Department of Bank Management

1. **Dr.K.Sujatha** –"A Study on Customer Satisfaction Towards After Sales Service Rendered by Two Wheeler Dealers in Tiruchirappalli District", SELP Journal of Social Science, www.selptrust.org, UGC, IF: 3.655, ISSN: 2349-1655, Vol 8, Issue 34, Page No: 25-28, Oct 2017.

   Abstract:

   "Satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance in relation to his or her expectation". As the definition makes it clear, satisfaction is a function of perceived performance and expectations. If the performance falls short of the expectations of the customer, the customer is dissatisfied. If the performance exceeds the expectations, the customer is highly satisfied or delighted. Many companies are aiming for high satisfaction because customers who are just satisfied still find it easy to switch, when a better offer comes along. Those who are highly satisfied are much less ready to switch. High satisfaction or delight creates an emotional affinity with the brain, not just a rational preference.

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2. **Dr.K.Sujatha** –"Service Quality Analyses of Two Wheeler Dealers in Tiruchirappalli District", International Journal of applied Management Research, www.ijamr.com, Peer reviewed, Scopus, ISSN: 0974-8709, Vol 10, Page No: 62-66, Jan 2018.

   Abstract:

   The consumer is a very important person in a market. He is principal factor in any business. He is always right and can do no wrong. He is the central point of all economic activities. His community is the largest economic group in any country and wields enormous powers in the market. Service quality has defined as the difference between Customer expectations of a service and his/her perception of the service performance.

Department of Business Administration

1. **Dr.R.Balasaraswathi** –"Psychosocial Problem Faced by SHGS' Women Entrepreneurs- A Study", North Asian International Research Journal of Social Science & Humanities, www.nairjc.com, Peer reviewed, IF:3.015, ISSN: 2454-9827, Vol 3, Issue 11, Page No: 433-438, Nov 2017.

Abstract:

Indian women give more emphasis to family ties and relationships. Married women have make a fine balance between business and family. The business success also depends on the support of the family members extended to women in the business process and management. Entrepreneurship is considered as one of the most important factors contributing to the economic development of the society. Entrepreneurship have been considered instrumental in initiating and sustaining socio-economic development. This study sample size consists of 50. Chi-Square analysis found that there is statistically significant association between type of entrepreneur, nativity and age and their overall DASS. Women have become aware about their rights and situations and entered in different fields of business. They have established their own successful business empires. They are contributing towards the growth of economy and improvement of their socio-economic conditions. But the SHG women entrepreneurs affect from psychosocial problem.

Department of Biochemistry

1. **Ms.V.Bharathi & Dr.S.Shanthi**- "Green Synthesis of Silver Nanoparticles from Flower Extract of Nerium Oleander and it's Characterization", World Journal of Pharmaceutical Research, www.wjpr.net, Peer reviewed, Scopus, ICI, Google Scholar, UGC Approved, IF: 7.523, ISSN: 2277-7105, Vol 6, Issue 6, Page No: 1410-1417, June 2017.

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 Nerium oleander flower. 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.

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2. **Ms.V.Bharathi & Dr.S.Shanthi**- "Synthesis of Silver Nanoparticles from Flower Extract of Abutilon Indicum and it's Characterization", World Journal of Pharmaceutical Research, www.wjpr.net, Peer reviewed, Scopus, ICI, Google Scholar, UGC Approved, IF: 7.523, ISSN: 2277-7105, Vol 6, Issue 6, Page No: 1752-1756, June 2017.

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 Abutilon indicum flower. The synthesized nanoparticles were characterized by using UV–Vis absorption spectroscopy and FT-IR analysis. The reaction mixture turned to brownish gray colour after 5hrs 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, ecofriendly and easy alternative to conventional methods of silver nanoparticles synthesis.

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3. **Ms.V.Bharathi et al**. – "Green Synthesis of Mangifera indica silver nanoparticles and its analysis using Fourier transform infrared and scanning electron microscopy, National Journal of Physiology, Pharmacy and Pharmacology, www.nippp.com, Peer reviewed, Google Scholar, Index, UGC Approved Journal, ISSN: 2231-3206, Vol 7, Issue 12, Page No: 1-4, Aug 2017.

Abstract:

Background: Cost effective and environmentally favorable green synthesis of metallic nanoparticles is a fast growing research in nanotechnology. **Aims and Objectives:** The present study reports the synthesis of silver nanoparticle (AgNP) using Mangifera indica leaves extract, and its constituents and particle size was analyzed by Fourier transform infrared (FTIR) spectroscopy and scanning electronmicroscopy(SEM).

Materials and Methods: Preliminary phytochemical analysis of M. indica leaves extract was performed, and AgNPs were prepared by M. indica leaves extract when treated with silver nitrate. Finally, various functional groups in the plant extracts and size of the AgNPs were identified by FTIR and SEM analysis.

Results: Qualitative phytochemical analysis revealed the presence of alkaloids, tannins, flavonoid, quinines, steroids, coumarins, and phenolic compounds in M. indica leaves extract. Presence of AgNPs in the green extract was confirmed by color changes from pale yellow to dark brown color and by an intense peak in the ultraviolet-spectrophotometer at 420 nm. FTIR analysis showed the presence of various functional groups between the frequency range of 400 and 4000/cm and SEM analysis showed the nanometer size of silver particles that formed. Conclusion: This novel green approach may be used for large scale production of metallic nanoparticle and can be used in pharmacological aspects based on the medicinal uses of M. indica.

4. **Dr.T.Karpagam, Dr.B.Varalakshmi, Ms.A.Shanmugapriya and Ms.S.Gomathi et al**. –" Genotyping of Angiotensin Converting Enzyme (ACE 1) Gene in study subject with hypertension and Chronic Kidney Disease", Research Journal of Pharmacy and Technology, www.ijptonline.org, Peer reviewed, Scopus, Google Scholar, ISSN: 0974-3618, Vol 10, Issue 8, Page No: 2607-2610, Aug 2017.

Abstract:

Hypertension and Chronic kidney disease are two most prominent public health problems and show similar clinical complications like high blood pressure and poor renal system. These diseases are due to over activation of sympathetic nervous system. Genetically, the angiotensin-converting enzyme (ACE) gene is involved in hypertension and chronic kidney diseases where the D polymorphism is related to chronic kidney disease and hypertension. The objective of study is to correlate the absolute relationship between hypertension and renal complications in the polymorphism of ACE 1 gene. Results of statistical analysis conclude that none of the genotype distribu¬tions followed the Hardy-Weinberg equilibrium and the differences in genotypes or alleles were not statistically significant. The overall frequency of II genotype was 0.226, DD was 0.499 and ID was 0.276 respectively. Similarly, the frequency of I allele in the study population was 0.475 and D allele was 0.525 respectively. Although the results showed that ID genotype for ACE1 gene are found in hypertension and chronic kidney disease, large studies should be performed to verify the analysis.

5. **Ms.V.Bharathi, Dr.S.Shanthi et al. –**"Green Synthesis of Achyranthes Aspera silver Nano Particles and Confirmation of them through Microscopy and Spectrophotometric Techniques", European Journal of biomedical and Pharmaceutical Science, www.ejbps.com, Peer reviewed, Google Scholar, ICI, IF: 4.382, ISSN: 2349-8870, Vol 4, Issue 12, Page No: 348-351, Nov 2017.

Abstract:

Nanotechnology is the creation of functional materials, devices and systems through control of matter on the nanometer length scale (1-100 nanometers), and exploitation of novel phenomena and properties (physical, chemical, biological, mechanical, electrical...) at that length scale.â€ Achyranthes aspera commonly called as Prickly Chaff Flower, Chaff-flower, Crocus stuff, Crokars staff, and Devilâ€™s horsewhip. This plant is popularly supposed to act as a safeguard against scorpions and snakes by paralyzing them. It is described as purgative, pungent, and digestive, a remedy for phlegm, and inflammation of the internal organs, piles, itch, abdominal enlargements, and rheumatism and for enlarged cervical glands.

6. **Ms.A.Shanmugapriya et al**. –"Phytochemical Screening, Antimicrobial and Antioxidant Activity of Leaf Extracts of Tridax Procumbens", International Journal of Research in Pharmacy and Chemistry, www.ijrpc.com, Peer reviewed, Google Scholar, UGC, IF: 0.521, ISSN: 2231-2781, Vol 7, Issue 3, Page No: 320-326, 2017.

Abstract:

Medicinal herbs have been used comprehensively against various diseases over a long phase of time. Nature has provided abundant plant wealth source, which possess various medicinal values. The essential values of some medicinal plants have been known longer, but a large number of them remain unexplored. It is quite important to investigate the uses and to conduct experimental studies to describe their curative properties. Tridax procumbens a medicinal herb, commonly known as "coat buttons" has been used in medicine since times immemorial. The Present study deals with Phytochemical Screening, Mineral, Antioxidant and Antimicrobial Activity of Leaf Extracts of Tridax procumbens. The results of the phytochemical analysis showed the presence of vital secondary metabolites in ethanol extract than aqueous extract which play a role in plant disease resistant mechanism. Ethanol extract of Tridax procumbens leaves showed massive antimicrobial and antioxidant activity. High content of sodium and potassium in mineral analysis showed the role in metabolism. It is hoped that the important Phytoconstituents, Minerals, antioxidants and antimicrobial properties analyzed in Tridax procumbens leaves will open new avenues in medical field in the treatment of various diseases.

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7. **Ms.S.Gomathi, Ms.V.Bharathi, Ms.A.Shanmugapriya, Dr.T.Karpagam et al.** – "Phytochemical Screening of silver nanoparticles extract of Eugenia jambolana using Fourier infrared spectroscopy", International Journal of Research in Pharmaceutical Sciences, www.ijrps.pharmascope.org, Peer reviewed, UGC, ISSN: 0975-7538, Vol 8, Issue 3, Page No: 373-377, 2017.

Abstract:

Silver nanoparticles were synthesized using leaves extract of Eugenia jambolana. Therefore, the present study is evaluate the phytochemical constituents of silver nanoparticles plant extract of Eugenia jambolana using FTIR. For synthesis of silver nanoparticles using leaf extracts of Eugenia jambolona, plant extract or filtrate was prepared by grinding the leaves and allowed to boil using water and finally filter the content with Whatman no. 1 filter paper. This filtrate was then added to silver nitrate solution for silver.

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8. **Dr.B.Varalakshmi, Dr.T.Karpagam, Ms.A.Shanmugapriya, Ms.S.Gomathi et al.** – "Phytochemical Analysis of Cinnamomum zeylanicum Bark and Molecular Docking of Procyanidin B2 against the Transcription Factor Nf-kB", Free Radicals and Antioxidants, www.phcog.net, Peer reviewed, Vol 7, Issue 2, Page No: 195-199, 2017.

Abstract:

Introduction: Identification of novel natural antioxidant compounds is a highly demanding avenue of therapy for oxidative stress induced diseases. The bark of *Cinnamomum zeylanicum* commonly known as Ceylon cinnamon is commonly used in Ayurvedic medicine.

Method: In this study, the methanolic extract of bark was subjected to GC-MS, UV absorption and TLC techniques to analyze the presence and to elucidate the structure of proanthocyanidins present in the bark. In the latter part of the study, chemdraw structure of the identified procyanidin B_2 was subjected to in silico molecular drug docking analysis using GOLD to find out its inhibiting efficacy against NF-κB (1NFI).

Results: The phytochemical analysis supported the presence of a proanthocyanidin compound, procyanidin B_2. The constitutive or aberrant activation of the transcription factor, NF-κB pathway is often noticed in many cancers, autoimmune disorders, pulmonary, cardiovascular, neurodegenerative and skin diseases. The docking of procyanidin B_2 with NF-κB revealed its inhibiting efficacy by binding to active site of NF-κB and thus could inhibited the nuclear translocation and DNA binding of p50/p65 heterodimer to κB DNA sequences.

Conclusions: Thus, procyanidin B_2 can act as the inhibitor for NF-κB. So, procyanidin B_2 present in *C. zeylanicum* bark can be used as a potential lead compound for drug development against cancer and other oxidative stress disorders.

9. **Dr.T.Karpagam, Dr.B.Varalakshmi, Ms.A.Shanmugapriya and Ms.B.Ramya et al.-** "A Combinative Evaluation of Antioxidant Potential in Tridax procumbens and Boerhavina diffusa", International Journal of Pharmaceutics and Drug Analysis, www.ijpda.com, Peer reviewed, UGC, ISSN: 2348-8948, Vol 6, Issue 2, Page No: 197-202, Jan 2018.

Abstract:

Free radicals are substances that are capable of inducing oxidative damage to human body. This free radical reaction can be terminated effectively by the antioxidants thus reducing the risk of diseases. The present study was designed to develop safer and protective herbal combination to prove the free radical scavenging

effect as a new alternative. The ethanolic extracts of Tridax procumbens leaves and Boerhavia diffusa roots individually and in combination were tested for their radical scavenging ability like DPPH, Hydrogen peroxide, nitric oxide and ferrous ion. The activities of the medicinal plants were compared with standard antioxidant ascorbic acid. All the free radicals were effectively scavenged by all the three plant extracts. The combinative ethanolic extract showed maximum scavenging activity, followed by the Boerhavia diffusa extract and Tridax procumbens extract. The results of the present study showed that the combinative plant extract exhibited synergistic radical scavenging activity thus proving its efficacy to be used in pharmacological industries.

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10. **Dr.T.Karpagam, Dr.B.Varalakshmi, Ms.A.Shanmugapriya and Ms.B.Ramya et al**.- "Evaluation of antihepatotoxic effect of Avicennia marina against alcohol-induced liver injury", International Journal of Pharmaceutics and Drug Analysis, www.ijpda.com, Peer reviewed, UGC, ISSN: 2348-8948, Vol 6, Issue 2, Page No: 225-231, Jan 2018.

Abstract:

This study aims to evaluate the antihepatotoxic effect of Avicennia marina against ethanol induced hepatotoxic rats. Qualitative phytochemical analysis was carried out in alcoholic extract of leaves of A.marina. The hepatoprotective effect A.marina was investigated against ethanol - induced hepatotoxic (group-III) rats and the activity of A.marina was compared with standard drug (Silymarin) treated (Group-IV) rats. Ethanol was used as hepatotoxic inducer for all experimental rats except for normal control (Group-I) rats and ethanol alone was given for disease control (Group-II) rats. Liver marker enzymes in serum (ALT, ALP, AST, GGT), Biliru-bin, Protein and histopathological analysis were carried out. Ethanol treatment elevated levels of liver enzymes, decreased protein and histological damage in hepatocytes. However, treatment with A.marina significantly reversed the above changes compared with ethanol-challenged rats and was comparable with silymarin treated rats. The results clearly demonstrate that A.marina possesses promising antihepatotoxic effect and hence suggests its use as a potential therapeutic agent for protection from ethanol overdose.

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11. **Ms.V.Bharathi, Dr.S.Shanthi, et al. –**"Impact of farm-made liquid organic nutrients jevamirtham and fish amino acid on growth and nutritional status in different season of Abelmoschus esculentus-a self-sustainable field trial" Organic Agriculture,

www.spinger.com, Google Scholar, Scopus, UGC, Web of Science, ISSN: 1879-4238, Feb 2018.

Abstract:

In organic agriculture, jeevamirtham (J) and fish amino acids (FAA) (Liquid organic nutrient bioformulations-LONBFs) were used to improve the plant growth and soil fertility. The effect of J and FAA in combination on the growth, nutritional status, and yield of plant has not been scientifically evaluated. In this study, liquid organic preparations of J and FAA were prepared and applied to okra plants individually and in combination (J+FAA). The experimental fields were designed as T1-untreated control field, T2-chemical fertilizer treated field, T3-jeevamirtham-treated field, T4-fish amino acid-treated field, and T5-mixture of jeevamirtham and fish amino acid-treated field.

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12. **Ms.V.Bharathi et al. –**"Evaluation of Anthelmintic Activity of Momordica Charantia, Cucurbita Pepo L., and Solanum Torvum based Formulation and its Phytochemical Analysis using Fourier Transform Infrared", Asian Journal of Pharmaceutical and Clinical Research, www.ajpcr.com, Peer reviewed, UGC, Google Scholar, Scopus, ICI, ISSN(O): 2455-3891, ISSN(P): 0974-2441, Vol 11, Issue 7, Page No: 353-355, March 2018.

Abstract:

Objective: In the present study, the phytochemical and anthelmintic effect of a formulation (MCS) prepared from the plants, namely Momordica charantia, Cucurbita pepo L., and Solanum torvum were investigated.

Methods: Phytochemical constituents were analyzed using Fourier transform infrared (FTIR), and anthelmintic activity of methanolic and aqueous extract MCS formulation against earthworm Pheretima posthuma was evaluated.

Result: As a result of FTIR analysis, MCS formulation showed the presence of coumarin, flavonoids, tannin, phenolic compound, saponin, quinone, and alkaloids. In investigating the anthelmintic action of formulation against adult Indian earthworms, the values of paralytic time and death time of formulation were less when compared to the positive control albendazole.

Conclusion: The present work concludes that the MCS formulation acts as a more suitable herbal treatment against helminths infection.

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13. **Ms.V.Bharathi et al. –**"Effects of a medicinal plant Macrotyloma uniflorum (Lam.) Verdc.formulation (MUF) on obesity-associated oxidative stress induced liver injury",

Saudi Journal of Biological Sciences, www.sciencedirect.com, Peer reviewed, Scopus, Pubmed, IF: 3.138, ISSN: 1319-562x, Vol 25, Issue 3, Page No:1-6, March 2018.

Abstract:

Obesity is a global health burden due to lifestyle modifications that have a strong association with a high incidence of diseases, such as dyslipidemia, glucose intolerance, nonalcoholic fatty liver diseases, diabetes, hypertension, coronary heart disease and cancer. The aim of the present study is to investigate the protective effects of a Macrotyloma uniflurom formulation (MUF) against high-fat diet (HFD)-induced oxidative stress and inflammation in obese rats. Male albino Wistar rats were fed a high-fat diet for 6 weeks to facilitate fat-induced oxidative stress and were simultaneously treated with MUF (400 mg/kg b.w.) through oral gavage from the third week onwards during the treatment phase. At the end of the experimental period, hepatic and oxidative stress markers were examined. The mRNA expression levels of inflammatory marker genes [Tumor Necrosis Factor-α (TNF-α) and Interleukin-6 (IL-6)] were also determined by reverse transcriptase-polymerase chain reaction in liver tissue. Hepatic marker enzymes (aspartate aminotransferase, alanine aminotransferase, alkaline phosphatase and gamma glutamyl transferase) and lipid peroxidation markers (Thiobarbituric acid reactive substances and LOOH) were significantly increased in HFD-fed rats, and administration of MUF resulted in remarkable suppression of these markers. Administration of MUF to HFD rats enhanced the activity of enzymatic (superoxide dismutase, catalase and glutathione peroxidase and non-enzymatic (vitamin E, vitamin C and glutathione) antioxidants compared to HFD-fed rats. An anti-inflammatory effect of MUF was demonstrated by attenuating gene expression of TNF-α and IL-6. Therefore, the results of this study indicate that MUF could be a strong herbal therapeutic alternative for the protection of the liver as well as prevention and treatment of high-fat-induced oxidative Stress and inflammation.

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14. **Ms.V.Bharathi et al. –**"Effect of Macrotyloma uniflorum on antiobesity in rats fed with a high fat diet", Saudi Journal of Biological Sciences, www.sciencedirect.com, Peer reviewed, Scopus, Pubmed, IF: 3.138, ISSN: 1319-562x, Vol 25, Issue 3, Page No: 1-6, March 2018.

Abstract:

Obesity is a universal health burden develops from an inequity between food consumption and energy disbursement which causes excessive deposition of fat in adipose tissue, liver tissue, muscle, pancreatic islets and other organs involved in

metabolism results in dyslipidaemia, glucose intolerance, coronary heart disease,diabetes, hypertension, non-alcoholic fatty liver disease and cancer (Isabelle et al., 2017). Globally, 600 million people are obese and 19 billion adults are overweight (Jian Bing et al., 2016). Fat absorption process is mediated by pancreatic lipase (PL) and militarization of fat stored in adipose tissues is mediated by triglyceride lipase (TGL) (Rudolf et al., 2012). Lifestyle modification and high energy diet have increase the incidence of obesity (Hasani et al., 2013) There are several antiobesity drugs are available, however, they have perilous side effects and hence medicinal plant including crude extracts and isolated compound from plant can be used to induce weight loss and prevent diet induced obesity (Matson and Fallon, 2012). The potential of natural products against obesity is still largely unexplored and can be an excellent alternative for the safe and effective antiobesity drugs from natural origin.

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15. **Ms.V.Bharathi, Ms.P.Anitha & Dr.S.Shanthi-"**Chemical Charaterisation of GCMS Analysis of Tabernaemontana Divaricata", European Journal of biomedical and Pharmaceutical Sciences, www.ejbps.com, Peer reviewed, Google Scholar, ICI, IF: 4.382, ISSN: 2349-8870, Vol 5, Issue 4, Page No: 451-454, March 2018.

Abstract:

Medicinal plants have been used as an exemplary source for centuries as an alternative remedy for treating human disearses because they contain numerous active constituents of therapeutic value. The present study was carried out to identify the phytochemical components of the Tabernaemontana divaricata using ethanol, chloroform and water extract. The phytochemical screening showed the presence of alkaloids, tannins, steroids, flavonoids, saponins, tannins and phenolics. In GC MS, the mass spectrum of the unknown component was compared and interpreted with the spectrum of the known compeonents stored in the National Institute Standard and Technology (NIST) library. The presence of various bioactive compounds justifies the use of the plant for various ailments by traditional practitioners.

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16. **Dr.T.Karpagam, Dr.B.Varalakshmi, Ms.A.Shanmugapriya et al.-"**Outlining of Phytochemicals and GC-MS Profile of Centella asiatica", International Journal of Pharmaceutics and Drug Analysis, www.ijpda.com, Peer reviewed, UGC, ISSN: 2348-8948, Vol 6, Issue 2, Page No: 252-256, 2018.

Abstract:

The aim of this study is to assess the phytochemicals and bioactive compounds present in Centella asiatica.In the present study, qualitative phytochemical analysis of different extracts and GC – MS was carried out using aqueous extract of Centella asiatica for the identification of bioactive compounds. Phytochemicals like alkaloids, steroids, cardiac glycosides, terpenoids, tannins, anthroquinone, proteins, total carbohydrates, reducing sugar, flavonoids, saponins, lignins, coumarin were analysed. Ethanolic extract had nine phytochemical metabolites out of thirteen analyzed, methanolic extract had seven metabolites, acetone extract had eight while aqueous extract had twelve, and henceforth aqueous extract was chosen for GC-MS analysis. The results showed the presence of phytochemicals and bioactive phytocompounds which may possess a wide range of therapeutic effects.

Department of Chemistry

1. **Dr.S.Manimaran et al.** - " Inhabition of Carbon Steel Corrosion in Ground Water by Polyacrylamide", European Journal of Biomedical and Pharmaceutical Sciences, www.ejpbs.com , Peer reviewed, Google Scholar, ICI, , IF: 4.382, ISSN: 2349-8870, Vol 5, Issue 2, Page.No: 920-927, Dec 2017.

Abstract:

The inhibition efficiency of Polyacrylamide (PAA) in controlling corrosion of carbon steel immersed in ground water has been evaluated in the absence and presence of Zn2+. PAA has some inhibition efficiency. The inhibition efficiency increases in presence of Zn2+. The synergistic effect exists between PAA and Zn2+ the maximum efficiency of 98% is obtained. The synergism parameters have been calculated. It is found that the synergistic effect exists between PAA and Zn2+. The synergistic effect is statistically significant. This is proved by F-test. The mechanism of corrosion inhibition proposed based on AC impedance spectra. The productive film has been analyzed by SEM and AFM studies.

2. **Dr.P.Lakshmi Prabha** - "Removal on Mn(II) & Zn(II)IONS Using Soil Collected from a pond in Tiruchirappalli, India", European Journal of Biomedical and Pharmaceutical Sciences, www.ejpbs.com, Peer reviewed, Google Scholar, ICI, IF: 4.382, ISSN: 2349-8870, Vol 5, Issue 2, Page.No: 308-313, Jan 2018.

Abstract:

Water pollution due to the presence of toxic metal ions is a major task, since they cause toxic effects on all living organisms. In the present work, the adsorptive removal of Mn(II) & Zn(II)ions using soil (collected from a pond in Tiruchirappalli) was carried out after regeneration with NaCl solution. The process parameters like pH of the medium, size of the adsorbent, contact time etc., were varied and their effects on the removal of Mn(II) & Zn(II) ions were determined. The instrumental data (FT-IR and SEM EDX) of the adsorbent before and after the adsorption process confirm the removal of Mn(II) & Zn(II) ions. Desorption of the metal ions, was maximum when 0.5N HCl solution was used.

Department of Computer Science

1. **Dr.K.R.Subramanian et al.-** "M-Polynomial of Penta –chains", Journal of Ultra Scientist of Physical Science, www.ultrascientist.org, Peer reviewed, Google Scholar, ICI, ISSN(print): 2231-346x, ISSN(online): 2319-8044, Vol 29, Issue 4, Page No: 164-168, April 2017.

   Abstract:

   Using the vertex degrees of the graphs, M- polynomials of several types of graphs consisting of concatenated pentagonal rings are obtained and studied in this paper. The vertex degree based indices like Randic, Geometric – Arithmetic, Sum Connectivity, Harmonic, First Zagreb, Second Zagreb, Second Modified Zagreb, Inverse Sum, Alberston, Atom – bond Connectivity, Symmetric – Division index and Augmented Zagreb indices etc., of penta-chains can be calculated easily by using the proposed M-Polynomials of the penta-chains for single, alternating and double-row pentachains of two types.

2. **Dr.M.Manimekalai**, Director & Head "Hide and seek:A new way to hide encrypted data in QR code using the concepts steganography and cryptography" International Journal of Advanced Research in Computer and Communication Engineering, www.ijarcce.com, Peer reviewed, Google Scholar, IF: 6.66, ISSN (Online): 2278-1021, ISSN (Print): 2319-5940, Vol. 6, Issue 6, June 2017.

   Abstract:

   The art of information hiding has become an important issue in the recent years as security of information has become a big concern in this internet era. Cryptography and Steganography play major role for secured data transfer. Steganography stands for concealed writing; it hides the message inside a cover medium. Cryptography conceals the content of a message by encryption. QR (Quick Response) Codes are 2-dimensional bar codes that encode text strings. They are able to encode information in both vertical and horizontal direction, thus able to encode more information. Genetic Algorithm basic function is to be used to generate the key values that can be used to encrypt the message so the detection of the message is complicated. In this paper a novel approach is proposed for secret communication by combining the concepts of Steganography and QR codes. The suggested method includes two phases: (i) encrypt the message by using the key values that is generated using genetic algorithm (ii) Hiding the encrypted message inside the QR code. Experimental result shows that the enhanced design of secure algorithm can be created which ensure improved security and reliability.

3. **Ms.V.Vetriselvi**- "Hop- to- Hop Secure Data Transmission using Cryptography and Audio Steganography Algorithm" International Journal of Advanced Research in Computer and Communication Engineering, www.ijarcce.com, Peer reviewed, Google Scholar, IF: 5.947, ISSN: 2278-1021, Vol 6, Issue 6, June 2017.

Abstract:

Today's large demand of internet applications requires data to be transmitted in a secure manner. Data transmission in public communication system is not secure because of interception and improper manipulation by eavesdropper. In this thesis we implement two security algorithms they are cryptography and steganography. For secure communication we are providing security by using the RSA which is based on Cryptography. Steganography is an art of sending hidden data or secret messages over a public channel so that a third party cannot detect the presence of the secret messages. Audio signals have a characteristic redundancy and unpredictable nature that make them ideal to be used as a cover to hide secret information. A Steganographic technique for embedding text information in audio using LSB based algorithm is presented in this paper. In the proposed method each audio sample is converted into bits and then the text data is embedded. In embedding process, first the message character is converted into its equivalent binary. By using proposed LSB based algorithm, the capacity of stego system to hide the text increases. The performance of the proposed algorithm is computed using SNR values for various audio input. By using these methods third parties cannot percept the existence of message embedded in the audio file. The properties of the audio file remain the same after hiding the secret message.

4. **Ms.N.Vijayalakshmi & T.Jenifer** –"An Analysis of Risk Factors for Diabetes using Data Mining Approach", International Journal of Computer Science and Mobile Computing, www.ijcsmc.com, Peer reviewed, IF: 6.017, ISSN: 2320-088x, Vol 6, Issue 7, Page No: 166-172, July 2017.

Abstract:

One of the most significant health issue faced by men and women these days is diabetes. Although several factors are considered to lead to diabetes, it would be worth enough to find the most predominant factors causing this problem to gain a better understanding of the issue. Data mining and statistical analysis go hand in hand in identifying these factors from a clinical database containing primary data pertaining to significant factors relating to diabetics/non-diabetics in men and women. The sample population encompasses both diabetics and non-diabetics men and women relating to a good age spread. Data mining techniques like association

rule mining, classification using decision tree induction, clustering, prediction using a decision tree approach and building an application based on the knowledge gained for predicting the probability of diabetics in a men and women have been used to thoroughly attain our objectives.

5. **Ms.R.Indra et al.-** "Scalable Dynamic Networks with Influential Node Tracking Under An Interchange Greedy Algorithm", International Journal for Science and Advance Research in Technology, www.ijsart.com, Peer reviewed, Google Scholar, IF: 5.388, ISSN: 2395-1052, Vol 3, Issue 8, Page No: 314-317, Aug 2017.

Abstract:

Real world marketing campaign utilizing the world-of-mouth effect usually lasts a long time, where multiple sets of influential users need to be mined and targeted at different time of fully utilize the power of viral marketing. As both social network structure and strength of influence between individuals evolve constantly, it requires tracking the influential nodes under a dynamic setting. To address the above problem, we explore the influential Node Tracking (INT) problem as an extension to the traditional Influence Maximization[6], problem under dynamic social networks. While Influence Maximization problem aims at identifying a set of k nodes to maximize the joint influence under one static network, INT problem focuses on tracking a set of influential nodes that keeps maximizing the influence as the network evolves.

6. **Ms.R.Indra et al.-** "Strategy of Automated Clinical Pratices for Reading Electronic Health Records Dynamically According to the Real-Time Fluctuation of the Patient's Condition", International Journal for Science and Advance Research in Technology, www.ijsart.com, Peer reviewed, Google Scholar, IF: 5.388, ISSN: 2395-1052, Vol 3, Issue 8, Page No: 318-321, Aug 2017.

Abstract:

Reasoning is a crucial task performed by the inference engine of the clinical decision support systems, which combines medical knowledge with patient specific data and generates relevant decisions. There are different reasoning methods, suitable for different knowledge representations and application area. This paper reviews the most common methods and describes how they are used in real systems. Furthermore, it outlines the remaining weaknesses of the reasoning mechanisms and provides directions for future research and improvements. Scientists have developed many different reasoning mechanisms, which are available to be used by

the inference engine within the clinical diagnosis and treatment system (CDTS). However, even decades since the CDTSs were initially introduced, there are still unresolved problems. And no single method has been found to answer all questions. The main purpose of this paper is to review the different reasoning methodologies and to provide directions for further research and improvements.

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7. **Ms.S.Geetha & S.Iniya Devi** –"Image Retrieval Process Based on Input Query using Clustering Techniques", International Journal of Research science and Engineering, www.ijrse.org, ISSN: 2212-4012, Vol 3, Issue 9, Sep 2017.

Abstract:

A scalable approach for content-based image retrieval in peer-to-peer networks by employing the Bag-of-visualwords model. A peer-to-peer network regularly evolves dynamically, which makes a static codebook less effective for retrieval tasks. A dynamic codebook updating process by optimizing the communal information between the resultant codebook and relevance information, and the workload balance among nodes that manage different code words. The planned approach is scalable in developing and disseminated peer-to-peer networks, while achieving enhanced recovery accuracy.

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8. **Ms.S.Geetha & N.Nathiya** –"Automatic Decision of Findings Text in Development Models", International Journal of Research science and Engineering, www.ijrse.org, ISSN: 2212-4012, Vol 3, Issue 9, Sep 2017.

Abstract:

System-related engineering tasks are often conducted using process models. In this context, it is essential that these models do not contain structural or terminological inconsistencies. To this end, several automatic analysis techniques have been proposed to support quality assurance. While formal properties of control flow can be checked in an automated fashion, there is a lack of techniques addressing textual quality. More specifically, there is currently no technique available for handling the issue of lexical ambiguity caused by homonyms and synonyms. In this paper, we tackle this research gap and intend a modus operandi that detect and resolve lexical ambiguities in practice models.

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9. **Dr.K.Menaka & V.Sundaravalli** –"Enhancing Information Encryption with Biomolecular Sequences Using NDES Algorithm", International Journal of Advanced Research in Computer Science, www.ijarcs.info, Peer reviewed, Google Scholar, IF: 7.234, ISSN: 0976-5697, Vol 8, Issue 9, Page No: 482-485, Nov 2017.

Abstract:

During Communication, Information Encryption plays a very important role. While transmitting data, unusual kinds of attacks may occur. To enhance the security during data transmission, cryptographic techniques are used. Cryptography is thus a study in which the message to be transmitted is converted into unreadable form and then sent so that unauthorized

users may not be able to read the information. The information is transformed during a phase called Encryption, before being stored or transmitted, based on a Secret key. To guarantee the privacy and validity of the furtive data, a variety of cryptographic techniques have been developed and researchers are continuously working on it to afford better technique towards information security. Though many algorithms have been developed for hiding the data, biomolecular DNA (Deoxyribonucleic acid) sequences based data encryption seems to be a promising approach for satisfying the current informationsecurity needs. In this work, the enormous number of features available in DNA sequences are taken and combined with the well known cryptographic algorithm, the Data Encryption Standard (DES). The proposed technique which combines the features of DNA sequences and the DataEncryption Standard is thus named as NDES (Novel Data Encryption Standard) algorithm. This technique thus enhances the securityby conversion, manipulation, substitution, confusion and hence provides complexity.

10. **Dr.V.Mathimalar et al-"**Enabling Privacy Location Proofs for Mobile Users using Dynamic Grid", International Journal for Scientific Research & Develolpment, www.ijsrd.com, Peer reviewed, Google Scholar, ISSN(O): 2321-0613, Vol 3, Issue 12, 2017.

Abstract:

Location-based services are quickly becoming immensely popular. Mostly such location based services rely on users' current location, and other related services rely heavily on users' location history data. Malicious users may lie about their spatial-temporal provenance without a carefully designed security system for users to prove their past locations. A novel privacy preserving location hiding model called Hybrid STAMP is proposed. The hybrid STAMP is designed for ad-hoc mobile users generating location proofs for each other in a distributed setting, which can accommodate trusted mobile users and wireless access points. STAMP ensures the integrity and non-transferability of the location proofs and protects users' privacy. A semi-trusted Certification Authority is used to distribute cryptographic keys as well

as guard users against collusion by a light-weight entropy-based trust evaluation approach. The proposed hybrid STAMP model has low-cost overheads in terms of computational and storage resources.

11. **Dr.G.Srinaganya & S.Sowmiya** –"Security Enhancement in Manet by Proposed Fuzzy Trust Routing Scheme", International Journal of Advanced Research Trends in Engineering and Technology, www.ijartet.com, Peer reviewed, Google Scholar, UGC, IF: 5.338, ISSN(P): 2394-3777, ISSN(O): 2394-3785, Vol 5, Issue 12, Page No:1033-1051, April 2018.

Abstract:

MANETs are much more susceptible to various attacks because of openness in network topology and being away of a centralized administration in management. As an outcome of that, more malicious nodes are often comes in and goes out without being detected from the network topology. Hence, MANET needs very specialized security methods to isolate the false entrance. As well as there is no single solution that fitting in different types of the network where the nodes can be behave like any apparatuses. The networks works well if the nodes are trusty and act rightly cooperatively. In order to improve the security of the network, this paper gets started the new interesting approach to evaluate the trustworthiness of the nodes. Fuzzy Trust-based Secured Routing (FTSR) approach provides a flexible and feasible approach to choose trusted route to meet the requirement of the security of the data transmission. In this, fuzzy logic rule prediction mechanism is adopted to notice the future behavior of node by updating the node's trust. We have also analyzed the performance metrics such as packet delivery ratio, end-to-end delay and average throughput which can also increase accordingly through newest approach.

Department of Economics

1. **Ms.R.Latha et al**.–"An Economic Study on Flower Cultivation in Andanallur Block in Tiruchirapalli District", International Biannual Journal titled Research Explorer, www.selptrust.org, UGC, ISSN(P): 2250-1940, IF: 2.014, ISSN(O): 2349-1647), Vol 6, Issue 17, Page No: 98-100, April 2018.

   Abstract:

   Agriculture plays a vital role in the economic development of a country. More than 70 percentage of the population in India either directly dependent on agriculture for their livelihood. Floriculture is one of the branches of agriculture. Flowers are the most beautiful of creation of nature and it is universally acclaimed as a gift of nature to mankind. Andanallur block is a fertile area in Trichy. The main occupation of people is flower cultivation. This study is an attempt to find out the total income and expenditure of flower cultivation in the study area.

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2. **Ms.R.Latha et al**.–"Problems Faced by the Farmers Cultivating Flowers in Tiruchirappalli District", International Biannual Journal titled Research Explorer, www.selptrust.org, UGC, IF: 2.014, ISSN(P): 2250-1940, ISSN(O): 2349-1647), Vol 9, Issue 37, Page No: 40-42, April 2018.

   Abstract:

   Agriculture has become the most important occupation of our country. The development of agriculture turned to be boon for the human civilization as it also gave way to their development. Flower cultivation is a branch of agriculture and a segment of horticulture. It deals with the culture of flowers and ornamental plants; it has great importance in our daily life as well as national economy. Flower cultivatiors faced many problems. So this study is an attempt to identify the problems faced by the farmers cultivating flowers.

Department of English

1. **Ms.V.Anitha**-"The Bequest of Buchi Emecheta in 'The Joys of Motherland'" Indian Council of Research Journals Impact Factor And Rating, www.icrjifr.com, Peer reviewed, IF: 3.9531, ISSN(p): 0976-5247, ISSN(e): 2395-7239, Vol 8, Issue 3, 2017.

   Abstract:

   Buchi Emecheta is one of Nigeria's major unique female writer. Her legacy has made a way of motivation for modern Higerian female journalists. This paper expects to examine her compositions, concentratingon the two womanist portrayals of Nigerian female characters. All things considered, a standard examination of Emecheta's works, especially 'The Joys of Motherhood' (1979) uncover Nigerian women characters who demand recommended understandings of their functions as a 'female', 'spouse' and 'mother'. Emecheta's women portrayals build up a sect of women, who are solid, stubborn and engaged inspite of their shifted conditions, a depiction deserving of aspiration.

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2. **Ms.V.Anitha et al.-"**Emergence of new African woman in Buchi Emecheta's Kehinde", International Journal of Advanced Research and Development, www.advancejournal.com, Peer reviewed, Google scholar, ICI, IF: 5.24, ISSN: 2455-4030, Vol 3, Issue 1, Page No: 856-857, Jan 2018.

   Abstract:

   An image of the vagrant world is found in Kehinde chosen from the third period of Buchi emecheta's composition. Postcolonial obsession caused by distance and disengagement is seen alleviated by the amalgamation of these groups. Kehinde represents the encounters of the African female diaspora and frame a microcosm of the diasporic groups. Kehinde is simply the record of the enlivening of a First world outsider. The novel manages the slow change of an African female and with her change into a completely created lady, acquiring an extraordinary personality.

Department of Mathematics

1. **Dr.M.A.Gopalan, Dr.A.Kavitha &** A.Jesintha Mary – "On the Positive Pell Equation $y^2 = 72x^2 + 36$", International Journal of Research-Granthaalayah, www.granthaalayah.com, Peer reviewed, Google Scholar, ISSN(Print): 2394-3629, ISSN(Online): 2350-0530, Vol 5, Issue 7, Page No: 68-74, July 2017.

   Abstract:

   The binary quadratic equation represented by the positive pellian 72 36 2 2 + x =y is analysed 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 hyperbolas, parabolas and special Pythagorean triangle.

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2. **Dr.G.Sumathi- "Observations on the Hyperbola $y^2 = 150x^2 + 16$"**, International Journal of Mathematics Trends and Technology, www.ijmttjournal.org, Peer reviewed, UGC Approved, Google Scholar, IF: 4.101, ISSN: 2455-1457, Vol 3, Issue 9, Page No: 198-206, Sep 2017.

   Abstract:

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

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3. **Dr.G.Sumathi- "Observations on the equation $y^2 = 312x^2 + 1$"**, International Journal of Mathematics Trends and Technology, www.ijmttjournal.org, Peer reviewed, UGC Approved, Google Scholar, IF: 2.53, ISSN: 2231-5373, Vol 50, Issue 4, Page No: 231-234, Oct 2017.

   Abstract:

   The binary quadratic equation $y^2 = 312x^2 + 1$ is considered and a few interesting properties among the solutions are presented. Employing the integral solutions of the equation under consideration, a few patterns of Pythagorean triangles and rectangles are observed.

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4. **Dr.S.Mallika &** P.Abinaya- **"On Negative Pellian Equation $y^2 = 40x^2 - 15$ ",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), ISSN(O): 2349-0640, Vol 10, Page.No: 41-48, Dec 2017.

Abstract:
The binary quadratic equation represents by negative Pellian $y^2 = 40x^2 - 15$ 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 ofother choices of hyperbolas, parabolas and Pythagorean triangle.

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5. **Dr.T.R.Usha Rani** & K.Ambika- **"Observation on the Non-Homogeneous Binary Quadratic Diophantine Equation $5x^2 - 6y^2 = 5$ ",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(online), Vol 10, Page No: 41-48, Dec 2017.

Abstract:
Non-homogeneous binary quadratic equation represents hyperbola given by $5x^2 - 6y^2 = 5$ 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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6. **Dr.S.Vidyalakshmi** & N.Bharathi- **"Observation on the Non-Homogeneous Ternary Quadratic Equation $x^2 - xy + y^2 + 2(x + y) + 4 = 12z^2$",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(online), Vol 10, Page No: 41-48, Dec 2017.

Abstract:
A search is made for obtaining infinitely many non-zero distinct integer solutions to the non-homogeneous quadratic equation given by $x^2 - xy + y^2 + 2(x + y) + 4 = 12z^2$. Different choices of integer solution to the above equation are obtained. A few interesting relations between the solutions and special polygonal numbers are obtained.

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7. **Dr.G.Sumathi** & B.Deepika - **"Integral Points on the Cone $7x^2 - 3y^2 = 16z^2$",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(online), Vol 10, Page No: 41-48, Dec 2017.

Abstract:
The cone represented by the ternary quadratic Diophantine equation $7x^2 - 3y^2 = 16z^2$ is analyzed for its patterns of non-zero distinct integral solutions. A few

interesting properties between the solutions and special polygonal numbers are exhibited.

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8. **Ms.T.R.Usha Rani** & M.Devi -**"On the Binary Quadratic Diophantine equation $y^2 = 80x^2 - 16$",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(online), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The Binary quadratic negative pell equation $y^2 = 80x^2 - 16$", representing a hyperbola is analyzed for its non-zero integer solutions. A few interesting relations among its solutions are presented. Further, employing the solutions of the above equation, we have obtained solutions of other choices of hyperbolas, parabolas and special pythogorean triangles.

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9. **Ms.D.Maheswari** & S.Dharuna- **"On the Non-Homogeneous Cubic Equation with four Unkowns $x^2 - y^2 = z^3 + w^3$ ",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(online), Vol.10, Page No: 41-48, Dec 2017.

Abstract:

An attempt has been made to determine four non-zero distinct integers x, y, z and w such that the difference of squares of any two integers equals the sum of the cubes of other two integers. A few relations among x, y, z and w are presented. A general formula for generating sequence of integer solutions based on the given solution is also presented.

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10. **Dr.G.Sumathi** & R.Divyabharathi- **"Observations on the Hyperbola $y^2 = 182x^2 + 14$ ",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(online), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The binary quadratic equation $y^2 = 182x^2 + 14$ 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 sequences of numbers, Generalized Lucas sequences of numbers.

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11. **Dr.S.Mallika** & D.Hema- **"On the Ternary Quadratic Diophantine Equation $5y^2 = 3x^2 + 2z^2$ "**, Journal of Mathematics and Informatics, Peer reviewed, Google Scholar, www.researchmathsci.org, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The ternary homogeneous quadratic equation given by $5y^2 = 3x^2 + 2z^2$ is analysed for its non-zero distinct integer solutions. A few interesting relations between the solutions and special polygonal and pyramidal numbers are presented. Also, given a solution, a generation of sequence of solution based on the given solutions are presented.

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12. **Dr.A.Kavitha** & B.Kiruthika- **"On Homogeneous Cubic Diophantine equation with four unknowns $3(x^3 + y^3) = 8zp^2$ "**, Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The homogeneous cubic Diophantine equation with four unknowns represented by $3(x^3 + y^3) = 8zp^2$ is analyzed for finding its non-zero distinct integral solutions. Different patterns of solutions of the equation under consideration are obtained the relations between the integer solutions and special numbers namely polygonal number and pyramidal number are exhibited.

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13. **Dr.T.R.Usha Rani** & J.Kiruthika- **"Observation on the Homogeneous Ternary cubic Equation with four Unknowns $3(x^3 + y^3) = 2zw^2$ "**, Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The homogeneous ternary cubic equation given by $3(x^3 + y^3) = 2zw^2$ is analysed for its non-zero distinct integer solutions. A few interesting relations between the solutions and special polygonal and pyramidal numbers are presented.

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14. **Dr.G.Sumathi** & C.Pathmapriya- **"On the Homogeneous Cubic Equation with four Unknowns $(x^3 + y^3) = 7zw^2$ "**, Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The homogeneous cubic equation with four unknowns represented by the Diophantine equation $(x^3 + y^3) = 7zw^2$ is analyzed for its patterns of non-zero distinct integer solutions. A few interesting properties between the solutions and special numbers are exhibited.

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15. **Dr.S.Vidhyalakshmi & A.Priya- "On the Homogeneous Ternary Quadratic Equation $2(x^2 + y^2) - 3xy + (x + y) + 1 = z^2$ "**, Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The non-homogeneous quadratic Diophantine equation represented by $2(x^2 + y^2) - 3xy + (x + y) + 1 = z^2$ is studied for its non-zero distinct integer solutions. Four different sets of distinct integer solutions to the above equation are obtained. A few interesting relations between the solutions and special polygonal numbers are presented.

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16. **Dr.S.Mallika & T.Priyadharshini- "Observation on Cubic Equation with four unknowns $(x^3 + y^3) + (x + y)(x + y + 1) = zw^2$ "**, Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The non-homogeneous cubic Diophantine equation represented by $(x^3 + y^3) + (x + y)(x + y + 1) = zw^2$ " is analyzed for its non-zero distinct integer solutions. A few interesting relations between the solutions and Polygonal numbers, Pyramidal numbers are also presented.

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17. **Dr.A.Kavitha & S.Ramya- "On the Positive Pellian Equation $y^2 = 90x^2 + 31$ "**, Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The binary quadratic Diophantine equation represented by the positive pellian $y^2 = 90x^2 + 31$ is analysed 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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18. **Dr.A.Kavitha & P.Sasipriya- "A Ternary Quadratic Diophantine Equation $x^2 + y^2 = 65z^2$ ",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The Quadratic Diophantine equation with three unknowns represented by $x^2 + y^2 = 65z^2$ " is analyzed for finding its non-zero distinct integral solutions. Different patterns of solutions of the equation under consideration are obtained. A few interesting properties among the solutions are presented.

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19. **Dr.S.Mallika & K.Selva Keerthana- "On the Ternary Quadratic Diophantine Equation $3(x^2 + y^2) - 5xy + 2(x + y) + 4 = 15z^2$ ",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The ternary non-homogeneous quadratic equation $3(x^2 + y^2) - 5xy + 2(x + y) + 4 = 15z^2$ is analysed for its non-zero distinct integer solutions. A few interesting relations between the solutions and special polygonal and pyramidal numbers are presented.

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20. **Dr.M.A.Gopalan & Sharadha Kumar- "On the Hyperbola $2x^2 - 3y^2 = 23$ ",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The hyperbola represented by the binary quadratic equation is $2x^2 - 3y^2 = 23$ " analyzed for finding 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 hyperbolas and parabolas are presented. Also, employing the solutions of the given equation, special Pythagorean triangle is constructed.

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21. **Ms.D.Maheswari & R.Suganya- "On the Negative Pellian Equation $y^2 = 110x^2 - 29$ ",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

An attempt has been made to determine four non-zero distinct integers x, y, z and w such that the difference of squares of any two integers equals the sum of the cubes of other two integers. A few relations among x, y, z and w are presented. A general formula for generating sequence of integer solutions based on the given solution is also presented.

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22. **Dr.G.Sumathi & V.Sunandha- "Integral Solution of Homogeneous Biquadratic Equation with Five unknowns $2(x^2 + y^2) = (z^2 - w^2)p^2$ "**, Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 11, Page No: 41-48, Dec 2017.

Abstract:

An attempt has been made to obtain pattern of non-zero distinct integral solutions to the homogeneous biquadratic equation with five unknowns represented by $2(x^2 + y^2) = (z^2 - w^2)p^2$ is analyzed and various interesting relations between the solutions and special numbers namely polygonal numbers , pyramidal numbers are exhibited .

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23. **Dr.S.Vidyalakshmi & S.Thenmozhi- "On the Ternary Quadratic Diophantine Equation $3(x^2 + y^2) - 5xy = 75z^2$ "**, Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The ternary quadratic equation given by $3(x^2 + y^2) - 5xy = 75z^2$ is considered and searched for its many different integer solutions. Four different choices of integer solutions to the above equation are presented. A few interesting relations between the solutions and special polygonal numbers are presented.

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24. **Dr.A.Kavitha & R.Umamaheswari- "Integer Solution of the Homogeneous Bio-Quadioctic Diophantine Equation with five unknowns $(x - y)(x^3 + y^3) = (z^2 - w^2)p^2$ ",** Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The homogeneous equation with five unknown $(x-y)(x^3+y^3)=(z^2-w^2)p^2$"is analyzed for its nonzero distinct integer solutions. Employing the transformation and applying the method of factorization, different patterns of nonzero distinct integer solutions to the above bi-quadratic equation are obtained. A few interesting relations between the solutions and special number patterns namely polygonal and pyramidal numbers are presented.

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25. **Ms.D.Maheswari & A.Victoria Maharani- "On the non-Homogeneous cubic equation with four unknowns $(x-y)^2=2z^3+w^2$"** , Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The non-homogeneous cubic equation with four unknowns given by $(x-y)^2=2z^3+w^2$ is analyzed for its distinct integer solutions. Three different patterns of integer solutions to the above equation are obtained. A few interesting relations between the solutions and special polygonal numbers are also obtained.

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26. **Dr.S.Vidyalakshmi & S.Yogeshwari- "On the Homogeneous Ternary Quadratic Equation $11x^2-2y^2=9z^2$"** , Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

An attempt has been made to obtain all integer solutions of the homogeneous ternary quadratic Diophantine equation given by $11x^2-2y^2=9z^2$. Different choices of integer solution to the above equation are obtained. A few interesting relations between the solutions and special polygonal numbers are presented.

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27. **Dr.T.R.Usha Rani & K.Dhivya- "On the Non Homogeneous Quadratic Equation with Five Unknowns $x^2+xy^2-y^2-(z+w)=10p^2$"** , Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 41-48, Dec 2017.

Abstract:

The non-homogeneous quadratic equation with five unknowns represented by the Diophantine equation $x^2+xy^2-y^2-(z+w)=10p^2$ is analysed for its non-zero

distinct integral solutions. Various interesting relations between the solutions and special numbers are exhibited.

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28. **Dr.S.Vidhyalakshmi, Dr,M.A.Gopalan et al**.-"**On Homogeneous Cubic Equation with Four Unknowns $x^3 + y^3 + (x + y)(x - y)^2 = 16zw^2$",** Asian Journal of Mathematical Sciences, www.ajms.in, Peer reviewed, ISSN: 2581-3463, Vol 2, Issue 1, Page No: 19-23, Jan 2018.

Abstract:

The cubic Diophantine equation with four unknowns given by $x^3 + y^3 + (x + y)(x - y)^2 = 16z$ is analyzed for its non-zero distinct integer points on it. Different patterns of integer points for the equation under consideration are obtained. A few interesting relations between the solutions are special number patterns namely polygonal number, Gnomonic number, star number and pronic number are presented.

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29. **Dr.A.Kavitha & K.Janani**-"On the Negative Pell Equation $y^2 = 7x^2 - 14$", International Journal of Emerging Technologies in Engineering Research, www.ijeter.everscience.org, Peer reviewed, IF: 4.225, ISSN: 2454-6410, Vol 6, Issue 3, Page No: 31-35, March 2018.

Abstract:

The binary quadratic Diophantine equation represented by the negative pellian $y^2 = 7x^2 - 14$ 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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30. **Ms.S.Mallika & M.Anitha – "On Negarive Pellian Equation $y^2 = 27x^2 - 8$"**, International Journal on Research Innovations in Engineering Science and Technology, www.ijriest.com, Peer reviewed, ISSN: 2455-8540, Vol 3, Issue 4, Page No: 583-590, April 2018.

Abstract:

The binary quadratic equation represented by negative pellian $y^2 = 27x^2 - 8$ 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, parabolas and pyhthagorean triangle.

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31. **Ms.S.Mallika & D.Hema**-"Observations on the Hyperbola $8x^2 - 3y^2 = 20$", International Journal on Research Innovations in Engineering Science and Technology, www.ijriest.com, Peer reviewed, ISSN: 2455-8540, Vol 3, Issue 4, Page No: 575-582, April 2018.

Abstract:

Non-homogeneous binary quadratic equation representing hyperbola given by $8x^2 - 3y^2 = 20$", is analyzed for its non-zero distinct integer solutions. A few interesting relation 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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32. **Dr.S.Vidhyalakshmi, Dr.M.A.Gopalan & S.Thenmozhi**-"On the ternary quadratic Diophantine equation $6(X^2 + Y^2) - 11XY + 2(X + Y) + 27Z^2$, International Journal of Academic Research and Development, www.academicsjournal.com, Peer reviewed, Google Scholar, ICI, ISSN: 2455-4197, Vol 3, Issue 3, Page No: 130-135, May 2018.

Abstract:

The ternary quadratic equation given by $6(X^2 + Y^2) - 11XY + 2(X + Y) + 27Z^2$ is considered and searched for its many different integer solutions. Four different choices of integer solutions to the above equation are presented. A few interesting relations between the solutions and special polygonal numbers are presented.

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33. **Ms.D.Maheswari & R.Suganya**-"Observations on the Pell Equation $y^2 = 11x^2 + 5$, International Journal of Emerging Technologies in Engineering Research, www.ijeter.everscience.org, Peer reviewed, Google Scholar, , IF: 4.225, ISSN: 2454-6410Vol 6, Issue 5, Page No: 45-50, May 2018.

Abstract:

The binary quadratic equation $y^2 = 11x^2 + 5$ is considered and a few interesting properties among the solutions are presented. Employing the integral solutions of the equation under consideration, a special Pythagorean triangle is obtained.

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34. **Ms.D.Maheswari & S.Dharuna**-"Observations on the Hyperbola $2x^2 - 5y^2 = 27$", International Journal of Emerging Technologies in Engineering Research, www.ijeter.everscience.org, Peer reviewed, Google Scholar, IF: 4.225, ISSN: 2454-6410, Google Scholar, Vol 6, Issue 5, Page No: 7-12, May 2018.

Abstract:

The hyperbola represented by the binary quadratic equation $2x^2 - 5y^2 = 27$ is analyzed for finding its non-qero 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. Also, employing the solutions of the given equation, special Pythagorean triangle is constructed.

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35. **Dr.T.R.Usharani & K.Dhivya**-"On the positive Pell Equation $y^2 = 14x^2 + 18$", International Journal of Academic Research and Development, www.academicsjournal.com, Peer reviewed, Google Scholar, ICI, IF: 5.22, ISSN: 2455-4197, Vol 3, Issue 3, Page No: 43-50, May 2018.

Abstract:

Non-homogeneous binary quadratic equation representing hyperbola given by $y^2 = 14x^2 + 18$", is analyzed for its non-zero distinct integer solutions. A few interesting relation 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. Aslo, employing the solutions of the given equation, special Pythagorean triangle is constructed.

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36. **Dr.T.R.Usharani & K.Dhivya**-"Observations on the Hyperbola $7x^2 - 5y^2 = 28$", International Journal of Emerging Technolgies in Engineering Research, www.ijeter.everscience.org, Peer reviewed, Google Scholar, IF: 4.225, ISSN: 2454-6410, Vol 6, Issue 5, Page No: 1-6, May 2018.

Abstract:

The hyperbola represented by the binary quadratic equation $7x^2 - 5y^2 = 28$ is analyzed for finding 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 hyperbolas and parabolas are presented. Also, employing the solutions of the given equation, special Pythagorean triangle is constructed.

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37. **Ms.S.Mallika & D.Hema**-"On negative Pell equation $y^2 = 20x^2 - 11$", International Journal of Academic Research and Development, www.academicsjournal.com, Peer reviewed, Google Scholar, ICI, IF: 5.22, ISSN: 2455-4197, Vol 3, Issue 3, Page No: 33-40, May 2018.

Abstract:

The binary quadratic equation represented by negative Pellian $y^2 = 20x^2 - 11$", 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 hyperbolas, parabolas and Pythagorean triangle.

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38. **Dr.S.Vidhyalakshmi, Dr,M.A.Gopalan & S.Arthy Thangam**-**"**Generation formula for solutions to special ternary quadratic Diophantine equations representing cones**",** International Journal of Applied Research, www.allresearchjournal.com, Peer reviewed, Google Scholar, IF: 5.2, ISSN(P): 2394-7500, ISSN(O): 2394-5869, Vol 1, Issue 6, Page No: 228-238, May 2018.

Abstract:

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

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39. **Dr.A.Kavitha & R.Umamaheswari**-"On Ternary Quadratic Diophantine Equation $x^2 + y^2 = 17z^2$", International Journal of Emerging Technologies in Engineering Research, www.ijeter.everscience.org, Peer reviewed, ISSN: 2454-6410, IF: 4.225, Vol 6, Issue 5, Page No: 68-73, May 2018.

Abstract:

The quadratic diophantine equation with three unknowns represented by 2 2 2 17z= y +x is analyzed for finding its non-zero distinct integral solutions. Different patterns of solutions of the equation under consideration are obtained. A few interesting properties among the solutions are presented.

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40. **Dr.S.Vidhyalakshmi, M.A.Gopalan & S. Aarthy Thangam** - "On triples where the sum of any two members of a triple is a perfect square" , Journal of Mathematics and Informatics, www.researchmathsci.org, Peer reviewed, Google Scholar, UGC, IF: 1.627, ISSN: 2349-0632(P), 2349-0640(O), Vol 10, Page No: 21-29, Dec 2017.

Abstract:
This paper deals with the construction of families of integer triples where, in each triple, the sum of any two members is a perfect square. A few numerical examples are also given.

Department of Microbiology

1. **Ms.V.Bharathi & Dr.S.Shanthi**- "Green Synthesis of Silver Nanoparticles from Flower Extract of Nerium Oleander and it's Characterization", World Journal of Pharmaceutical Research, www.wjpr.net, Peer reviewed, Scopus, ICI, Google Scholar, UGC Approved, IF: 7.523, ISSN: 2277-7105, Vol 6, Issue 6, Page No: 1410-1417, June 2017.

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 with the synthesis and characterization of silver nanoparticles using Nerium oleander flower. 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. **Ms.V.Bharathi & Dr.S.Shanthi**- "Synthesis of Silver Nanoparticles from Flower Extract of Abutilon Indicum and it's Characterization", World Journal of Pharmaceutical Research, www.wjpr.net, Peer reviewed, Scopus, ICI, Google Scholar, UGC Approved, IF: 7.523, ISSN: 2277-7105, Vol 6, Issue 6, Page No: 1752-1756, June 2017.

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 with the synthesis and characterization of silver nanoparticles using Abutilon indicum flower. The synthesized nanoparticles were characterized by using UV-Vis absorption spectroscopy and FT-IR 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.

3. **Dr. S. Bhuvaneswari, and Ms. G. Subashini,** -"Green Synthesis of Zincoxide Nanoparticle using Potato peel & degradation of Textile mill effluent by Photocatalytic activity", World Journal of Pharmaceutical Science, www.wjpr.net, Peer reviewed, Scopus, ICI, Google Scholar, UGC, IF: 8.074, ISSN: 2277-7105, Vol 6, Issue 6, Page No: 774-785, June 2017.

Abstract:

Textile industry is one of the oldest industries in India with over 1000 industry. A facile green recipe was developed to synthesize highly pure, safe and durable zinc oxide nanoparticles (ZnONps) using domestic waste-starch rich potato peel. The ZnONps were synthesized using zinc oxide powders and potato peel. The particle size and morphology of the synthesized nanoparticles is characterized by using UV VIS spectrophotometer, FTIR and SEM analysis. The effluents were treated with ZnONps and the photocatalytic degradation capability of the dyes significantly enhanced the great potential for wastewater treatment system.

4. **Dr.K.Anandhi**- "Biological Extraction of Chitin and Chitosan from Marine Fungi, it's Characterization, Antimicrobial Activity, Antitextile Activity against MDR Pathogens and Anticancer Activity", World Journal of Pharmaceutical Research, www.wjpr.net, Peer reviewed, Scopus, ICI, Google Scholar, IF: 7.523, ISSN: 2277-7105, Vol 6, Issue 15, Page No: 844-863, Nov 2017.

Abstract:

Chitin, the insoluble linear ß 1, 4-linked homopolymer of N-acetyl Dglucosamine (GlcNAc) is the second most abundant natural polysaccharide (after cellulose). Chitosan is a cationic amino polysaccharide, essentially composed of ß-1,4 D-glucosamine (GlcNAc) linked to N-acetyl D-glucosamine residues, derived from de-N-acetylation of chitin. These polysaccharides are found in a wide range of natural sources such as crustaceans, insects, annelids, molluscans, coelenterates and it's a common constituent of fungal cell wall. In the present study chitin/chitosan was extracted from Aspergillus spp. and Trichoderma spp. isolated from Pitchavaram a mangrove forest soil. The chitin and chitosan was extracted using 2% w/v sodium hydroxide solution for 2 hours, followed by acetic acid treatment. Crude chitin/chitosan was collected (yield was 500mg of mycelium) 0.1g of chitin/chitosan was obtained. Silver and Gold nanoparticles were synthesized by using 1mm Ag No3 & 1mm Au Cl4 respectively. The Bionanocomposites were characterized using UV-visible, FT-IR and SEM (Scanning Electron Microscopy) study. Antibacterial study

was also conducted against Multi Drug Resistant pathogens. Further antitextile and anticancerous activities were carried out.

5. **Dr.K.Anandhi**- "Isolation and Characterization of some Antibiotic Resistant Bacteria from Hospital Drainage Sample", World Journal of Pharmaceutical Research, www.wjpr.net, Peer reviewed, Scopus, ICI, Google Scholar, IF: 7.523, ISSN: 2277-7105, Vol 6, Issue 15, Page No: 876-886, Nov 2017.

Abstract:

Hospital waste possesses a significant impact on health and environment. In this present study hospital waste dumped soil sample was collected from private hospital at Tiruchirappalli Dt. And analysis the bacterial population in the soil. Again the soil samples were enriched onto nutrient broth medium incorporated with an antibiotic Streptomycin (200mg/100ml) for the screenging of antibiotic resistant bacteria present in the soil. Colonies developed on the plates were identified using standard manual. Based on the morphological and biochemical characters, six bacterial species were isolated and identified namely Escherichia coli, Enterobacter aerogenes, Pseudomonal aeruginosa and Staphylococcus aureus. All the four isolates were again screened for their susceptibility against ten different antibiotics. Among the isolates tested, Escherichia coli and Staphylococcus aureus showed maximum resistance against most of the antibiotics followed by Enterobacter aerogenes. Andrographis paniculata, Leucas aspera and Ruellia tuberose plant leaves were collected and phytochemical compounds were analysed in the plant extract. Among the study maximum compounds were present in acetone and methanol extracts. In this study Andrographis paniculata plant leaves maximum antibacterial activity was recorded against isolated all antibiotic resistant bacteria. From this study, it can be said that there is an urgent need to raise awareness and education on medical waste issues. Proper waste management strategy is needed to ensure health and environmental safety.

6. **Dr.K.Anandhi**- "Antibacterial (Wound Infecting Bacteria) and Anticancer Activity of different types of Honey and it's Compound Characterization", World Journal of Pharmaceutical Research, www.wjpr.net, Peer reviewed, Scopus, ICI, Google Scholar, IF: 7.523, ISSN: 2277-7105, Vol 6, Issue 15, Page No: 864-875, Nov 2017.

Abstract:

Honey is the natural sweet substance from nectar or blossom or from the secretion of the living parts or excretion of plants which the honeybees collect and store. It was widely used in traditional medicine but it use in modern medicine is limited because

of the lack of scientific support. Among its several uses, honey is used for the treatment of many infections and also used effectively as wound dressing including surgical wounds, burns and skin ulcer. In this study four different honey samples were collected and investigated for its antimicrobial activity using disc diffusion and well diffusion methods and anticancer activity against HeLa Cell Line.

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7. **Ms.V.Bharathi, Dr.S.Shanthi et al. –**"Green Synthesis of Achyranthes Aspera silver Nano Particles and Confirmation of them through Microscopy and Spectrophotometric Techniques", European Journal of biomedical and Pharmaceutical Science, www.ejbps.com, Peer reviewed, IF: 4.382, ISSN: 2349-8870, Vol 4, Issue 12, Page No: 348-351, Nov 2017.

   Abstract:

   Nanotechnology is the creation of functional materials, devices and systems through control of matter on the nanometer length scale (1-100 nanometers), and exploitation of novel phenomena and properties (physical, chemical, biological, mechanical, electrical...) at that length scale.â€ Achyranthes aspera commonly called as Prickly Chaff Flower, Chaff-flower, Crocus stuff, Crokars staff, and Devilâ€™s horsewhip. This plant is popularly supposed to act as a safeguard against scorpions and snakes by paralyzing them. It is described as purgative, pungent, and digestive, a remedy for phlegm, and inflammation of the internal organs, piles, itch, abdominal enlargements, and rheumatism and for enlarged cervical glands.

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8. **Dr.S. Vijayalakshmi**-"Isolation & Identification of Secondary metabolites producing Bacteria isolated from soil termites", Asian Journal of Science & Technology, www.journalajst.com, Peer reviewed, Google Scholar, UGC, IF: 6.315, ISSN: 0976-3376, Vol 8, Issue 12, Page No: 6949-6954, Dec 2017.

   Abstract:

   In the present investigation Bacillus sp. were isolated from subterranean termites gut. Bacillus sp. was identified based on the morphological and molecular characterization. 16SrRNA of Bacillus sp. sequenced and submitted to Gen Bank. Antibacterial activity of Bacillus sp. was screened. It inhibits the growth of S.typhi, E.coli and S.aureus. The bioactive compounds were analyzed by UV-Visible spectroscopy and thin layer chromatography. The highest peak was observed between 240 to 280 nm. In...

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9. **Dr.S.Vijayalakshmi, Dr. S. Bhuvaneswari, and Ms. G. Subashini et al.** –"Prevalence and antimicrobioal resistance pattern of diarrheagenic Escherichia coli isolated from actue diarrhea children", International Journal of Biology Research, www.biologyjournal.in, Peer reviewed, Google Scholar, ICI, IF: 5.22, ISSN: 2455-6548, Vol 3, Issue 1, Page No:306-311, Jan 2018.

Abstract:

Diarrhoea is one of the causes of the uppermost mortality and morbidity in children, predominantly in children younger than 5 years. In world, 6 million children die each year from diarrhoea, where the common deaths come about in developing countries. In the present study Prevalance and Antimicrobial resistance Pattern of Diarrheagenic Escherichia coli Isolated From Acute Diarrhea Children were studied. A total of 27 under-five years old children who included in this study the minimum age of cases was less than 12 months and the maximum age was 60 months. Among 27 isolates, all were resistant to amphicillin/claxacillin, cefdinir, cefixime, ceftazidime, cefuroxime, cephalexin and co-trimoxazole. The MDR isolate AS-13 was selected for further investigations and characterization. Most of the E. coli isolates showed multiple drug resistance and measures such as observation of appropriate personal hygiene by children, mother's behavior and environmental condition, use of effective disinfectants in reducing the potential pathogenic organisms in house and so forth. Prescribers should be well-known with local antibiotic sensitivity profiles and should conform to the local antibiotic guide-lines. A hospital antibiotic policy should be formulated based on local antimicrobial resistance data. Prescribers should be educated about the use of antibiotics, when not to use them and also the infection control strategies.

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10. **Dr.S.Shanthi, Ms.V.Bharathi et al. –"**Impact of farm-made liquid organic nutrients jevamirtham and fish amino acid on growth and nutritional status in different season of Abelmoschus esculentus-a self-sustainable field trial" Organic Agriculture, www.spinger.com, Google Scholar, Scopus, UGC, Web of Science, ISSN: 1879-4238, Feb 2018.

Abstract:

In organic agriculture, jeevamirtham (J) and fish amino acids (FAA) (Liquid organic nutrient bioformulations-LONBFs) were used to improve the plant growth and soil fertility. The effect of J and FAA in combination on the growth, nutritional status, and yield of plant has not been scientifically evaluated. In this study, liquid organic preparations of J and FAA were prepared and applied to okra plants individually and in combination (J+FAA). The experimental fields were designed as T1-

untreated control field, T2-chemical fertilizer treated field, T3-jeevamirtham-treated field, T4-fish amino acid-treated field, and T5-mixture of jeevamirtham and fish amino acid-treated field.

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11. **Ms.V.Bharathi, Ms.P.Anitha and Dr.S.Shanthi et al.** – "Chemical Charaterisation of GCMS Analysis of Tabernaemontana Divaricata", European Journal of Biomedical and Pharmaceutical Sciences, www.ejbps.com, Peer reviewed, Google scholar, ICI, UGC, IF: 4.918, ISSN: 2349-8870, Vol 5, Issue 4, Page No: 451-454, March 2018.

Abstract:

Medicinal plants have been used as an exemplary source for centuries as an alternative remedy for treating human disearses because they contain numerous active constituents of therapeutic value. The present study was carried out to identify the phytochemical components of the Tabernaemontana divaricata using ethanol, chloroform and water extract. The phytochemical screening showed the presence of alkaloids, tannins, steroids, flavonoids, saponins, tannins and phenolics. In GC MS, the mass spectrum of the unknown component was compared and interpreted with the spectrum of the known compeonents stored in the National Institute Standard and Technology (NIST) library. The presence of various bioactive compounds justifies the use of the plant for various ailments by traditional practitioners.

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12. **Dr.K.Anandhi**- "Restriction Fragment Length Polymorphism Analysis of Rhizobium SP. Isolated from Dolichous Lablab", World Journal of Pharmaceutical Research, www.wjpr.net, Peer reviewed, Scopus, ICI, Google Scholar, IF: 8.074, ISSN: 2277-7105, Vol 7, Issue 8, Page No: 486-492, April 2018.

Abstract:

RFLP analysis is a technique used to identify patterns that occur in DNA. No two organisms have identical DNA, so this procedure can be used to identify if a sample of DNA came from a particular individual. Dolichous lablab is known for its dietary protein source, medicinal properties and symbiotic nitrogen fixation by Rhizobium present in its root nodules. Rhizobium sp. Was identified by biochemical methods from root nodules of Dolichous lablab.

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13. **Dr.S.Shanthi, Ms.V.Bharathi et al.** –"Effect of Macrotyloma uniflorum on antiobesity in rats fed with a high fat diet", Saudi Journal of Biological Sciences, www.sciencedirect.com, Peer reviewed, Scopus, UGC, Pubmed, Web of Science, ISSN: 1319-562X, 2018.

Abstract:

Obesity is a universal health burden develops from an inequity between food consumption and energy disbursement which causes excessive deposition of fat in adipose tissue, liver tissue, muscle, pancreatic islets and other organs involved in metabolism results in dyslipidaemia, glucose intolerance, coronary heart disease, diabetes, hypertension, non-alcoholic, fatty liver disease and cancer. Globally, 600 million people are obese and 19 billion adults are overweight. Fat absorption process is mediated by pancreatic lipase and militarization of fat stored in adipose tissues is mediated by triglyceride lipase.

Department of Management Studies

1. **Dr.K.G.Prasannasivagami & S.Aishwarya**- "Consumer Perception and Attitude towards the Usage of M-Health Applications", Research Journal of Pharmacy and Technology, www.rjptonline.org, Peer reviewed, Scopus, ICI, Google Scholar, ISSN: 0974-360X, Vol 10, Issue 8, Page No: 2567-2572, Aug 2017.

Abstract:

This study focuses on determining the perception and attitudes of the consumers towards the usage of mHealth apps with the various attributes like simplicity, trustworthy, accuracy, factors considered while downloading mHealth applications and which factors resist the user from downloading such apps are also examined. In addition, the study tries to identify their familiarity with mHealth and their willingness to use their mobile devices in health -related functions. The duration of this study was between the months of February-march of 2017. For this study, the data was collected from various respondents using a well-structured questionnaire. Those who were using mHealth application in various cities across Tamilnadu were included for this study. Judgment sampling method is adopted and 40 respondents were included for this study. The collected data was analyzed by using frequency analysis, factor analysis, chi square analysis and Regression analysis with the help of SPSS package. The result revealed that the consumer perception has a positive impact on the attributes that build confidence in using mHealth applications. It has been found that the factors like relevance, rating and popularity plays a very important role in influencing the consumer to download the mHealth applications. The study found that there is an association between the skincare app category and gender i.e. more skincare apps are downloaded by the female respondents and also it found that other remaining categories of mHealth applications don't have any association with the gender. Risk of privacy and inaccurate information, app dependency, are some of the factors which cause fear in the respondents' mind and it resist them from downloading such apps.

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2. **Dr.J.Francis Mary & C.Abarna** –"A Study on Employee Perception towards career Stability in GIG Economy with Reference to Rustomjee Academy for Global Careers, Ahemadabad", Journal of Management and Science, www.journalonline.org, Peer reviewed, UGC, Google Scholar, ISSN: 2249-1260, E-ISSN: 2250-1819, Issue 3, Page No: 130-135, Feb 2018.

Abstract:
Gig economy is a labour market where freelancers are highly privileged, instead of permanent workers. Knowledge is global now. With the help of digital platforms companies can head hunt the freelancers with niche talent in advanced technologies for short-term works. India is guesstimated to have around 1.5 freelancers and they impart 40% of freelancing business requirements in world wide. Engaging gig workers tapers the lavish money spent on training, office space, paid vacations, sick leaves, PF, health insurance, retirement schemes, bonuses, stock options, recreational activities, travel allowances and other welfare amenities. Gig workers can be pleased by flexibility, work-life balance; but they experience hardship towards career instability due to income fluctuations, job insecurity, zero benefits. It impacts their career decisions. This study focuses on career stability in gig economy in the light of Indian employees.

3. **Dr.J.Francis Mary & C.Abarna**-"A Study on Footprints of Self-Efficacy on Organizational Effectiveness with Reference to Higher Educational Institutions in Thuraiyur Taluk", Journal of Emerging Technologies and Innovative Research, www.jetir.org, Peer reviewed, UGC, Google Scholar, IF: 5.87, ISSN: 2349-5162, Vol 5, Issue 3, Page No: 362-365, March 2018.

Abstract:
Self –efficacy is having faith in one's own potential to organize and implement the modus operandi to manage prospective situations. It has merited flourishing temptation in psychology as well as management research and invested its potential to appetite prominent outcomes in many institutions. There is limited assimilation in individual and contextual factors that promote self-efficacy behaviors of employees. This quantitative research examines the degree of self-efficacy and sources and indicators of them among the teaching faculties. It ascertains the effects of self-efficacy on organizational effectiveness as well. The samples are selected by simple random sampling method. The respondents. are 150 teaching faculty members of higher educational institutions in Thuraiyur.

4. **Dr.J.Francis Mary & C.Abarna** –"A Study on Employee Perception towards prospects and challenges in GIG economy with reference to Iglowsoft IT Innovations, Chennai", KV Journal of Management, ISSN: 2395-2156, Vol 4, Issue 1, Page No: 3-12, April 2018.

Abstract:

GIG economy has merited growing interest in management research, given its potential to amend the employment opportunities in the digital world. Gig economy is an open talent labour market where companies head hunt the freelancers instead of perpetual labours, for short-term projects. Through digital platform, freelancers who have niche talent in advanced technologies can gain perishable job opportunities from companies across the globe. One-fourth of the freelancers in the world are Indians and they contribute 40% of the global freelancing requirements. In software domain, India contributes 50% of global freelancing obligations(Goutam Das, 2018). Gig workers can be gratified by flexibility, work-life balance. Due to shain contract, they are ineligible to acquire insurance, bonus, Provident Fund(PF), superannuation schemes, training, travel allowances, recreational activities, paid vacations and other welfare amenities. Income fluctuations, job insecurity and gender discriminations are the prominent barriers for entering the world of freelancers. This study focuses on the prospects and challenges in gig economy in the light of Indian employees.

Department of Physics

1. **Ms.M.Padmavathy** –"Use of Vibrational Spectroscopy to Study 1,3-dimethyl-5-Nitrobenzene:A combined theoretical and Experimental Approach", International Journal of Pure & Applied Physics, www.ripublication.com, Peer reviewed, Google Scholar, ICI, ISSN(P): 0973-1776, Vol 56, Issue 4, Page No: 1-12, Nov 2017.

Abstract:

The FTIR and FT-Raman spectra of 1,3-dimethyl-5-nitrobenzene (DMNB) have been recorded in the range 4000-400 cm**-1,** respectively. The molecular structures, fundamental vibrational frequencies and intensity of the vibrational bands have been investigated and interpreted theoretically with the use of structural optimizations and normal coordinate force field calculations based on density functional theory (DFT) with 6-31G(d,p) basis set. The vibrational assignments have been made from potential energy distribution (PED). The theoretically simulated vibrational spectra of the molecule show excellent agreement with the experimental spectra. The hyper conjugative interaction energy (E(2)) and electron densities of donor (i) and acceptor (j) bonds have been calculated using NBO analysis.

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2. **Ms.M.Padmavathy** –"Structure, Characterization and DFT studies of 1,2-Dichloro-4-fluoro-5-Nitrobenzene", International Journal of Scientific Research in Science, Engineering and Technology, www.ijsrset.com, Peer reviewed, Google Scholar, IF: 5, ISSN(P): 2395-1990, ISSN(Online): 2394-4099, Issue 4, Page No: 190-199, March 2018.

Abstract:

The 1,2-Dichloro-4-fluoro-5-Nitrobenzene (DFNB) subjected to density functional theory (DFT) studies using B3LYP/6-31+G(d,p) method. Characterization was done by FT-IR, FT-Raman and NMR (13C and 1H) spectroscopic techniques. Molecular electrostatic potential (MEP) study was also determined.

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3. **Ms.K.Sujatha et al.-"**A Study of Thermodynamical and Electrochemical Properties of Peptides in Non Aqueous Medium", International Journal of Pure and Applied Mathematics, www.ijpam.eu, Scopus, ISSN: 1314-3395, Vol 119, Issue 12, Page No: 2003-2011, May 2018.

Abstract:

Ultrasonic study of solutions provides valuable information regarding the solutesolvent interactions, nature and strength of interactions. Probing biomolecules

by ultrasonic technique is a powerful tool for characterizing their physico-chemical properties. Peptides have been used in the study of protein structure and function. Internal pressure is closely related to solubility parameters which determine the way in which the interaction occurs in the system and also it can be measured experimentally. Free volume dependent properties have close connection with the molecular structure which may account for interesting features about interactions in the solutions. Suryanarayana and Kuppusamy have formulated quantitative relationship between the internal pressure, free volume and equivalent conductance. The solutions of different molalities were prepared in formamide and experimental studies were made from a very low concentration to a high concentration and at different temperatures. In the present work, the results are analyzed on the basis of ultrasonic methods to interpret the structural changes taking place in the solution.

Department of Social work

1. **Dr.K.Kavitha Maheswari et al.**- "Spiritual Well Being among Adolescents", International journal of applied research, www.allresearchjournal.com, peer reviewed, Google Scholar, IF: 5.2, ISSN(P): 2394-7500, ISSN(O): 2394-5869, Vol 3, Issue 7, Page No:572-575 August 2017.

Abstract:

Spirituality and faith provide an opportunity to detach from circumstances and observe life with clarity and integrity. This study is conducted to assess the level of spiritual well-being among adolescents. Descriptive research has been adopted for this project. The study was conducted among 11th std students of both urban and rural backgrounds. The researcher selected two schools from both urban and rural areas respectively in Tiruchirappalli. There were 224 students in both the schools formed the universe. Among the students of the above schools, 100 respondents were selected by using stratified disproportionate random sampling technique. 50 students from each school were selected to form the sample. The researcher used standard questionnaire on Spiritual well-beingby Hall, T.W & Edwards, K.J.(1996) along with a self-prepared questionnaire covering socio demographic profile of the sample. The findings of the study revealed that majority of the respondents perceived low level of self-efficacy and a little more than half of the respondents have low life scheme and (63.0%) of the respondents perceived low level spiritual well-being.

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2. **Dr.K.Kavitha Maheswari & S.Prabha**- "Causes of Truancy with Special Reference to School Factors", International journal of applied research, www.allresearchjournal.com, peer reviewed, Google Scholar, IF: 5.2, ISSN(P): 2394-7500, ISSN(O): 2394-5869, Vol 3, Issue 11, Page No:236-238, Oct 2017.

Abstract:

Truancy is any intentional, unjustified, unauthorized, or illegal absence from compulsory education. It is absence caused by own free will of the students, and usually does not refer to proper excused absences. This study attempts to describe the socio-demographic variables and the influence of school variables on truancy. This study was conducted in a government higher secondary school, Karur District. The truant children from sixth standard to twelfth standard constituted the universe of this study. They were identified with the help of the head master and the school teachers. Census method was adopted and complete enumeration of all the 70

students were the sample of this study. The researcher used structured interview schedule as tool to collect the required data from the respondents. The detailed findings of this study is discussed in the full paper.

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3. **Dr.K.Kavitha Maheswari & S.Prabha**- "Study on truant children", International journal of applied research, www.allresearchjournal.com, peer reviewed, Google Scholar, IF: 5.2, ISSN(P): 2394-7500, ISSN(O): 2394-5869, Vol 3, Issue 11, Page No:239-241, Oct 2017.

Abstract:

Truancy is commonly considered as any unexcused or unverified absence from school. Causes of truancy may include lack of guidance or parental monitoring and supervision, drug or alcohol and other substance abuse, lack of awareness of attendance policies and regulations and having poor attitude towards education. The study on truant children focuses on their attitude towards school and their behavioral problems. The design of the study is descriptive in nature. It attempts to describe the socio-demographic variables, their attitude towards school infrastructure, teacher student relationship, parent child relationship, peer group influence and their behavioral problems. The study was conducted in a government higher secondary school, Karur District. The truant children from sixth standard to twelfth standard constituted the universe of this study. They were identified with the help of the head master and the school teachers. They were 70 students who are found as having truant behavior are the universe of this study and census method was adopted for sampling. The researcher used self prepared structured interview schedule as tool to collect the required data from the respondents. The major findings of the study are discussed in the full paper.

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4. **Dr.K.Kavitha Maheswari & A.Sajitha**– "Impact and Problems Associated with whats-App use among college girls students", Shanlax International Journal of Arts, Science and Humanities, www.shanlaxjournals.in, peer reviewed, Google Scholar, UGC, IF: 2.114, ISSN: 2321-788X, Vol 5, Issue 4, Page No: 11-15, March 2018.

Abstract:

The study on impact and problems associated with whats-app use among college students is a descriptive study focused on the problems arises in time management or time usage, problems in work completion of daily and self-tasks, sensitive issue related problems, affecting academic involvement and performance, problems in family, possibility of moral corruption, problems in friends circle, merits and

disadvantages. It was conducted at government hostel, trichy where in 154 girl students are residing constitute the universe, among them 50 respondents were selected by simple random sampling. The data were collected by using a self-prepared questionnaire. The study has revealed that despite being an essential medium of communication, it has an adverse impact on the lifestyle of youth. They may receive misleading information and concentration is more on gossips which will negatively impact their life. Emphasis must be given to the useful side of this application. Youths are spending more time on whats-app rather than spending quality time with their family members. Hence quality time must be shared with family and friends circle. They should also try use whats app for constructive purposes.

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5. **Dr.K.Kavitha Maheswari & S.Prabha–** "Influence of Parenthood on Self Concept of Adolescents", Shanlax International Journal of Arts, Science and Humanities, www.shanlaxjournals.in, peer reviewed, Google Scholar, UGC, IF: 2.114, ISSN: 2321-788X, Vol 5, Issue 4, Page No: 83-88, March 2018.

Abstract:

The self-concept is more or less a collection of beliefs about nature, qualities and behavior. It's all about thinking and evaluating of oneself at any given moment in time. It is a perception of individual uniqueness. This study is basically descriptive which portrays the socio-demographic characteristics of the respondents along with their self concept and the influence of parenthood on self concept of the respondents. This study was conducted with 40 respondents who are having both the parents alive and 40 of them who are having only one parent either father or mother were selected as sample by using purposive convenient sampling method. The researcher collected the data by using a self prepared questionnaire along with a standardized tool on self concept. The findings of the study supports that there is no significant influence of parenthood on the self concept of the respondents.

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6. **Dr.K.Kavitha Maheswari & V.Dhanalakshmi–** "Work Life Balance among Women", Shanlax International Journal of Arts, Science and Humanities, www.shanlaxjournals.in, peer reviewed, Google Scholar, UGC, IF: 2.114, ISSN: 2321-788X, Vol 5, Issue 4, Page No: 135-139, March 2018.

Abstract:

Women constitute half of the world population. They shoulder lot of responsibility both in family and work environment. They effectively deal it but unfortunately

they find it difficult to shoulder multiples roles and responsibilities. The aim of the study is to study of work life balance among women working in Atlas export enterprises Karur. The researcher used descriptive research design for this study and she portrayed the socio demographic variables of the selected population with special reference to their work life balance and how the socio demographic variable influence on work life balance of the respondents. The researcher used stratified disproportionate random sampling for selecting 60respondents from the universe of 700women workers of a karur based private export enterprises. The researcher found 3units namely checking, packing, sewing units in the industry hence the researcher decided to select 20 respondents from each unit which is disproportionate to the universe together 60 respondents formed the sample of this study. The research used to a self-prepared questionnaire to find out the demographic details of the respondents along with a standardized tool on work life balance scale development by Fisher. The detailed findings of the study are discussed in the full paper.

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7. **Dr.K.Kavitha Maheswari & E.Rajeswari-** "Mental Health among early married women", International journal of applied research, www.allresearchjournal.com, peer reviewed, Google Scholar, IF: 5.2, ISSN(P): 2394-7500, ISSN(O): 2394-5869, Vol 4, Issue 4, Page No: 249-251, Oct 2017.

Abstract:

The aim of this study is to assess the mental heal status among married adolescent girls. Through this study the research made an attempt to know the descriptive information on mental health status among adolescent girls, hence descriptive research design was adopted for this study. The universe of the present study are the adolescent girls those who were married before the age of 18 years in the Kurumbalur village, Perambalur district. The researcher used convenient sampling method to select 40 respondents from the universe. It is revealed from the study that majority of the respondents have medium level of overall mental health, more than one third of the respondents have low level of overall mental health and remaining 2.5% of the respondents have high level of mental health. So it is concluded that very low percent of the respondents have high level of mental health and the remaining have comparatively low mental health status.
