practice in Media Industry with Special Reference to NewDelhi Television Limited (NDTV)", International Journal of Research and Analytical Reviews, www.ijrar.org, Peer reviewed, UGC, Google Scholar, IF: 5.75, ISSN: 2348-1269, P-ISSN: 2349-5138, Vol 6, Issue 1, Page No: 24-35, Feb 2019.

Abstract:

Media plays an important role in disseminating information to the public. The governing of the listed companies should be known, to maintain the trustworthiness of the investors. A large number of investors are unaware of the happenings inside the company premises. Corporate governance is such a tool to ensure investor protection and elaborate the working relationship of the management. This paper

aims at evaluating the corporate governance practices in Media Industry with special reference to New Delhi Television Limited. This paper gives a brief detail regarding the different committees present in a company and their duties.

7. **Ms.S.Kanimozhi et al**.-"Application of the Decomposed theory of Planned Behaviour in Technology Adoption: A Review", International Journal of Research and Analytical Reviews, www.ijrar.com, Peer reviewed, UGC, IF: 4.236, E-ISSN: 2348-1269, ISSN(Print): 2349-5138, Vol 6, Issue 2, Page No: 735i-739i, April 2019.

Abstract:

The adoption of technology by people in various means has generated interests among researchers. Mobile technology in is growing at constant and faster pace in the past few years paving way for ease and comfortability in the personal and professional lives of many people. Though many theories and models have proposed to address the technology adoption by consumers, an interesting theoretical framework used in Information (IS) that gets attention of the researchers is the Decomposed Theory of Planned Behavious (DTPB). This researcher paper will provide insight by offering a comprehensive review of literature in DTPB context and its applications. This study contributes to the existing literature which will be beneficial for future researchers interested in DTPB model.

Department of Mathematics

1. **Dr.S.Vidhyalakshmi, Dr.M.A.Gopalan & S.Aarthy Thangam**-"Generation Formula for Integer Solutions to Special Elliptic Paraboloids", International Journal of Mathematics Trends and Technology, www.ijmttjournal.org, Peer reviewed, UGC, Google Scholar, IF: 2.53, ISSN: 2231-5373, Vol 58, Issue 1, Page No: 20-23, June 2018.

   Abstract:

   Knowing a solution of ternary quadratic Diophantine equation representing elliptic paraboloid, a general formula for generating sequence of solutions based on the given solution is illustrated.

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2. **Dr.S.Vidhyalakshmi, Dr.M.A.Gopalan & S.Aarthy Thangam**-"Observations on Two Special Hyperbolic Paraboloids", International Journal of Latest Engineering and Management Research, www.ijlemr.com, Peer reviewed, IF: 2.545, ISSN: 2455-4847, Vol 3, Issue 6, Page No: 1-4, June 2018.

   Abstract:

   Knowing a solution of ternary quadratic diophantine equation representing hyperbolic paraboloid, a general formula for generating sequence of solutions based on the given solution is illustrated.

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3. **Dr.S.Vidyalakshmi, Dr.M.A.Gopalan & S.Aarthy Thangam** - "On Heron Triangles", International Journal Of Engineering Science Invention, www.ijesti.org, Peer reviewed, Google Scholar, IF: 5.962, ISSN: 2319-6734, Vol 7, Issue 8, Page No: 85-98, Sept 2018.

   Abstract:

   Different set of formulas for integer heron triangles are obtained.

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4. **Dr.S.Vidyalakshmi, Dr.M.A.Gopalan**, S.Aarthy Thangam- "Real And Gaussian Integer Solution to $x^2 + y^2 = 2(z^2 - w^2)$", Global Journal Of Engineering Science And Researches, www.jesr.com, Peer reviewed, IF: 5.070, ISSN: 2348-8034, Vol 5, Issue 9, Page No: 46-53, Sept 2018.

   Abstract:

   The quadratic equation with four unknowns given by $x^2 + y^2 = 2(z^2 - w^2)$ analysed for its non-zero distinct integer solutions and Gaussian integer solutions. Different choices of solutions in real and Gaussian integers are obtained. A general formula for obtaining sequence of solutions (real and complex) based on its given solution is illustrated.

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5. **Dr.M.A.Gopalan et al.**- "The Homogeneous Bi-quadratic Equations with five Unkowns $x^4 - y^4 + 2(x^2 - y^2)(w^2 + p^2) = 4(x^3 + y^3)z$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 6, Issue X, Oct 2018.

   Abstract:

   In this paper "The homogeneous bi-quadratic equation with five unknowns given by x^4-y^4+2(x^2-y^2)(w^2+p^2)=4(x^3+y^3)z", is studied for determining its non-zero distinct integer solutions. A few interesting relations between the solutions and special figurate numbers are obtained.

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6. **Dr.S.Vidyalakshmi & Dr.M.A.Gopalan** -"Remark on the Paper Entitled Lattice Points of a Cubic Diophantine Equation $11(x + y^2 = 4(xy + 11z^3)$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 6, Issue x, Oct 2018.

   Abstract:

   In this paper, new sets of solutions to the cubic equation with three unknowns given by 11(〖x+y〗^2=4(〖xy+11z〗^3) are presented.

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7. **Dr.M.A.Gopalan & J.Shanthi–"**Observations on the Diophantine Equation $x^2 + xy + y^2 = 12z^2$", Global Journal of Engineering Science and Researches, www.gjesr.com, Peer reviewed, IF: 5.070, ISSN: 2348-8034, Issue 10, Page No: 134-136, Oct 2018.

   Abstract:

   A new and different set of solutions to the ternary quadratic equation x^2+xy+y^2=12z^2 is obtained through the concept of geometric progression and Pythagorean equation.

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8. **Dr.S.Vidyalakshmi, Dr.M.A.Gopalan & S.Aarthy Thangam**-"On Systems of Double Equations With Surds", International Journal of Mathematical Archive, www.ijma.info, ISSN: 2229-5046, Vol 9, Issue 10, Page No: 20-26, Oct 2018.

   Abstract:

   This paper concerns with 6 different systems of double equations involving surds to obtain their solutions in real numbers respectively.

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9. **Dr.M.A.Gopalan & J.Shanthi**-"On Cubic Equation With Four Unknowns $4(x^3 + y^3) + 12(s^2 - 1)(x + y)z^2 = (3s^2 + 1)w^3, (s \neq \pm 1)$", International Journal for Research in Applied Science and Engineering Technology, www.ijraset.com, Peer

reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 6, Issue x, Page No: 549-551, Oct 2018.

Abstract:

In this paper, the cubic equation with four unknown given by 4(x^3+y^3)+12(s^2-1)(x+y) z^2=(3s^2+1) w^3,(s≠±1) is considered for determining its non-zero distinct integer solutions.

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10. **Dr.K.Meena, Dr.S.Vidhyalakshmi and J.Srilekha**-"Observation on the Negative Pell Equation $y^2 = 40x^2 - 36$", International Journal for Research in Applied Science and Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 6, Issue xi, Page No: 39-46, Nov 2018.

Abstract:

The binary quadratic equation represented by the negative pellian $y^2 = 40x^2 - 36$ is analyzed for its distinct integer solutions. A few interesting relations among the solutions are given. Employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbola and parabolas. Also, the relations between the solutions and special figurate numbers are exhibited.

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11. **Dr.S.VidhyaLakshmi, Dr.M.A.Gopalan** & **T.Mahalakshmi**-"On the Negative Pell Equation $x^2 = 6y^2 - 50$", International Journal of Engineering Sciences & Research Technology, www.ijesr.com, Peer reviewed, Google Scholar, IF: 5.164, ISSN: 2277-9655, Vol 7, Nov 2018.

Abstract:

The binary quadratic equation represented by the negative pellian $x^2 = 6y^2 - 50$ is analyzed for its distinct integer solutions. A few interesting relations among the solutions are also given. Further, employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbolas, parabolas and special Pythagorean triangle.

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12. **Dr.S.Vidyalakshmi, Dr.M.A.Gopalan**, S.Aarthy Thangam-"Remark on the paper Entitled Observations on Ternary Quadratic Equation $5x^2 + 7y^2 = 972z^2$", Monthly Science Review, Peer reviewed, ISSN: 2492-1136, Vol 1, Issue 1, PageNo: 10-12, Nov 2018.

Abstract:

A new and different sets of solutions to the ternary quadratic equation $5x^2 + 7y^2 = 972z^2$ are obtained through the concept of geometric progression and Pythagorean equations.

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13. **Dr.S.Vidyalakshmi, Dr.M.A.Gopalan, J.Shanthi**-"On the Diophantine Equation$x^2 + axy + by^2 = z^2$", London Journal of Research in Science: Natural and Formal, Peer reviewed, ISSN: 2631-8490, 2631-8504, Vol 18, Issue 4, Dec 2018.

Abstract:

A new and different set of solutions is obtained for the ternary quadratic Diophantine equation $x^2 + axy + by^2 = z^2$ through representing it as a system of double equations.

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14. **Dr.S.Vidhyalakshmi, Dr.M.A.Gopalan,** S.Aarthy Thangam-"On Gaussian Diophantine Quadruples" International Journal of Engineering & Technology www.ijet.org, Peer reviewed, Google Scholar, E-ISSN: 2227-524X, Vol 7, Issue 4, Page No: 6947-6950, 2018.

Abstract:

This paper concerns with the problems of constructing gaussian diophantine quadruples with the property that the product of any two distinct gaussian integers added with 1 and 4 in turn is a perfect square. The construction of gaussian diophantine quadruple(A, B, C, D) is illustrated through employing the non-zero distinct integer solutions of the system of double diophantine equations. The repetition of the above process leads to the generation of sequences of guassian Diophantine quadruples with the given property.

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15. **Dr.S.Vidhyalakshmi, Dr.M.A.Gopalan &** S.Aarthy Thangam -"A Connection between Pairs of Rectangles and SphenicNumber", Journal of Emerging Technologies and Innovative Research, www.jetir.org, UGC, Google Scholar, ISSN : 2349-5162, Vol 6, Issue 1, Page No: 231-235, Jan 2019.

Abstract:

This paper aims at determining pairs of rectangles such that, in each pair, the sum of their areas is represented by a Sphenic number. Also, the number of primitive and non-primitive rectangles for each sphenic number is given.

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16. **Dr.K.Meena, Dr.S.Vidhyalakshmi,** K.Radha-"On the Positive Pell Equation $y^2 = 32x^2 + 41$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue 1, Page No: 258-265, Jan 2019.

Abstract:

The binary quadratic equation represented by the positive pellian y^2=32x^2+41 is analyzed for its distinct integer solutions. A few interesting relations among the

solutions are given. Further, employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbola and parabola.

17. **Dr.K.Meena, Dr.M.A.Gopalan & T.Priyalakshmi**-"On the Positive Pell Equation $y^2 = 35x^2 + 14$", International Journal for Research in Applied Science & Engineering Technology, www.ijreaset.org, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue 1, Page No: 240-247, Jan 2019.

Abstract:

The binary quadratic equation represented by the positive pellian y^2=35x^2+14 is analyzed for its distinct integer solutions. A few interesting relations among the solutions are given. Further, employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbola and parabola.

18. **Dr.S.Vidhyalakshmi, Dr.M.A.Gopalan & S.Aarthy Thangam**- "On the Heptic Equation with Five Unknowns $x^4 + y^4 - (y + x)w^3 = 14z^2T^5$", International Journal of Engineering Sciences & Research Technology, www.ijesrt.com, Peer reviewed, IF: 5.164, ISSN: 2277-9655, Vol 8, Issue 1, Page No: 137-140, Jan 2019.

Abstract:

We obtain infinitely many non-zero integer quintuples (x,y,z,w,T) Satisfying the non-homogeneous equation of degree seven with five unknowns given by x^4+y^4-(y+x) w^3=14z^2 T^5. Various interesting properties between the solutions and special numbers are presented.

19. **Dr.K.Meena, Dr.M.A.Gopalan & J.Srilekha**-"On the Transcendental Equation with Three Unknowns $2(x + y) - 3\sqrt{xy} = (k^2 + 7s^2)z^2$", International Journal of Engineering Sciences & Research Technology, www.ijesr.org, Peer reviewed, IF: 5.164, ISSN: 2277-9655, Vol 8, Issue 1, Page No: 133-136, Jan 2019.

Abstract:

The transcendental equation with three unknowns given by $2(x + y) - 3\sqrt{xy} = (k^2 + 7s^2)z^2$ is considered and analyzed for finding different sets of integer solutions.

20. **Dr.M.AGopalan, Sharadha Kumar**-"On the Pell-Like Equation $3x^2 - 8y^2 = 40$", International Journal of Multidisciplinary Research, www.ijmr.com, Peer reviewed, IF: 5.148, ISSN: 2455-3662, Vol 5, Issue 1, Page No: 95-106, Jan 2019.

Abstract:

The hyperbola represented by the binary quadratic equation $3x^2 - 8y^2 = 40$ is analyzed for finding its nonzero distinct integer solutions. A few interesting relations among its solutions are presented. Also, knowing an integral solution of the given hyperbola, integer solutions for other choices of hyperbolas and parabolas are presented.

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21. **Dr.M.A.Gopalan-"**On the Pair of Equations $a \pm b = p^3, ab = q^2$**",** International Journal of Multidisciplinary Research, www.ijmr.com, IF: 5.148, ISSN: 2455-3662, Vol 5, Issue 1, Page No: 107-111, Jan 2019.

Abstract:

This communication aims at determining pairs of non-zero distinct integers (a,b) such that, in each pair

(i). The sum is a cubic integer and the product is a square integer

(ii). The difference is a cubical integer and the product is a square integer

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22. **Dr.S.Vidhyalakshmi, Dr.M.A.Gopalan & S.Aarthy Thangam-**"On the hyperbola $x^2 + 4xy + y^2 - 2x + 2y - 8 = 0$", Malaya Journal of Matematik, ISSN(Print): 2319-3786, ISSN(Online): 2321-5666, Special Issue 1, Page No: 1-3, 2019.

Abstract:

In this work, we search for the lattice points of the hyperbola $x^2 + 4xy + y^2 - 2x + 2y - 8 = 0$. Various connections among the solutions are given. Given a solution, solutions for other forms of hyperbolas and parabolas are determined.

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23. **Dr.M.A.Gopalan, A.Sathya, A.Nandhinidevi-"**Observation on the Positive Pell Equation $y^2 = 15x^2 + 10$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.org, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue 2, Page No: 639-645, Feb 2019.

Abstract:

The binary quadratic Diophantine equation represented by the positive pellian y^2=15x^2+10 is analyzed for its distinct integer solutions. A few interesting relations among the solutions are given. Employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbola and parabola.

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24. **Dr.M.A.Gopalan, A.Sathya, S.Nivetha-"**Observation of Negative Equation $y^2 = 12x^2 - 23$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.org, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue 2, Page No: 494-500, Feb 2019.

Abstract:

The binary quadratic Diophantine equation represented by the positive pellian 〖y〗^2=12x^2-23 is analyzed for its distinct integer solutions. A few interesting relations among the solutions are given. Employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbola and parabola.

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25. **Dr.S.Vidhyalakshmi, A.Sathya,** S.Nivetha-"On the Pellian Like Equations $5x^2 - 7y^2 = -8$", International Research Journal of Engineering and Technology, www.ijret.org, IF: 7.211, E-ISSN: 2395-0056, ISSN(Print): 2395-0072, Vol 6, Issue 3, Page No: 979-984, Mar 2019.

Abstract:

The binary quadratic Diophantine equation represented by the positive pellian 5x^2-7y^2=-8 is analyzed for its distinct integer solutions. A few interesting relations among the solutions are given. Employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbola and parabola.

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26. **Dr.A.Kavitha & K.Megala-**"On the Positive Pell Equation $y^2 = 21x^2 + 4$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue 3, Page No: 973-978, Mar 2019.

Abstract:

The binary quadratic Diophantine equation represented by the positive pellian $y^2 = 21x^2 + 4$ is analyzed for its non-zero distinct solutions. A few interesting relations among the solutions are given. Further, employing the solutions we have obtained solutions of other choices of hyperbola and parabola.

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27. Dr.A.**Kavitha** & K.Janani-"On the Positive Pell Equation $y^2 = 17x^2 + 8$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue 3, Mar 2019.

Abstract:

The binary quadratic Diophantine equation represented by the positive pellian $y^2 = 17x^2 + 8$ is analyzed for its non-zero distinct integral solutions. A few interesting relations among the solutions are given. Further, employing the solutions have obtained solutions of other choices of hyperbolas and parabolas.

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28. **Dr.A.Kavitha**, **K.Maragathavalli**-"On the Pell Equation $y^2 = 23x^2 + 13$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue 3, Mar 2019.

Abstract:

The binary quadratic Diophantine equation represented by the positive pellian $y^2 = 23x^2 + 13$ is analyzed for its non-zero distinct solutions. A few interesting relations among the solutions are given. Further, employing the solutions of the above hyperbola, we are obtained solutions of other choices of hyperbolas and parabolas Pythagorean triangle.

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29. **Dr.S.Vidhyalakshmi, Dr.M.A.Gopalan & S.Aarthy Thangam**-"Special Pairs of Rectangles and Sphenic Number", International Journal of Multidisciplinary Research and Studies, www.ijmras.org, Peer reviewed, Google Scholar, ISSN: 2640-7272, Vol 2, Issue 1, Page No: 1-4, 2019.

Abstract:

This paper aims at presenting pairs of rectangles representing the same sphenic number where, in each pair, the sum of the areas is 2 times sphenic number -1.

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30. **Dr.M.A.Gopalan & J.Srileka**-**"**Special Characterization of Rectangles in Connection with Armstrong Numbers of orders 3,4,5,6**",** International Journal of Multidisciplinary Research and Studies, www.ijmras.org, Peer reviewed, Google Scholar, ISSN: 2640-7272, Vol 2, Issue 3, Page No: 5-10, 2019.

Abstract:

This paper consists of two sections A and B. **Section A** exhibits rectangles, where, in each rectangle, the area added with its semi-perimeter is an Armstrong number with digits 3,4,5,6. **Section B** presents rectangle, where, in each rectangle, the area minus its semi-perimeter is an Armstrong number with digits 3,4,5,6.

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31. **Dr.S.Vidhyalakshmi, A.Sathya & A.Nandhinidevi**-**"**On the Binary Quadratic Equation $2x^2 - 3y^2 = -4$**",** International Research Journal of Engineering and Technology, www.irjet.com, Peer reviewed, Google Scholar, IF: 7.211, E-ISSN: 2395-0056, ISSN(Print): 2395-0072, Vol 6, Issue 3, Page No: 979-984, Mar 2019.

Abstract:

The binary quadratic Diophantine equation represented by the positive pellian $2x^2 - 3y^2 = -4$ is analyzed for its distinct integer solutions. A few interesting relations among the solutions are given. Employing the solutions of the above

hyperbola, we have obtained solutions of other choices of hyperbolas and parabolas and Pythagorean triangle.

32. **Dr.G.Sumathi & W.Princy Dona**–"Integral Points on the Ternary Quadratic Diophantine Equation $y^2 = 33x^2 + 4^t, t \geq 0$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue 3, Page No: 305-313, March 2019.

Abstract:

The binary quadratic equation $y^2 = 33x^2 + 4^t$ representing hyperbola is considered for finding its integer solutions. A few interesting properties among the solutions are presented. Also, we present infinitely many positive integer solutions in terms of Generalized Fibonacci sequence of numbers, Generalized Lucas sequence of numbers.

33. **Dr.G.Sumathi & A.Niranjani**-"Observations on the Hyperbola $y^2 = 14x^2 + 16^t, t \geq 0$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue 3, Page No: 314-321, March 2019.

Abstract:

The binary quadratic equation $y^2 = 14x^2 + 16^t, t \geq 0$ representing hyperbola is considered for finding its integer solutions. A few interesting properties among the solutions are presented. Also, we present infinitely many positive integer solutions in terms of Generalized Fibonacci sequence of numbers, Generalized Lucas sequence of numbers.

34. **Dr.G.Sumathi & A.Prathiba**-"Observations on the Binary Quadratic Equation $y^2 = 105x^2 + 4^t, t \geq 0$", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue 3, Page No: 951-959, March 2019.

Abstract:

The binary quadratic equation is considered and a few interesting properties among the solutions are presented.

35. **Dr.G.Sumathi & S.Gokila**-"On the Binary Quadratic Diophantine Equation $y^2 = 272x^2 + 16$", International Research Journal of Engineering and Technology, www.irjet.com, Peer reviewed, Google Scholar, IF: 7.211, E-ISSN: 2395-0056, ISSN(Print): 2395-0072, Vol 6, Issue 3, Page No: 1587-1593, March 2019.

Abstract:
The binary quadratic equation $y^2 = 272x^2 + 16$ is considered and a few interesting properties among the solutions are presented. Employing the integral solutions of the equation under considerations a few patterns of Pythagorean triangle are observed.

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36. **Dr.G.Sumathi & M.Jaya Bharathi**-"Integral Solutions of the Diophantine Equation $y^2 = 20x^2 + 4$", International Research Journal of Engineering and Technology, www.irjet.com, Peer reviewed, Google Scholar, IF: 7.211, E-ISSN: 2395-0056, ISSN(Print): 2395-0072, Vol 6, Issue 3, Page No: 1566-1571, March 2019.

Abstract:
The binary quadratic equation $Y^2 = 20x^2 + 4$ is considered and a few interesting properties among the solutions are presented. Employing the integral solutions of the equation under considerations a few patterns of Pythagorean triangle are observed.

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37. **Dr.T.R.UshaRani, Ms.V.Bahavathi & K.Sridevi**-"Observation on the Positive Pell Equation $y^2 = 35x^2 + 46$", International Journal of Engineering Sciences & Research Technology, www.ijesrt.com, Peer reviwed, Google Scholar, IF: 5.164, ISSN: 2277-9655, Vol 8, Issue 3, Page No: 119-125, March 2019.

Abstract:
The binary quadratic equation represented by the positive pellian $y^2 = 35x^2 + 46$ is analyzed for its distinct integer solutions. A few interesting relation among the solutions are given. Employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbolas and parabolas.

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38. **Dr.T.R.UshaRani, Ms.V.Bahavathi & K.Sridevi**-"Observations on the Non-homogeneous binary Quadratic Equation $8x^2 - 3y^2 = 20$", International Research Journal of Engineering and Technology, www.irjet.com, Peer reviewed, Google Scholar, IF: 7.211, E-ISSN: 2395-0056, ISSN(Print): 2395-0072, Vol 6, Issue 3, Page No: 2375-2382, March 2019.

Abstract:
A Non-homogeneous binary quadratic equation represents hyperbola given by $8x^2 - 3y^2 = 20$ is analyzed for its non-zero distinct integer solutions. A few interesting relation between the solution of the given hyperbola, integer solutions for other choices of hyperbola and parabola are obtained.

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39. **Dr.M.A.Gopalan, Ms.T.Mahalakshmi & K.Sevvanthi**-"On the Positive Pell Equation $y^2 = 35x^2 + 29$", International Research Journal of Engineering and Technology, www.irjet.com, Peer reviewed, Google Scholar, IF: 7.211, E-ISSN: 2395-0056, ISSN(Print): 2395-0072, Vol 6, Issue 3, Page No: 1829-1837, March 2019.

Abstract:

The binary quadratic Diophantine equation represented by the positive pellian $y^2 = 35x^2 + 29$ is analyzed for its non-zero distinct integer solutions. A few interesting relation among the solutions are given. Employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbolas and parabolas.

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40. **Dr.S.Mallika**-"Pythagorean Triangle with 2A/P+H-LED as a Narcisstic Number of Orders 3,4 and 5", Global Journal of Engineering Science and Researches, www.gjesr.com, Peer reviewed, IF: 5.070, ISSN: 2348-8034, Vol 6, Issue 3, Page No: 1-4, March 2019.

Abstract:

This paper concerns with the problem of attaining Pythagorean triangle where, in each Pythagorean triangle expressions $\frac{2*Area}{Perimeter} + H - a$ Leg is represented by a Narcisstic numbers.

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41. **Dr.S.Mallika** –"A Connection between Pythagorean Triangle and Sphenic Numbers", International Journal of Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue III, Page No: 63-66, March 2019.

Abstract:

This paper concerns with the problem of obtaining many Pythagorean triangle where, in each Pythagorean triangle, the expressions $\frac{2*Area}{Perimeter} + H - a$ Leg is represented by a Sphenic number and Sphenic palindrome number respectively. Also, we present the number of primitive and non-primitive Triangles.

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42. **Dr.S.Mallika & G.Ramya** –"On the Negative Pell Equation $y^2 = 48x^2 - 23$", International Journal of Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue IV, Page No: 159-159, April 2019.

Abstract:

The binary quadratic equation represent by negative Pellian $y^2 = 48x^2 - 23$ is analyzed for its distinct integer solutions. A few interesting relations among the

solution are given. Further, employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbolas and parabolas.

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43. **Dr.S.Mallika & K.Ramya**-"On Binary Diophantine Equation $8x^2 - 7y^2 = k^2 + 14k - 7$", Global Journal of Engineering Science and Researches, www.jesr.com, Peer reviewed, IF: 5.070, ISSN: 2348-8034, Vol 6, Issue 4, Page No: 168-178, April 2019.

Abstract:

Non-homogeneous binary quadratic equation representing hyperbola given by $8x^2 - 7y^2 = k^2 + 14k - 7$ is analyzed for its non-zero distinct integer solutions. A few interesting relations among its solutions are presented. Also, knowing an integral solution of the given hyperbola, integer solutions for other choices of hyperbola and parabola are presented. Also, employing the solutions of the given equation, special Pythagorean triangle is constructed.

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44. **Ms.D.Maheswari & J.Keerthana**-"On the Positive Pell Equation $y^2 = 34x^2 + 18$", Global Scientific Journal, www.globalscientificjournal.com, Peer reviewed, IF: 1.2, ISSN: 2320-9186, Vol 7, Issue 4, Page No: 512-520, April 2019.

Abstract:

The binary quadratic Diophantine equation represented by the positive pellian $y^2=34x^2+18$ is analyzed for its non-zero distinct solutions. A few interesting relations among the solutions are given. Further, employing the solutions of the above hyperbola, the solutions of other choices of hyperbolas, parabolas and Pythagorean triangle are obtained.

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45. **Ms.D.Maheswari & K.Kaviyarasi** –"On the Negative Pell Equation $y^2 = 102x^2 - 18$", Global Scientific Journal, www.globalscientificjournal.com, Peer reviewed, IF: 1.2, ISSN: 2320-9186, Vol 7, Issue 4, Page No: 521-528, April 2019.

Abstract:

The binary quadratic Diophantine equation represented by the negative pellian $y^2=102x^2-18$ is analyzed for its non-zero distinct solutions. A few interesting relations among the solutions are given. Further, employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbolas, parabolas and Pythagorean triangle.

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46. **Dr.S.Vidhyalakshmi, Dr.M.A.Gopalan & S.Aarthy Thangam**-"On Pairs of Rectangles and Armstrong Numbers", International Journal of Applied Engineering Research, www.ripublication.com, UGC, Google Scholar, Scopus, ISSN: 0973-4562, Vol 14, Issue 7, Page No: 1570-1583, 2019.

Abstract:
This paper concerns with the problem of obtaining pairs of rectangles, where, in each pair, the sum of the areas is represented by an Armstrong number with 3 and 4 digits respectively.

47. **Dr.S.Mallika, Ms.G.Ramya**- "On the Diophantine Equation $7x^2-5y^2=8$", Global Journal of Engineering Science and Researches www.giesr.org, Peer reviewed, UGC, IF: 5.070, ISSN: 2348-8034, Page No: 271-278, April 2019.

Abstract:

Non-homogeneous binary quadratic equation representing hyperbola given by $7x^2-5y^2=8$ is analyzed for its non-zero distinct integer solutions. A few interesting relations among its solutions are presented. Also, knowing an integral solution of the given hyperbola, integer solutions for the other choices of hyperbola and parabola are presented.

48. **Dr.S.Mallika, Ms.V.Surya**-"On the Binary Quadratic Equation $y^2=35x^2+29$", International Journal of Engineering Science and Research Technology, www.ijesrt.org, Peer reviewed, UGC, IF: 5.164, ISSN: 2277-9655, Page No: 198-205, April 2019.

Abstract:

The binary quadratic equation represented by the positive pellian $y^2=35x^2+29$ is analyzed for its distinct integer solutions. A few interesting relation among the solutions are given. Employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbola and parabolas.

49. **Ms.D.Maheswari**, **A. Mercy Carolin**- "On the Negative Pell Equation $y^2 = 30x^2 - 45$", International Journal of Mathematics Trends and Technology, www.ijmttjournal.org, Peer reviewed, UGC, Google Scholar, IF: 2.53, ISSN: 2231-5373, Vol 65, Issue 5, Page No: 32-40, May 2019.

Abstract:

The binary quadratic Diophantine equation represented by the negative pellian $y^2=30x^2-45$ is analyzed for its non-zero distinct solutions. A few interesting relations among the solutions are given. Further, employing the solutions of the above hyperbola, we have obtained solutions of other choices of hyperbolas, Parabolas.

50. **Dr.S.Vidhyalakshmi, Ms.D.Maheswari et al.**-"On The Non Homogeneous Binary Quadratic Equation $4x^2 - 3y^2 = 37$", Bulletin of Pure and Applied Sciences, Peer reviewed, Google Scholar, ICI, IF:4.895, ISSN: 2320-3226, Vol 38E, Issue 38E, Page No: 324-328, May 2019.

Abstract:

This paper deals with the problem of obtaining non-zero distinct integer solutions to the non homogeneous binary quadratic equation represented by the Pell-like equation $4x^2-3y^2=37$. Different sets of integer solutions are presented. Employing the solution of the above equation, integer solutions for other choices of hyperbolas and parabolas are obtained. A special Pythagorean triangle is also determined.

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51. **Dr.S.Vidhyalakshmi & S.Aarthy Thangam**-"Special Characterizations of Polygonal Numbers through Pell Equation", Bulletin of Pure and Applied Sciences, www.bpasjournals.com, Peer reviewed, Google Scholar, ICI, IF: 4.895, ISSN(Print): 0970-6577, ISSN(Online): 2320-3226, Vol 38E, Issue 1, Page No: 271-280, May 2019.

Abstract:

In this paper, different choices of positive and negative Pell equations are considered. Employing the non-zero integer solutions of each of the above choices of positive and negative Pell equations, the relations among the special polygonal numbers are exhibited.

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52. **Dr.S.Mallika**, Ms.G.Ramya-"On the Binary Quadratic Equation $5x^2-6y^2=5$", International Journal of Engineering Science and Research Technology www.ijesrt.org, Peer reviewed, UGC, IF: 5.164, ISSN:2277-9655, Page No: 20-28, May 2019.

Abstract:

Non-homogeneous binary quadratic equation representing hyperbola given by $5x^2-6y^2=512$ is analyzed for its non-zero distinct integer solutions. A few interesting relations among its solutions are presented. Also, knowing an integral solution of the given hyperbola, integer solutions for the other choices of hyperbola and parabola are presented. Also, employing the solutions of the given equation, is constructed.

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53. **Dr.S.Mallika**, Ms.V.Surya- "On the Binary Diophantine Equation $3x^2-5y^2=12$", International Journal of Engineering Science and Research Technology, www.ijesrt.org, Peer reviewed, UGC, IF: 5.947, ISSN: 2321-9653,Vol 7, Issue V, May 2019.

Abstract:

Non-homogeneous binary quadratic equation representing hyperbola given by $3x^2-5y^2=12$ is analyzed for its non-zero distinct integer solutions. A few interesting relations among its solutions are presented. Also, knowing an integral solution of the given hyperbola, integer solutions for the other choices of hyperbola and parabola are presented.

Department of Microbiology

1. **Dr.V.Bharathi, Dr.S.Shanthi et al**.-"Green Synthesis of Silver Nano Particle Using *Senna Alata*", World Jouranl of Pharmaceutical Research, www.ijpr.com, www.ijpr.com, UGC, IF: 8.074, ISSN: 2277-7105, Vol 7, Issue 15, Page No: 507-517, July 2018.

   Abstract:

   There is an increasing commercial demand for nanoparticles due to their wide applicability in various areas such as electronics, catalysis, chemistry, energy, and medicine. This work deals with the synthesis and characterization of silver nanoparticles using *Senna alata*. The synthesized nanoparticles were characterized by using UV–Vis absorption spectroscopy, FT-IR and SEM analysis. The reaction mixture turned to brownish gray colour after 5 hrs of incubation and exhibits an absorbance peak around 450 nm characteristic of Ag nanoparticles. Scanning Electron Microscopy (SEM) analysis showed silver nanoparticles was pure and polydispersed and the size were ranging from 10-40 nm. The approach of green synthesis seems to be cost efficient, eco-friendly and easy alternative to conventional methods of silver nanoparticles synthesis.

2. **Dr.V.Bharathi, Dr.S.Shanthi et al**- "Phytochemical and Antimicrobial Analysis of *Senna Alata* Leaves Extract", World Jouranl of Pharmaceutical Research, www.wjpr.org, UGC, IF: 8.074, ISSN: 2277-7105, Vol 7, Issue 14, Page No: 1030-1044, July 2018.

   Abstract:

   Objective: Ethanolic extract of *Senna alata leaves* leaves was investigated for antimicrobial activities.

   Methods: The well diffusion method was followed for antibacterial assay. Antimicrobial activity of the leaves extract (200µg, 400µg, 600µg, 800µg) using well diffusion method. In this disc was prepared by using whatmann No.1 filter paper. Then, the filter paper disc of 5mm diameter were sterilized and soaked in the different concentration of plant extract.

   Result: The increase in prevalence of multiple drug resistance has slowed down the development of new synthetic antimicrobial drugs and has necessitated the search for new antimicrobials from alternative Sources. In the present investigation, preliminary phytochemical analysis was carried out in the extracts of *Senna alata.*

   Conclusion: In the present investigation, preliminary phytochemical analysis was carried out in the extracts of *Senna alata*. The extracts showed the presence of alkaloids, reducing sugar, coumarin, tannin and phenolic compounds.

3. **Dr.S.Bhuvaneswari, Ms.G.Subashini, Dr.S.Vijayalakshmi & H.Dharani-** "Decolourisation of Synthetic textile dyes by using Calocybe indica", International Journal of Biology Research, wwww.biologyjournal.com, Peer reviewed, Google Scholar, IF: 5.22, ISSN: 2455-6548, Vol 3, Issue 4, Page No:11-15, Oct 2018.

Abstract:

The present study reveals the potentials of macrofungi namely Calocybe indica for decolorization of dye. Azo dyes are released in large quantities into the environment from textile industries. These dyes are recalcitrant to microbial degradation, causing problems in the usual biological treatment of the industrial effluents. Pollution is particularly associated with the reactive azo dyes, because of their strong colour which leads to aesthetic problems and obstructs light penetration and oxygen transfer into water bodies. Biomass production varied with different fungal isolates in the decolourization of dyes. The decolorization of viscose orange-A was found to be 78.54 and 94.72%, with Calocybe indica -1 and Calocybe indica -2 respectively after 15 days of incubation. The decolorization of direct green PLS, was found to be 81.56% and 66.41 with Calocybe indica -1 and Calocybe indica -2 respectively after 15 days of incubation. Among the two fungi, Calocybe indica -1 produced the maximum fungal biomass. Fungal isolates showed a highly correlation between the dry weight of the fungi and colour removal percentage.

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4. **Dr.S.Bhuvaneswari, Ms.G.Subashini & B.Renugadevi** -"Antimicrobial Activity and Phytochemical Analysis of *Opilia amentaceae* Medicinal Plant Extracts Against Bacteria Causing Diarrhoea", Journal of Emerging Technologies and Innovative Research, www.jetir.org, UGC, Google Scholar, IF: 5.87, ISSN: 2349-5162, Vol 6, Issue 4, Page No: 346-354, April 2019.

Abstract*:*

The study of medicinal plants as antimicrobial agents should be focused in part on ascertaining specific information about the plant's antimicrobial activity In the present investigation Phytochemical, antimicrobial activity were screened using a plant namely *Opilia amentaceaea* extract against diarrhoeal pathogens. In the phytochemical analysis sequential extractions was carried out different solvent extracts. Various phytochemical compounds was screened such as Tannins, Saponins, Flavonoids, Catachins and Sugar were screened in medicinal plants. Anthroquinones present only in *Anogeissus latifolia.* All crude extracts of those medicinal plants were tested against standard reference strains including Escherichia coli ATCC 25922, *Salmonella enteric typhimurium, Shigella dysentriae, Klebseilla pneumonia*. The results suggest that opilia amentaceae is scientifically validate the use of this plant in the traditional medicine for isolation and

characterization of active role in future exploitation in medical microbiology. The purpose this study was to investicate the use of the selected plant extract was opilia amentacea in the treatment of diarrhoea which may lead to the discovery of attractive form of treatment.

5. **Dr.S.Bhuvaneswari, Ms.G.Subashini, R.Nandhini et al.** -"Growth and characterization of Calcium Hydrogen Phosphate Dihydrate Crystals influenced by Leaves of Hibiscus Rosasinensis", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, IF: 6.887, ISSN: 2321-9653, Vol 7, Issue IV, Page No: 1393-1399, April 2019.

Abstract:
To investigate the inhibitory effect of methanol extract of leaves of Hibiscus rosasinensis on the growth of calcium hydrogen phosphate dihydrate (CHPD) crystals. Calcium hydrogen phosphate dihydrate (CHPD) crystals were grown by the single diffusion gel growth technique and the inhibitory effect of methanol extracts of leaves of Hibiscus rosasinensis on the growth of CHPD crystals has been studied. The grown crystals were characterized by Fourier Transform Infrared Spectroscopy (FTIR), Powder X-Ray diffraction (XRD) for further confirmations. With an increase in the concentration of methanol extract of Hibiscus rosasinensis, the weight of the formed crystals were gradually reduced from 142 g to 17.8 g (leaves) for the CHPD crystals, respectively. The crystals harvested from the CHPD were characterized by Fourier Transform Infrared Spectroscopy (FTIR) to confirm the functional groups, and Powder X-Ray Diffraction technique (XRD) analyses to confirm the crystalline phases of the CHPD and hydroxyapatite (HAP) crystals. Results obtained indicated that Hibiscus rosasinensis (leaves) has the potential to inhibit the formation of calcium hydrogen phosphate dihydrate crystals. This study confirms that using methanol extract of leaves of Hibiscus rosasinensis can promote the formation of hydroxyapatite (HAP) crystals and reduce the nucleation rate of CHPD crystals, a major component of calcium urinary stone.

6. **Dr.S.Bhuvaneswari & Ms.G.Subashini & P.Kalaivani**-"Antibacterial, Antioxidant and Phytochemical Analysis of Sapindus emarginatus Vahl.", International Journal for Research in Applied Science & Engineering Technology, www.ijraset.com, Peer reviewed, UGC, ISSN: 2321-9653, IF: 6.887, Vol 7, Issue IV, Page No: 2066-2070, April 2019.

Abstract:
Medicinal plants are gifts of nature used to cure number of human diseases. Sapindus emarginatus traditionally, used as anti-inflammatory and antipyretic.

The seed is an intoxicant, and the fruit rind has oxytropic action. Its powder is used as nasal insufflations. The present finding focuses on the antibacterial, antioxidant and phytochemical analysis of Sapindus emarginatus Vahl and.the antibacterial assay was performed on various pathogens such as Escherichia coli , Pseudomonas aeruginosa , Staphylococcus aureus, salmonella typhi. With reference to standard antibiotics the inhibition of antibacterial activity were obtained by methanolic extract leaf of Sapinduus emarginatus Vahl of different concentration. The maximum zone of inhibition was observed by Salmonella typhi was found to be 2.5 ± 0.73at 10 mg concentration minimum zone of inhibition was found to be 1.1 ± 0.45 at 6mg concentration. It also showed highest antioxidant activity gave 50% inhibition of DPPH activity. The methanolic extract of per caps of leaf of Sapindus emarginatus of two tests does that were 200 mg /Kg. studies have shown that Sapindus emarginatus Vahl contains bio active compounds which having strong antibacterial, antioxidant. Further studies are being carried out on the plant to fully understand its mechanism of action and its full potency against other pathogens.

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7. **Dr.S.Bhuvaneswari, Ms.G.Subashini, & S.T.Saangethapriya et al.** -"Comparative Study of Developed PHB Nanoparticles with *Plectranthus Amboinicus* on Cotton Gauze for Biomedical Applications", Journal of Emerging Technologies and Innovative Research, www.jetir.org, UGC, Google Scholar, IF: 5.87, ISSN: 2349-5162, Vol 6, Issue 4, Page No: 569-579, April 2019.

Abstract:

This research work deals with environment friendly technique for green synthesis of silver Nanoparticles from 1mM $AgNO_3$ solution through the extract of Plectranthus amboinicus leaf. On mixing leaf extract with silver salt solution in ratio 1:9 the color changed from colourless to yellowish brown which partially confirmed the degradation of silver ions to silver nanoparticles (SNP_S). Poly β Hydroxybutyrate (PHB) nanoparticle is a biodegradable polymer produced by several bacteria and it has many medical applications. The synthesized nanoparticles were characterized by using UV-visible spectroscopic techniques, Scanning electron microscopy (SEM), and Fourier transform infrared spectroscopy (FT-IR). The antimicrobial activities of the synthesized silver Nanoparticles and PHB Nanoparticles against microorganisms were evaluated by using disc diffusion method. Conventional cotton gauze treated with nanocomposites for achieveing antimicrobial activity and its efficiency.

Department of Physics

1. **Ms.A.Anitha Ezhil Mangaiyarkarasi et al.**-"Sns Thin Films Prepared By Chemical Spray Pyrolysis At Different Substrate Temperatures for Photovoltaic Application", IOSR Journal of Applied Physics, www.iosrjournals.org, Peer reviewed, UGC, Google Scholar, E-ISSN: 2278-4861, Vol 10, Issue 4, Page No: 1-6, July 2018.

   Abstract:

   The preparation and analysis of morphological, structural, optical, vibrational and compositional properties of tin monosulfide (Sns) thin film deposited on glass substrate by chemical spray pyrolysis is reported. The growth conditions were evaluated to reduce the presence of residual phases different to the SnS orthorhombic phase. X-ray diffraction spectra revealed the poly-crystalline nature of the SnS films with orthorhombic structure and a preferential grain orientation along the (111) direction. At high substrate temperature (450℃), a crystalline phase corresponding to the Sn_2S_3 Phase was observed.

2. **Dr.R.G Vidhya et al.**-"Effect of Magnetic Field on The Structural and Thermal Properties of Manganese Tartrate Dihydrate Crystal", International Journal of Scientific Research and Reviews, www.ijrsr.org, Peer reviewed, UGC, Google Scholar, IF: 1.536, ISSN: 2279-0543, Vol 7, Issue 4, Oct 2018.

   Abstract:

   The availability of suitable crystals is the boon for various technological developments. The growth of crystals from gel is well suited for the crystal growth of compounds, which are sparingly soluble and decompose fairly at low temperatures. In this work, manganese tartrate dihydrate crystals are grown by single diffusion gel method in the presence and in the absence of the magnetic field. The influence of magnetic field on crystal stability is studies from Thermo gravimetry analysis (TGA) and differential scanning calorimetry (DSC) analysis. The cell parameters are obtained from single crystal X-ray diffraction (XRD) analysis. The variation of 'd' spacing of the majority peak due to the application of magnetic field during the growth period is confirmed from powder XRD analysis.

3. **Dr.A.Angelin Prema Dr.N.Manimaran et al.**-"Structural Properties of Lead Doped CDS Thin Films Prepared with different concentration of Ammonia by Chemical Bath Deposition Method", International Journal Research and Analytical Reviews, www.ijrar.com, Peer reviewed, UGC, Google Scholar, E-ISSN: 2348-1269, ISSN(Print): 2349-5138, Vol 5, Issue 4, Page No: 107-115, Nov 2018.

Abstract:
Lead doped CdS thin films were prepared on microscope glass slides using chemical bath deposition method (Silar Method) with concentration increases from 0.5, 1.0, 1.5, and 2.0 of NH_3. The structural properties of Lead doped CdS film were examined using X-ray Diffraction (XRD), Scanning Electron Microscopy (SEM), Atomic Force Microscopy (AFM) and Energy Dispersive X-ray Analysis (EDAX). The XRD images show that the peaks are not sharp indicating that the average crystallite size is small. The magnified microphotographs of lead doped CdS thin films reveals that the grains are quite small with unequal size dense composed of largely irregular shaped. Also the results of the Atomic Force Microscope (AFM) the Root Mean Square and Roughness of the lead doped CdS thin films was found to vary with the concentration of NH_3. EDAX analysis reveals that the films are cadmium rich. This may be due to the fact that the reactivity of cadmium is greater than lead and sulphur.

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4. **Dr.R.G.Vidhya et al.-**"Growth and Characterization of Potassium Permanganate Tartaric Acid Mixed Crystal", International journal of research and analytical reviews, www.ijrar.org, Peer reviewed, UGC, Google Scholar, IF: 5.75, E-ISSN: 2348-1269, ISSN(Print): 2349-5138, Vol 5, Issue 4, Page No: 1-15, Dec 2018.

Abstract:
Nowadays great attention has been given to the growth and characterization of pure and mixed crystals with the aim to identify new materials for practical purposes. In the present work, potassium permanganate and tartaric acid mixed crystals are grown by slow evaporation method. The crystals are characterized by FTIR spectroscopy and UV spectroscopy. Thermal stability is studied from Thermogravimetry analysis (TGA) and differential scanning calorimetry (DSC) analysis. The decomposition is observed from the endothermic peaks of DSC. The cell parameters are obtained from single crystal XRD analysis. Surface morphology is studied from SEM analysis.

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5. **Dr.R.G.Vidhya et al.**- "Comparative Analysis on Optical, Thermal and Structural Characterization of Barium Tartrate Crystal Grown in the Presence and Absence of Magnetic Field", International Journal of Recent Scientific Research, www.recentscientific.com, Peer reviewed, UGC, Google Scholar, IF: 7.383, UGC, ISSN: 0976-3031, Vol 9, Issue 12(A), Page No: 29832-29837, Dec 2018.

Abstract:
There are many reports presenting the growth and influence of various parameters such as gel density, concentration of reactants etc on the growth mechanism of

barium tartrate crystal. Characterization on single crystals of barium mixed strontium tartrate crystals and barium mixed calcium tartrate tetrahydrate crystals are reported. To the best of our knowledge there are no literature available on barium tartrate crystals grown under the influence of magnetic field. In this paper we report the comparative analysis of the optical, thermal and structural properties of barium tartrate crystals grown in the presence and absence of magnetic field. There is small variations in the refractive index, bandgap energy, PXRD pattern and cell parameters.

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6. **Dr.A.Angelin Prema, Dr.N.Manimaran et al.** - "Optical and electrical Properties of Pb Doped CdS Thin Films Prepared with different concentration of Ammonia by Chemical Bath Deposition Method", International Journal Research and Analytical Reviews, www.ijrar.com, Peer reviewed, UGC, Google Scholar, IF: 5.75, E-ISSN: 2348-1269. ISSN(Print): 2349-5138, Vol 5, Issue 4, Page No: 1505-1514, Dec 2018.

Abstract:

Lead doped CdS thin films were prepared on microscope glass slides using chemical bath deposition method (Silar Method) with concentration increases from 0.5, 1.0, 1.5, and 2.0 of NH_3. The optical and Electrical properties of Lead doped CdS films were examined using Photoluminescence Spectra (PL), UV-VIS-NIR Spectrophotometer, FT-IR Spectroscopy and Electrical Resistivity Analysis. The Photoluminescence spectra reveal that the emission peak was observed at 515.445 nm and corresponding band energy is 2.392.eV. The optical absorption spectrum was decreases exponentially with an increase in wavelength. Also the results of FT-IR Analysis the absorption peaks in the range 1750-1600 cm^{-1} are assigned to N-H bond. The Electrical analysis observed that the resistivity decrease with increase in temperature. The Activation energy varies with increase in concentration of Ammonia.

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7. **Dr.S.Santhakumari et al.**-"Analysis of Acoustical parameters and Equivalent Conductance of Sulfa Drug using Ultrasonic Velocity Innon-Aqueous Medium", International Journal of Multidisciplinary Research, ISSN: 2278-2311, Page No: 33-37, Dec 2018.

Abstract:

The ultrasound is the novel and challenging method. It is a non invasive technique of great interest and a unique tool in a characterizing the structure and properties of the liquids/solutions. The ultrasonic velocity in non-aqueous solutions gives information about the behaviour of solution such as molecular association or disassociation. Antibiotics, antiseptics and disinfectants are commonly used as

drug. The drug-solvent molecular interactions play an important role in the understanding of drug action. The delivery of a drug to the desired site of action is the ultimate aim of most pharmaceutical humans. Benzene sulphonamide is used in the treatment of gastrointestinal, deodenyl ulcer and neurological disorder.

8. **Ms.M.Padmavathy et al.-**"Experimental and Theoretical Determination of Structural and Vibrational Properties of 3-(Trifluoromethyl) Phenylacetontrile", International Journal of Research and Analytical Reviews, www.ijrar.org, Peer reviewed, UGC, Google Scholar, E-ISSN: 2348-1269, ISSN(Print): 2349-5138, Vol 6, Issue 1, Page No: 774-784, Jan 2019.

Abstract:

The title compounds was characterized by FT-IR, FT-Raman, ^{13}C NMR and ^{1}H NMR spectroscopy. In the present work, the compound 3-(Trifluoromethyl)phenylacetontrile is studied experimentally and theoretically. The vibrational assignments were made with the help of potential energy distribution (PED). The calculations have been performed to NLO and NBO studies by density functional theory (DFT-B3LYP) with 6-311+G(d,p) basis set. Natural Bond orbital analysis has been carried out to study the stability of the molecule arises from hyperconjugative interactions and charge delocalization. The ^{13}C and ^{1}H NMR spectra have been recorded and the chemical shifts have been calculated using the gauge-independent atomic orbital method(GIAO).

9. **Ms.A.Anitha Ezhil Mangaiyarkarasi et al.-**"Tin Sulfide (SnS) Thin Films with Different [S]/[Sn] Ratios Prepared by Chemical Spray Pyrolysis Technique", International Journal of Research and Analytical Reviews, www.ijrar.org, Peer reviewed, UGC, Google Scholar, E-ISSN: 2348-1269, P-ISSN: 2349-5138, Vol 6, Issue 1, Page No: 421-430, Jan 2019.

Abstract:

SnS thin films were deposited by chemical spray pyrolysis using cost-effective and low-toxicity precursor materials like tin (II) chloride dehydrate and thiourea as sources of tin and sulphur respectively. The properties of sprayed SnS thin films with [S]/[Sn] ratios were varied from 1 to 4 in order to optimize the parameters. The substrate temperature was fixed at 325℃. X-ray diffraction was used for analyzing the films structure, Scanning electron microscope (SEM) for surface morphology and energy dispersive energy (EDS) for compositional element in samples and optical spectroscopy for measuring transmittances and then deducing the band gap energies. All films obtained are polycrystalline with (111) as preferential direction for films with [S]/[Sn] ratio equals to one while for [S]/[Sn]

ratios from 2 to 4 the main peak becomes (101) and the (111) peak decreases in intensity. SEM images revealed that films are well adhered onto glass surface with rounded grains. EDS results show an improvement of stoichiometry with the increase of the [S]/[Sn] ratio. From optical analysis, it is inferred that the band gap energy decreases from 1.54 to 1.69 eV when the [S]/[Sn] ratio changes from 2 to 4.

10. **Ms.A.Anitha Ezhil Mangaiyarkarasi et al.-**"Effect of Tin Precursor Concentration on Physical Properties of Spray Deposited Tin Sulfide Thin Films", International Journal of Recent Scientific Research, www.recentscientific.com, Peer reviewed, UGC, Google Scholar, Pubmed, IF: 7.383, ISSN: 0976-3031, Vol 10, Issue 4(B), Page No: 31756-31762, April 2019.

Abstract:

Tin sulfide thin films were prepared with different molarities of tin species (MSn) at the optimized substrate temperature using the Spray pyrolysis technique to obtain better crystallinity with mono phase thin films. The concentration of Tin II chloride di hydrate precursor is varied from 0.05 to 0.25 ($SnCl^2.^2H^2O$: thiourea) to achieve correct stoichiometry and to tune the concentration of Tin ions in the SnS thin films. These films were well adherent, uniform, and shiny. Lower concentrations of Tin yields highly textured SnS thin films with (111) crystallite orientation.

11. **Ms.A.Anitha Ezhil Mangaiyarkarasi et al.-**"Structural, Optical and Photosensing Properties of Spray Pyrolyzed SnSSe Thin Films", International Journal of Current Advanced Research, www.journalijcar.org, UGC, Google Scholar, Pubmed, IF: 6.614, ISSN(Online): 2319-6475, ISSN(Print): 2319-6505, Vol 8, Issue 3(G), Page No: 18047-18051, March 2019.

Abstract:

Tin Sulpho Selenide (SnSSe) thin films were prepared by chemical spray pyrolysis technique. Cleaned non conducting glass slides were used as substrates. The precursors used were Stannous chloride, Thiourea and Selenourea for deposition. Various parameters to synthesize the SnSSe thin films were the surface temperature, distance between surface nozzle and substrate heater and the pressure were optimized initially out of which substrate temperature was kept constant at 325°C + 5°C, distance between spray nozzle and heater was kept 29 cm. The as deposited thin films of SnSSe were annealed in the nitrogen atmosphere for half an hour before characterization. The nitrogen annealed thin SnSSe films were studied for structural, optical, morphological, electrical, Photo sensing and Photo luminescent properties. X-ray diffraction studies show that the films are polycrystalline in nature with orthorhombic crystal structure .Crystallite size of the

film was found to be 292 nm. Optical absorption study reveals a band gap of 0.9 eV. Present films investigation describes the effect of increase in incident intensity of light on the SnSSe thin films. The light intensity was varied by using the incandescent bulb, maximum photosensitivity of SnSSe thin films was found to obtained 40000. In Photoluminescence study the peaks observed in were in close agreement with the reported peaks of the photoluminescence spectra for SnSSe thin films. The blue shift observed in PL emission spectra corresponds to nanocrystalline effect. This indicates that the nitrogen annealed SnSSe thin films Show the best photosensitivity as well as photo luminescent in nature.

Department of Social work

1. **Dr.K.Kavitha Maheswari & R.Praveena**-"Depression, Anxiety and Stress among patients undergoing de-addiction Treatment", International Journal of Applied Research, www.allsubjectjournal.com, Peer reviewed, IF: 5.2, ISSN(Print): 2394-7500, ISSN(Online): 2394-5869, Vol 4, Issue 10, Page No: 406-409, Sep 2018.

   Abstract:

   The study on depression, anxiety and stress among patients undergoing de addiction treatment aimed to know the socio-demographic conditions of the respondents and their addiction details and to assess their level of depression, anxiety and stress. The study was conducted at a voluntary de-addiction centre located in Madurai. The universe of this study was the alcohol and drug users. The researcher used convenient sampling to select the respondents from the infinite universe. Totally 60 respondents were selected by convenient non random sampling method from the universe. The researcher has collected data with the help of self-prepared questionnaire along with a standardized tool on ADSS- Anxiety, Depression and Stress Scale. The findings of this study revealed that more than half of the respondents perceived high level of depression, stress and anxiety. With regard to the dimension of depression, exactly 3/5th of the respondents had high level of depression, 63.3% of the respondents perceived high level of anxiety and 58.3% of the respondents had high level of stress.

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2. **Dr.K.Kavitha Maheswari & S.Prabha**-"Experience of domestic violence among married women", International Journal of Multidisciplinary Research and Development, www.allsubjectjournal.com, Peer reviewed, Google Scholar, ICI, IF: 5.72, ISSN(Online): 2349-4182, ISSN(Print): 2349-5979, Vol 5, Issue 10, Page No: 61-64, Oct 2018.

   Abstract:

   Domestic violence is a global issue reaching across national boundaries as well as socio-economic, cultural, racial and class distinction. This problem is not widely dispersed geographically, but its incidence is also extensive, making it a typical and accepted behavior. Domestic violence is wide spread, deeply ingrained and has serious impacts on women's health and well-being. It is a pattern of coercive controls that one person exercises over another. Domestic violence is the willful intimidation, assault, battery, sexual assault and or other abusive behavior perpetrated by as intimate partner against another. This descriptive study deals with the family and material life condition of the respondents, their experience of domestic violence, their mental health and impact of domestic violence on mental

health of the respondents. The sample size of the study consists of 100 respondents from the universe. Probability sampling method is used to select the respondents. The findings of the study are discussed in the full paper.

3. **Dr.K.Kavitha Maheswari & R.Pavithra**-"Job Satisfaction-An Important Indicator of Worker's Wellbeing" International Journal of Research and Analytical Reviews, www.ijar.com, Peer reviewed, UGC, Google Scholar, IF: 5.79, ISSN: 2349-5135, E-ISSN: 2348-1269, Page No: 117-121, Dec 2018.

Abstract:

Job satisfaction is an occupational indicator of wellbeing an important subject for researchers. Employees should be treated fairly and with dignity. Job satisfaction is a reflection of good treatment. Research design is dealing with the fundamentals of the research. In this study the researchers used descriptive research design to study the nurses' job satisfaction along with their personal, family, material and occupational details. This study was conducted in a bedded private hospital in Trichy. There totally 50 women nurses were working in this study. Hence censes method was employed in this study to give the complete enumeration of the universe. A self-prepared questionarie covering the aspect of personal, family, material and occupational details along with a standardized tool on job satisfaction developed by Paul.E.Spector (1985) was used for data collection. The findings of the study showed that more than half of the respondents perceived low job satisfaction and its dimensions.

4. **Dr.K.Kavitha Maheswari-"**Psycho-Social Conditions of Alcoholics and Drug Addicts**",** International Journal of Research and Analytical Reviews, www.ijrar.com, Peer reviewed, UGC, Google Scholar, IF: 5.79, ISSN: 2349-5135, E-ISSN: 2348-1269, Page No: 154-157, Dec 2018.

Abstract:

Alcohol and other drug abuse, as defined by the DSM-IV, is a maladaptive pattern of substance use marked by recurrent and significant negative consequences related to the repeated use of substances. The aim of the study is to know the socio-demographic and drug addiction conditions of the respondents and also to assess their psycho-social conditions and problems. The study was conducted at a voluntary de-addiction centre located in Madurai. The universe of this study was the alcohol and drug users. They universe of the study are both inpatients and out patients which is infinite in nature. The study was conducted between April 2018 to June 2018. The researcher used convenient sampling to select the respondents from the infinite universe. Totally 60 respondents were selected by convenient non

random saplling method from the universe. All the male patients addicted to drugs of any kind and alcohol and undergoing de addiction treatment at the Madurai based voluntary organization working for de addiction management. The researcher used a self prepare interview schedule on personal data, addiction details, problems caused and faced by the respondents along with standardized tool on life satisfaction developed by Bavigharst and Tobin and quality of life scale by Flanogon.S. The detailed findings of the study are discussed in the full paper.

5. **Dr.K.Kavitha Maheswari & E.Rajeswari**-"Prevalence of Depression among women with Polycystic Ovary Syndrome", International Journal of Research and Analytical Reviews, www.ijrar.com, Peer reviewed, UGC, Google Scholar, IF: 5.75, ISSN: 2349-5138, E-ISSN: 2348-1269, Page No: 150-153, Dec 2018.

Abstract:

Polycystic ovary syndrome (PCOS) is a set of symptoms due to high and elevated androgens (male hormones) in women. Signs and symptoms of PCOS include irregular or no menstrual periods, heavy periods, excessive body and facial hair, pimple and acne, pelvic pain, difficulty in getting pregnant and thick patches, darker, velvety skin. Also associated conditions include type 2 diabetes, obesity, obstructive and disturbed sleep, apnea, heart disease, mood disorders, and endometrial cancer. This study focused the physical and psychological problems faced by women with polycystic ovarian syndrome. By using convenient sampling method 100 respondents were selected. This study is conducted in a private medical college hospital in perambalur. A self prepared questionnaire along with standardized tool on depression were used to collect the data, from the analysis it was revealed that more than half of the respondents have high level of depression. Based on the findings it was recommended to the respondents to take regular proper treatment, medication, practice of yoga and physical exercises, diet, control can give effective results.

6. **Dr.K.Kavitha Maheswari et.al**-"Study on the Influence of 'interest' in job on work life balance", Internatonal Journal of Research Analytical and Reviews www.ijrar.com, UGC, IF: 5.75, ISSN : 2349-5138, E-ISSN: 2348-1269, Page No: 188-191, Dec-2018.

Abstract:

Work-life balance is the maintenance of a balance between responsibilities at work and at home. Work and family are equally important sphere of life which equally time, clear cut understanding of the roles and sincere commitment. The descriptive study on influence of interest in job on the work life balance was conducted with nursing staff of a private hospital in Trichy. This study was conducted in a 70 bedded private hospital in Trichy. There were totally 50 nurses were working in the hospital who constituted the universe of this study. Census method was employed in this study to give the complete enumeration of the universe. The researcher used a self prepared questionnaire on socio-demographic details, work related details and a standardized tool on work life balance developed by Fisher-McAuley, Stanton, Jolton and Garvin (2003), assessed by Jeremy Hayman. The findings of the study revealed that there is significant association between the respondents' in their present job and their work life balance.

7. **Dr.N.Hemalatha-**"A Study on Social Bullying among HIV/AIDS Infected Persons in Trichy", International Journal of Research and Analytical Reviews, www.ijrar.org, Peer reviewed, UGC, Google Scholar, IF: 5.75, E-ISSN:2348-1269, P-ISSN: 2349-5138, Vol 5, Issue 4, Page No: 1269-1282, Dec 2018.

Abstract:

AIDS is an acronym made up of the first letter of the words Acquired Immune Deficiency Syndrome. The virus that caused AIDS is known to be perfectly well with no physical sumptoms i.e. HIV non-symptomatic. The term AIDS is used when the disease has progressed and the person develops one or more serious infections or conditions. HIV is present through out the body. The main objective is to study the social bullying of the respondents. The researcher adopted descriptive research design and census method was used to collect the data. Social bullying includes the discriminatory attitude of the family members, peers, neighborhood communities and people involved in public health work activities whom these HIV positive people approach for medication. In fact, social bullying is an important warning signal of a dangerous or difficult situation of a HIV+person, who needs immediate assistance to resocialise with in the society where he/she lives.

Department of Tamil

1. **Ms.K.Annapoorani** -"அமைப்பியல் கோட்பாடுகள் ", Modern Thamizh Research, www.rajapublication.com, UGC, ISSN: 2321-984X, Vol 6, Issue 3, Page No: 367-369, Sept 2018.

   முன்னுரை:

   இலக்கியங்களிலும், மொழியியலிலும் சமுதாயம், அரசியல் பற்றிய கருத்துருவாக்கங்களிலும் உளவியல் போன்ற பல துறைகளிலும் செல்வாக்கு மிகுந்த அறிவாராய்ச்சி முறையாக அமைப்பியல் விளங்குகிறது. மொழியியலில் தான் முதன்முதலில் அமைப்பியல் குறித்த சிந்தனை தோன்றுகிறது. இச்சிந்தனைப்போக்கு சில விஞ்ஞானத் துறைகளும் பரவியது. மொழியியலையும் சமூகவியலையும் கடந்த மானுடவியல் , புராணவியல். வழக்காற்றியல் , இலக்கியம் போன்ற பல்வேறு துறைகளிலும் அமைப்பில் கோட்பாடுகள் பயன்படுத்தப்பட்டு வருகின்றன. தற்காலத்தில் அமைப்பியல் ஓர் உலகப்போக்கு எனவும் , தத்துவப் பொதுமுறையியல் எனவும் அறிமுகப்படுத்தப்பட்டு வருகின்றது.

2. **Ms.K.Annapoorani** –"புறநானுற்றில் பாடுபொருள்" Journal of Chemozhi Tamizh, www.rajapublication.com, UGC, ISSN: 2321-0737, Vol 6, Page No: 334-336, Sept 2018.

   முன்னுரை:

   சங்ககாலம் தமிழ் இலக்கிய வரலாற்றின் பொற்காலம். அக்கால இலக்கியங்கள் அனைத்தும் தனிநுட்பம் வாய்ந்தன. சங்க இலக்கியங்கள் நம் கருத்துக்களைக் கருவூலங்களாக்கி இன்றும் அழியாத இன்ப இலக்கியங்களாய் விளங்குகின்றன. அவ்விலக்கியங்கள் அனைத்தும் வாழ்வின் ஆதாரமாகவும், நம் நாட்டின் பண்பாடு , நாகரிகம், பழக்கவழக்கங்கள் போன்றவற்றை நம் தலைமுறைக்கு எடுத்துக்காட்டும் கண்ணாடியாகவும் மிளிர்கின்றன.

3. **Ms.M.Kavitha-**"பன்முகநோக்கில் பழமொழிகள் ", Ayidha Ezhuthu International Journal of Tamil Studies, UGC, IF: 4.118, ISSN: 2278-7550, Vol 6, Issue 10, Page No: 32-34, Oct 2018.

   முன்னுரை:

   பண்பாடு என்பதை மனித சமுதாயத்தின் வாழ்வியல் ஒழுக்கங்களைக் குறிக்கின்றது. ஒரு சமுதாயத்தில் உள்ள மக்கள் தங்கள் வாழ்க்கையை நடத்தும் முறையை பண்பாடு ஆகும். பழமொழி என்பது மக்களின் பண்பாட்டினை ஒட்டிய வாழ்வியல் முறைகளில் தொன்மையான வாக்கிய முதிர்வு பெற்ற சொற்களே ஆகும். பழமொழிகள் மூலம் மக்கள் வாழ்க்கை முறையினை அறிந்து கொள்ள முடிகின்றது.
   நம் தமிழ்மொழி பல இலக்கண இலக்கியங்களைக் கொண்டுள்ளது. தொன்மையான தொல்காப்பியத்தில் தொல்காப்பியர் பழமொழியை 'மூத்தமொழி', 'முதுசொல் ' எனக் குறிப்பிட்டுள்ளார்.

4. **Ms.S.Kannammal-**"மடலும் மங்கையும்", Modern Thamizh Research, www.rajapublication.com, UGC, ISSN: 2321-984X, Vol 6, Issue 4, Page No: 687-690, Oct 2018.

   முன்னுரை:

ஓங்கி உலகளந்த உத்தமன் பேர்பாடி அவனால் ஆட்கொள்ளப் பெறவேண்டும் என விழைந்தவர்கள் ஆழ்வார்கள். சைவ அடியார்களான திருநாவுக்கரசர் , மாணிக்கவாசகரைப் போன்று ஆழ்வார்களும் நாயகன் நாயகி பாவத்தில் இறைவனை அணுகினர். நம்மாழ்வார் தன்னை "பராங்குச் நாயகி" என அழைத்துக் கொண்டமையான் அதனை அடியொற்றி திருமங்கையாழ்வாரும் தன்னை 'பரகால நாயகி' என்றழைத்துப் பரவசப்பட்டார். இக்கட்டுரை மடலேறுதல், பரகால நாயகி மடலேறப்புகும் துணிவு , காதலின் (பக்தியின்) மேன்மை முதலானவற்றை விளக்குவதாக அமைகிறது.

5. **L.Vincy**- "இலக்கியத்தில் தொன்மம் சிலப்பதிகாரத்தில் தொன்மம்", International Journal of Tamil Studies www.ijts.org , UGC, IF: 4.118, ISSN: 2278-7550, Page No: 88-90, Oct 2018.
முன்னுரை:

மிகபழங்காலத்தில் மனிதன் வழிமுறை விதிமுறை என்று ஒன்றும் இல்லாது வாழந்தான். காலஞ் செல்லச் செல்ல மனிதத் சிந்தனையின் விளைவாக நியதிகளும் சட்ட திட்டங்களும் தோன்றின. ஆதியில் வாழ்ந்த மனிதர்கள் பல இடர்ப்பாடுகளைச் சந்தித்தனர். துன்பங்கள் ஏன் எற்படுகின்றன? என்று புரியாத நிலையில் ஏதோ ஒன்றைப் பற்றிக்கொள்ள அவர்கள் முனைந்தனர். தம்மைவிட ஆற்றல் மிக்க இயற்கையை அவர்கள் வழிபடத் தொடங்கினர். இவ்வுலகில் மனிதன் தோன்றிய காலமே தொன்மத்தின் தோற்றகாலமாகும்.

தொன்மம் சமயத் தொடர்பானது. இது சமயக்கருத்தில் பெரும்பங்கு வகிக்கிறது. தெய்வத்தின் மேன்மையை சிறப்பினை உணர்த்த இது ஒரு கருவியாகச் செயல்படுகிறது. இத்தொன்மங்கள் குறித்த வரையறைகளையும், சிலப்பதிகாரத்தில் காணப்படும்.

6. **L.Vincy**- "சங்க இலக்கியங்களில் தோல் கருவிகள்",", International Journal of Tamil Studies www.ijts.org , UGC, IF: 4.118, ISSN: 2278-7550, Page No: 83-85, Oct 2018.
முன்னுரை:

சங்க இலக்கியத்தில் தோற்கருவிகள் பயன்படுத்தியமையைச் சங்கப் பாடல்களை நோக்கும் நிலையில் காணமுடிகிறது . சங்ககாலத்து தோற்கருவிகளாக அரிக்கூடு, ஆகுளி, எல்லரி, கிணை, சிறுபறை, தட்டை, தடாரி தண்ணுமை, துடி, தொண்டகச் சிறுபறை, பறை முரசம், மற்றும் முழவு முதலியன பயன்படுத்தப்பட்டுள்ளன.