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Engineering, Humanities & Management”**

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The readers and beneficiaries vary from academicians, professional engineers and scientists, to undergraduate and graduate students from all over the country.





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**IC-RITSEHM/RFI-2024/151**

**THROUGHPUT COMPARISON FOR IMPROVING DATA OPTIMIZATION USING  
ARTIFICIAL BEE COLONY (ABC) ALGORITHM WITH DYNAMIC TECHNIQUE**

**Dr. Mirza Samiulla Beg**

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**Abstract** - In the acquisition model of bees, where clustering is a suitable strategy to give a better path that doesn't cause any difficulties when transferring data, the artificial bee colony algorithm may be an efficient optimisation method. Additionally, clusters have a great deal of similarities among themselves but less among one another. The typical optimisation strategy is ineffective for handling huge dimensional data. In order to create a preliminary population of paths linking the source and destination nodes, this study proposes Throughput Comparison utilising Artificial Bee Colony (ABC) Algorithm with Dynamic Technique for Improving Data Optimisation Technique. Therefore, to choose a food source The ABC algorithm's artificial bee condition consists of worker bees connected to specific food sources, spectator bees observing worker bees' movements inside the hive to choose a food source, and scout bees searching for food sources at random. The throughput demonstrated in this study is superior to that of FANET-GSO, IGSO, UCRA-GSO, and ACI-GSO Techniques.

**Keyword:** Artificial bee colony algorithm, dynamic technique, data optimization, wireless sensor network, throughput, better route.

**IC-RITSEHM/RFI-2024/153**

**STUDY ON SYNTHESIS, CHARACTERIZATIONS, AND APPLICATIONS OF  
CARBON QUANTUM DOTS**

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Supervisor - **Prof. (Dr.) Pramendra Ranjan Singh**

**Introduction** - Nanostructured materials have attracted significant attention due to their ability to connect the realms of bulk materials and molecular structures, opening exciting possibilities for novel applications, particularly in the fields of electronics, optoelectronics, and biology<sup>1-6</sup>. When a solid demonstrates noticeable changes in its optical and electronic characteristics as the particle size decreases to less than 100 nm, it is referred to as a nanostructure. On the basis of dimensionality, nanostructures can be classified into three categories: (a) two-dimensional (2D) structures, where motion of electrons gets spatially confined to any one of the crystallographic direction, such as thin films or quantum wells, (b) one-dimensional (1D) structures, where

motion of electron gets spatially confined to any two of the crystallographic directions, such as quantum wires, and (c) zero-dimensional (0D) structures known as Quantum dots, where motion of electron gets spatially confined to all the three crystallographic directions<sup>7-9</sup>. Over the past twenty years, there has been significant interest in studying the optoelectronic characteristics of nanostructured semiconductors or quantum dots (QDs) due to the size-dependent nature of various fundamental properties, within the nanometre scale.

**IC-RITSEHM/RFI-2024/155**

**UTILIZATION OF QUEUEING THEORY IN MEDICAL MANAGEMENT OR PROTECTION**

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**Pro.(Dr.) Md Mushtaque Khan**

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We know that Queueing theory was developed and analyzed by A.K Erlang in 1909-1917 to help the capacity requirements of DTS (Danish Telephone System). In present time it has since been applied to a large range of services, industries including banks, airlines and TCC (Telephone call centre) as well as emergency system such as police patrol, fire, ambulances. It has been also applies to analysis of various medical or health management or protection setting.

In other hands we have already defined that Queueing theory is the mathematical study of waiting lines or queue. In hospital it is not unusual to find patients waits for beds, surgery, diagnostic tests are common. Health care managers also face a challenging task to organise their processes more effectively and efficiently. I.e pressure on health care managers rises as both the demand for health protection and expenditure are increasing steadily.

Here in this time Queueing theory is the mathematical approach to the analysis of waiting lines in any setting which arrival rate of subjects is faster than the system can handle.

In this paper we will reviews and contributions and utilizations of Queueing theory in the field of medical management problems. The main aim of this paper is to discuss the main trends in the utilizations or applications of Queueing theory models that are available to health protection decision makers. This model implies that patients queue to see the doctor but on the arrival of a very sick patient, the nurses will take the patient immediately to see the doctor, by-passing those on the queue. This may explain why some of the patients suggested that first come-first-serve (FCFS) should be observed at the hospital clinic. We will also discuss in this talk about the some important uses of Queueing analysis and simulation in health protection such as walk in patients

clinic, emergency room arrivals, phone calls from physician office to health management organization, out patients surgery, pharmacy inventory control etc.

It is applicable to health management or protections setting where the system have excess capacity to accommodate random variations.

**Keywords:** Queueing theory, health care, decision makers, diagnostic tests, effectively and efficiently, approach, reviews and contributions, management, applications etc.

**IC-RITSEHM/RFI-2024/157**

**A BRIEF STUDY OF CONNECTION BETWEEN GAME THEORY AND STATISTICS**

**Dr. Amrendra Sharma**

Assistant Professor, (G.T.) A. N. D. College Shahpur Patory, Samastipur (L.N.M.U.)

**Abstract** - This paper is related to game theory. Game theory is a branch of operation research Certain optimal strategies based upon game theory are given in this paper we have tried to connection between game theory and statistics for some optimal strategies alog with example. Certain optimal strategies based upon game theory are given in this paper. A decision- making function and a risk function are explained. Decision-making criteria are applied for determining best decision-making functions with respect to a specific criterion. Special attention is given to the minimax criterion.

**Keywords:** Saddle-point, minimax criterion, Bayesian criterion, loss function, risk function, decision-making function.

**IC-RITSEHM/RFI-2024/158**

**A COMPARATIVE STUDY OF EYSENK PERSONALITY AMONG BOYS AND GIRLS OF N.C.C CADETS IN MADHUBANI DISTRICT**

**Dr. Uday Kumar Sah**

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**Abstract** - This paper is an attempt to study the personality profiles of NCC cadets boys and girls in Madhubani District of Bihar, A total of 200 cadets respondents, comprising of 100 boys and 100 girls cadets were obtained through purposive sampling technique. To assess the personality of the respondents Eysenk personality Questionnaire (EPQ) test was administered on the selected 200 respondents. in order to study the mean differences between boys and girls with respect to various dimensions of personality, t-test was used and the obtained results are interpreted and discussed. The findings of the study reveal that there are certain personality profiles among the cadets boys and girls which

can be improved. In order to improve them the investigators provided some of the inferential suggestions at the end of the paper. The NCC provides exposure to the cadets in a wide range of activities, with a distinct emphasis on Social Services, Discipline and Adventure Training The NCC is open to all regular students of schools and colleges on a voluntary basis. The students have no liability for active military service. To Create a Human Resource of Organized, Trained and Motivated Youth, To Provide Leadership in all Walks of life and be Always Available for the Service of the Nation. Healthy personality is necessary for cadets an individual in the life and education. Gender, Psychotic, Extraversion, Neuroticism, and Lie trains persons for various life situations of the present and future. This logic implies that psychotic, extraversion and neuroticism are interlinked and complementary to each other. Therefore, it is imperative for educators to understand the trends in NCC cadets personality and the factors contributing to their good personality. The study conducted by the investigator was a sincere attempt to understand the problems of disabled personality faced by youth in areas-Gender, Psychotic, Extraversion, Neuroticism, and Lie Total sphere. Accordingly it would help in developing well personality among the NCC cadets.

**Keyword:** personality, extraversion, Neuroticism, discipline, motivation, cadets, Psychotic, nation, etc.

**IC-RITSEHM/RFI-2024/159**

### **RECENT ADVANCES IN ORTHODONTICS**

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**Dr. Sameer Madhukarrao<sup>5</sup>**, Prof. & HOD of orthodontics, Dr. RR Kamble Dental College, Akola

### **INTRODUCTION**

Like every other industry, orthodontics will be computerized in the future. Advanced three-dimensional (3D) techniques have replaced traditional two-dimensional (2D) approaches in diagnostic and treatment planning due to technological advancements and the in-corporation of digital solutions in private practice Pretreatment diagnosis, treatment planning, and post-orthodontic evaluation of dent skeletal connections and face aesthetics are among the orthodontic applications of 3D imaging. The benefits of employing 3D models in orthodontics also include research, medico legal objectives, and three-dimensionally produced bespoke arch wires.

**IC-RITSEHM/RFI-2024/160**

**MARKETING AND MANAGEMENT IN DENTISTRY**

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**Dr. Mrs. Jiwansha Agrawal**, (Prof. and H.O.D Bharati Vidyapeeth Dental College Sangli)

**Abstract** - Online marketing these days has sought the attention of everyone in healthcare. Internet marketing has opened the portal for dental practices to reach their target audience and thereby showcase their services in an impressive manner. According to a healthcare survey, every patient seeks help on the internet these days before scheduling an appointment mainly for two reasons: Firstly, to find dentist in their local area and secondly, to determine which would be the right clinic to meet their needs. These consumer habits benefit dentist with a good online presence and who deliver their internet marketing message in an impressive style on the web. While management: It is a unique skill, it's the ability to get people to work with or for you. It is about leading a group of people focused on achieving measurable goals and about maximizing talents and teamwork. This book chapter outlines the need, technique and recent trends in marketing, management for practice growth for dentists.

**IC-RITSEHM/RFI-2024/161**

**HUMANITY IN HEALTH SCIENCES**

**Dr. Neelima Rajendra Pawade**

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**Abstract-** "Humanity in health sciences" signifies a commitment to a compassionate, patient-centered, and ethical approach in the field of healthcare. It goes beyond the technical aspects of medicine to encompass the broader understanding of individuals as human beings with unique experiences, emotions, and needs. At its core, humanity in health sciences emphasizes the importance of fostering genuine connections between healthcare providers and patients. This involves practicing empathy and compassion to comprehend the emotional and psychological dimensions of illness. It means treating patients not merely as cases to be diagnosed and treated, but as individuals with their own

values, preferences, and cultural backgrounds. This approach encourages healthcare professionals to actively involve patients in decision-making processes, respecting their autonomy and dignity. Furthermore, humanity in health sciences promotes effective communication, ensuring that information is conveyed with clarity and empathy. It encourages a holistic view of patient care, recognizing the interconnectedness of physical, mental, and social well-being. Cultural sensitivity is vital, acknowledging and respecting diverse backgrounds to provide inclusive and equitable healthcare. The pursuit of humanity in health sciences also involves continuous learning and adaptation, as well as advocacy for patient rights. By embracing these principles, the healthcare community can contribute to a more humane, patient-centered, and ethically grounded practice that ultimately enhances the overall well-being of individuals and communities.

**IC-RITSEHM/RFI-2024/162**

**GENERALIZATION OF DEFINITE INTEGRATION WITH THE HELP OF FORWARD OPERATOR AND QUADRATURE FORMULA**

**Dr. Vinod Kumar Tiwari**

Assistant Professor (Guest Faculty), Gopeshwar College Hathwa, Gopalganj

**Abstract-** In this paper, we discuss Under Consideration to obtain the formula for definite integration in Generalized. We also suggested a new approach with the help of forward operator that is deducing difference and quadrature formula, this formula also used in different type of function.

**IC-RITSEHM/RFI-2024/163**

**THE INFLUENCE OF SOCIAL FACTORS ON THE EFFECTIVENESS OF MICROFINANCE IN WOMEN'S EMPOWERMENT: A STUDY**

**Dr. Md. Mahtab Alam**

Assistant Professor, Department of Commerce, G.D. College, Begusarai  
(Lalit Narayan Mithila University, Darbhanga, Bihar)

**Abstract -** This study explores the intricate interplay between social factors and the effectiveness of microfinance in promoting women's empowerment. Microfinance initiatives have gained prominence as tools for economic development and poverty alleviation, with a particular focus on empowering women in marginalized communities. However, the impact of these programs is not uniform, and social factors play a pivotal role in shaping their outcomes. The research employs a mixed-methods approach, combining quantitative data analysis and qualitative insights from interviews and focus group discussions. The study scrutinizes various social dimensions, including cultural norms, social networks, and community dynamics, to discern their influence on the success or

failure of microfinance interventions. By delving into the multifaceted nature of social-factors, the research aims to provide a nuanced understanding of the contextual intricacies that shape the empowerment trajectory of women involved in microfinance programs. Findings from this study contribute valuable insights to the existing literature on microfinance and women's empowerment, offering practical implications for policymakers, practitioners, and stakeholders involved in designing and implementing microfinance initiatives. Ultimately, this research seeks to enhance the effectiveness of microfinance as a tool for fostering sustainable women's empowerment by acknowledging and addressing the intricate web of social factors at play.

**Keywords:** Women's empowerment; Microfinance initiatives; Social factors; Economic development; Poverty alleviation.

**IC-RITSEHM/RFI-2024/164**

**TECHNOLOGICAL INNOVATIONS FOR ENHANCING EFFICIENCY IN PUBLIC DISTRIBUTION SYSTEMS: A PATHWAY TO IMPROVED FOOD SECURITY**

**Dr. Md Shakir Alam**

Assistant Professor, C.M. College, Darbhanga (L.N.M.U)

**Abstract** - The study explores the integration of technological innovations to enhance efficiency in Public Distribution Systems (PDS) as a pivotal approach to bolstering food security in India. With a burgeoning population and diverse socio-economic challenges, the conventional PDS has faced hurdles in ensuring equitable and timely distribution of essential commodities. This paper examines how cutting-edge technologies such as blockchain, data analytics, and Internet of Things (IoT) can be harnessed to revolutionize the PDS landscape. The study delves into the potential of these innovations to streamline procurement, storage, and distribution processes, thereby minimizing leakages, pilferages, and delays. Emphasizing the role of digital platforms in facilitating transparent and accountable transactions, the paper underscores the importance of real-time data analytics for demand forecasting and inventory management. Furthermore, it discusses the impact of biometric authentication systems and mobile applications in ensuring targeted delivery to beneficiaries. The proposed technological interventions offer a pathway to not only improve operational efficiency but also foster a more inclusive and responsive PDS. By addressing logistical challenges and augmenting the overall effectiveness of the system, this research contends that technological innovations are indispensable tools for advancing food security objectives in the context of India's complex socio-economic landscape.

**Keywords:** Public Distribution Systems (PDS); Technological innovations; Food security; Internet of Things (IoT).

IC-RITSEHM/RFI-2024/165

**MINI REVIEW OF ELECTRICAL ASPECTS OF PEROVSKITES BASED OXIDES  
FOR VARIOUS APPLICATIONS**

**Sadaf Fatma<sup>1</sup> and Dr. Sunil Yadav<sup>2</sup>**

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<sup>2</sup>Assistant Professor, Department of Physics, Maharaja College, Ara, Bihar (India)

**Abstract** - The perovskite structure is named for the prototype  $\text{CaTiO}_3$  mineral called perovskite, which is generally a metal oxide with the formula  $\text{ABO}_3$ , where B is a small transition metal cation and A is a larger s-, d-, or f-block cation. In a cubic perovskite, the larger cation A resides on the corners of the unit cell, the smaller cation B is in the centre of the unit cell, and the oxygen ions ( $\text{O}_2$ ) are on the centres of the faces. Perovskite oxides, with the general formula of  $\text{ABO}_3$ , are considered as one of the promising candidates of electro active materials for supercapacitors (SCs) as a result of their stable structure, rich oxygen vacancies, and highly reversible redox capability. Perovskite-type complex oxides constitute one of the most prominent classes of metal oxides which find key applications in diverse technological fields. Recently a new wave of interest has risen on complex perovskite structure due to their wide use in fabrication of multilayer ceramic capacitors, electro-strictive actuators, and electromechanical transducers. In recent years, properties of perovskites at reduced dimensions have become considerable interest.

To fully exploit the materials opportunities provided by nano-structured perovskites, it is important to characterize and understand their bulk and near-surface electronic structure along with the electric properties of these materials in the nano-regime, where surface and interface effects naturally play a dominant role. Perovskite oxide nanocrystals have important properties in Ferro electricity, piezoelectricity, di electricity, ferromagnetism, magneto resistance, and multiferroics.

**Keywords:** Nanoparticles, Environment, Nanometric scale etc.

IC-RITSEHM/RFI-2024/166

**TOXIC EFFECTS OF ENDOSULFAN AN AGRICULTURAL PESTICIDE ON BLOOD  
CHEMISTRY OF FRESH WATER CATFISH PANGASIUS**

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(Under Patliputra University) Patna 800008, Bihar, India

**Abstract-** Toxicologists did some notable histopathological studies in fishes to know the safe dose of pesticides for the different tissues in a fish and in assessing the water quality. It has already found conclusively true that changes in blood



chemistry can be very important indicator of the toxic effect of pesticides. In the present study in sublethal concentration of Endosulfan for different intervals of day's significant decrease in large lymphocytes accompanied by significant increase in small lymphocytes was recorded. The toxic effects of 96-h LC50 Endosulfan are significant decrease in erythrocyte surface area. THC, Hb and TLC but significant increase in ESR, TLC and coagulation time. The toxic effects of sublethal Endosulfan are- significant decrease in erythrocyte surface area, TEC, Hb, PCV% and CT and significant increase in ESR, TLC and THC. The toxic effect of Endosulfan was very much evident in different blood parameters. TEC, Hb Level, PCV%, MCH and MCHC decreased significantly but ESR value showed significant increase from 3.31 mm/h to 5.47 mm/h. TEC, Hb level, PCV% all showed significant decrease in their values. MCV and MCH showed significant decrease but the MCHC decreased only slightly. ESR increased significantly from 3.11 mm/h to 5.52 mm/h.

**Keywords:** Sublethal, Pesticide, Pangasius, Endosulfan, Thrombocytes.

**IC-RITSEHM/RFI-2024/167**

**EXPLORING NANOMATERIALS: AN IN-DEPTH EXAMINATION OF UTILIZATIONS, ECOLOGICAL CONSEQUENCES, AND ENVIRONMENTAL FATE**

**<sup>1</sup>Md Afzal Mansoori, <sup>2</sup>Khushboo Mishra, <sup>3</sup>Md. Alimul Haque and <sup>4</sup>B.K.Mishra**

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**Abstract** - The contemporary age is often referred to as the nanotechnology era, marked by the remarkable significance of nanomaterials in the realms of technology, engineering, and medical advancements. These materials are highly prized for their versatile physical, chemical, and biological attributes, which set them apart from their bulk counterparts. The classification of nanomaterials is based on various factors including size, shape, composition, origin, and potential toxicity. With the ever-expanding utility and industrial applications of nanomaterials, it has become imperative to delve into their toxicity and the associated environmental risks. This comprehensive review critically examines the diverse applications, behaviors, and adverse effects on humans, animals, and the surrounding environment. Additionally, it delves into the fate and challenges surrounding nanomaterials, and outlines the future prerequisites for crafting secure nanotechnology, promoting sustainable development.

**Keywords:** Nanotechnology, Health, Environment, Toxicity.

IC-RITSEHM/RFI-2024/168

## ROLE OF CHEMISTRY IN EVERYDAY LIFE

**Dr. Ashim Kumar Nathaniel**

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**Abstract** - We are surrounded by chemistry, but many people are not aware of that fact. Chemistry has influenced our life so much that we do not even realize that we come across chemicals at every moment; that we ourselves are beautiful chemical creations and all our activities are controlled by chemicals.

By the end of the unit, students will be able to...

Explain the presence of chemistry in their everyday lives.

Give your opinion about the use of chemical substances in daily products.

Discuss whether chemistry is just involved in manufactured products or not.

Outline some phenomena of our everyday lives from a scientific perspective.

Find and exchange information on the chemical explanation of some everyday facts.

IC-RITSEHM/RFI-2024/169

महात्मा बुद्ध के उपदेशों से प्रेरित बाबा साहब डॉ. भीमराव अंबेडकर

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**Abstract-** छठी शताब्दी ईसा पूर्व में भी भारत के वैदिक धर्म का मूल रूप कर्मकांड एवं बाह्य आडंबरों के आवरण में छिप गया था। ब्राह्मणों के ढोंग एवं पुरोहितों के पाखंड के कारण समाज में उंच-नीच, जात-पात अमीर-गरीब छुआ-छूत का भेदभाव बहुत बढ़ गया था। धार्मिक बाह्य आडंबरों के कारण सामान्य जनता में असंतोष की लहर फैल रही थी। वह एक सरल और लोकप्रिय धर्म की खोज में थी। ऐसे ही समय में महात्मा बुद्ध का प्रादुर्भाव हुआ, जिन्होंने समाज में फैली कुरीतियों को मिटाकर समानता लाने का संदेश दिया। जिससे प्रेरित होकर आधुनिक भारत में बाबा साहब डॉ. भीमराव अंबेडकर ने बौद्ध धर्मावलम्बी होने में अपने को गौरवान्वित महसूस किया, तथा दलित जातियों में बौद्ध धर्म अपनाने की उत्सुकता बढ़ाई।

**Keywords:** महात्मा बुद्ध, उपदेश, भीमराव अंबेडकर, बौद्ध धर्म।

**IC-RITSEHM/RFI-2024/170**

**A UNIQUE GIFT OF NATURE “PLANTAGO”**

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The genus *Plantago* belongs to the family Plantaginaceae. The order Plantagineae is an order of doubtful affinity it is placed between Labiateae and Monochlamydeae. According to the monograph of Pilger (1937) the old world species intimately related to *Plantago ovata* belong to the section *Leucopsyllium*. About 282 species constituting the genus *Plantago* exhibit a great deal of variation in breeding system. The out crossing rates vary from 0 to 100% (Wolf et al. 1988). All of the species are distributed in a variety of habitats (Primack, 1979; Sharma 1984). Except for *Plantago ovata* which is cultivated for its seed husk, all other species are wild, only two of them *Plantago lanceolata* and *Plantago coronopus* are B-chromosome carrier species. Out of ten species inhabiting different parts of India, three species viz. *Plantago ovata*, *Plantago indica*, and *Plantago psyllium* are important for the economic point of view.

**IC-RITSEHM/RFI-2024/171**

**RECENT INTELLIGENT TECHNOLOGIES IN SCIENCE, ENGINEERING,  
HUMANITIES & MANAGEMENT**

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“Recent Intelligent technologies in science, Engineering, Humanities & Management” is one of the currently emerging fields in educational technology. Whilst it has been around thirty years, it is still unclear for educators how to make pedagogical advantage of it on a broader scale and how it can actually impact meaningfully on teaching and learning in higher education.

With this aim in view this paper seeks to provide an overview of research on technological application in higher education through a systematic review.

Humanities faculties have a reputation for being slow to incorporate technology in the class room, despite strong encouragement to embrace new digitized ways of teaching subjects such as language, history, social studies and literature – Technology helps put the purpose of humanities into practice.

One way to prepare students to think about how humanity interacts with their world in a time of rapid technological advancement is to integrate classical learning with modern tools. So digitization is the defining practice that bridges science and technology with the humanities, either intangible or in the intangible forms.

Advances in recent intelligence and its successful application in core technical domains brings new possibilities to support humanities research in particularly demanding and challenging task.

**IC-RITSEHM/RFI-2024/172**

**GENDER RESPONSIVE BUDGET AND WOMEN EMPOWERMENT IN BIHAR**

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**Abstract** - The Bihar government in recent years budgetting emphasized upon women empowerment and launched various schemes that greatly impact and promote women status either in social and economic contexts. The gender responsive bud getting is a strategy that creates budgets that work for special groups or community, and, by considering and analyzing the unique and diverse needs of every women strive for a fair distribution of resources. The Bihar government has implemented a policy to provide 35% reservation to women in all government jobs applicable to all as genral and reserved categories existed in state. The government also launched several schemes to promote women participation in education and training courses. The state also provide special scholarship to all girls that are passed secondary and subsequent degree programmes.

**Keywords:** GRD, gender, reservation, scheme, women empowerment.

**IC-RITSEHM/RFI-2024/173**

**HISTOPATHOLOGICAL CHANGES INDUCED BY WSF OF PETROL FUEL IN LIVER OF THE FRESHWATER FISH: CHANNA PUNCTATUS (BLOCH)**

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**Abstract-** The study reports the histopathological changes in the liver of the fresh water fish *Channa punctatus* exposed to sublethal safe concentration of water soluble fraction (WSF) petrol (9.6 ml/l) fuel for 30 days. *Channa Punctatus* showed marked disruption of normal history architecture of hepatocytes and significantly( $P<0.001$ ) reduced H.S.I. Degeneration and or rupture of cellular border lines, swelling of hepatocytes at places with areas of diffuse necrosis distended sinusoids, damage Central vein and haemolysis of hepatic blood vessels where the important pathological changes under the impact of WSF of petrol. This study concludes that WSF of petrol are potent to induced damage to fish liver leading to impairment of metabolic activities.

**Keywords:** *Channa punctatus*, liver Histopathology, WSF, petrol.

**IC-RITSEHM/RFI-2024/174**

**BIOENGINEERING IN ORTHODONTICS**

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**Introduction** - An important aspect of scientific revolution that has taken place in biology over last decade is broad application of physical sciences to living tissues. Physics, engineering and mathematics can be applied similarly with great profit to orthodontics.

**IC-RITSEHM/RFI-2024/175**

**A STUDY OF FISH FARMING DEVELOPMENT IN SMALL SCALE POND IN MADHUBANI, NORTH BIHAR**

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**Abstract** - Developing small-scale fish farming businesses in rural areas might have a significant impact on the local economy. Bihar's inland small-scale fisheries will benefit from the findings of this research. This pilot project was only the beginning of aquaculture education for farmers in the area, since aquaculture is a relatively new technique in the region. Fishermen in the Madhubani area of Bihar were surveyed for their views on the challenges they face. The cultivation of fresh water fish in a variety of aquatic bodies, eastern India's state of Bihar provides an ideal sub-tropical environment. Aquaculture has a significant impact on the state's food supply and rural economy. The

integration of locally accessible biological resources, a pilot experiment with a group of resource-poor farmers shown that tiny seasonal farmhouse ponds could produce roughly 1 800 kg/ha/yr.

**IC-RITSEHM/RFI-2024/176**

**MERGER OF 10 PUBLIC SECTOR BANKS AND IT'S IMPACT ON BANKING INDUSTRY**

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**Abstract** - The merger of 10 public sector banks in India signifies a landmark restructuring, aimed at bolstering efficiency, reducing redundancy, and enhancing financial stability. This consolidation is poised to streamline operations, optimize resources, and fortify the banking sector against economic challenges. Key outcomes include improved risk management, increased capital adequacy, and a potential boost to technological capabilities. The impact extends to customer service enhancements and a more resilient banking framework. However, challenges in cultural integration and workforce management must be navigated. This transformative initiative reflects a strategic response to dynamic economic demands, positioning India's banking industry for sustained growth.

**Keywords:** Merger, Public Sector Banks, Indian Banking Industry, Restructuring, Efficiency, Financial Stability, Risk Management, Capital Adequacy, Technological Capabilities, Customer Service, Economic Challenges.

**IC-RITSEHM/RFI-2024/178**

**THE STUDY OF MIXED PLASMONIC NANOCOMPOSITES IN SOLAR CELL**

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**Abstract** - In this paper we discuss plasmonic nanocomposites. To find the nanocomposites in dye sensitized system. We also discuss the nanocomposites by the method of dye sensitized with solar cell. We also discuss the inclusion of plasmonic nanoparticle in the semi conductor, photoanode improve the major process.

IC-RITSEHM/RFI-2024/179

**A MINI REVIEW OF ELECTRICAL PROPERTIES OF PEROVSKITE BASED  
OXIDES FOR VARIOUS APPLICATIONS**

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**Abstract** - In this paper, we report the electrical properties of some perovskite oxides, synthesized by the tradition solid-state reaction method. The study of perovskite oxides is important as they find several applications in non-linear optics, memory devices, pyroelectric, piezoelectric sensors etc. apart from the academic point of view due to the physical properties they exhibit. The well-known examples are BaTiO<sub>3</sub>, PbZrO<sub>3</sub>, PbTiO<sub>3</sub> etc. Many researchers have shown considerable interest in the electrical properties of said compounds. Materials having a diffuse phase transition (relaxers) have attracted the most attention due to their broad maximum in the temperature dependence of their dielectric constant. Recently a new wave of interest has risen on perovskite structure due to their wide use in fabrication of multilayer ceramic capacitors, electrostrictive actuators, and electromechanical transducers. The alternating current impedance spectroscopy (ACIS) is a very convenient and powerful experimental technique that enables us to correlate the electrical properties of a material with its microstructure, and also helps to analyze and separate the contributions, from various components (i.e., through grains, grain boundary, interfaces, etc.) of polycrystalline materials in the wide frequency range.

**Keywords:** Perovskite Oxides, Polycrystalline materials, Impedance spectroscopy, Electrical Properties.

IC-RITSEHM/RFI-2024/180

**सामाजिक चेतना, विकास और प्रभाव**

**सुरेन्द्र दलाल**

भोधार्थी हिन्दी विभाग, OSGU, हिसार, हरियाणा।

**सार**— मानव और समाज परस्पर एक दूसरे के पूरक हैं। मानव के बिना समाज का अस्तित्व नहीं है, इसी प्रकार समाज के अभाव में मानव भी पंगु के समान है। मानव अपने प्रत्येक क्रिया-कलाप तथा गतिविधि के लिए समाज पर आश्रित रहता है। जब तक किसी व्यक्ति को समाज का अपेक्षित सहयोग मिलता रहता है, तब तक उस व्यक्ति की जीवन-रूपी गाड़ी सही पटरी पर दौड़ती रहती है, परन्तु जैसे ही किसी व्यक्ति को सामाजिक सहयोग नहीं मिलता, व्यक्ति के समस्त जीवन का ढाँचा भरभराने लगता है। इसलिए प्रत्येक व्यक्ति यह प्रयास करता है कि वह

समाज द्वारा स्थापित की गई मान्यताओं, रीतियों या धारणाओं को स्वीकार करे। जब कोई व्यक्ति इन सामाजिक मान्यताओं का उल्लंघन करता है, तो समाज ऐसे व्यक्ति को स्वीकार नहीं करता है।

**IC-RITSEHM/RFI-2024/181**

**NATURE PLAYS AN IMPORTANT ROLE IN RALPH WALDO EMERSON'S  
WORKS**

**Dr. Priti Koolwal**, Professor (English Literature)

**Kanthamani. R.**, Research Scholar

Mansarovar Global University, Sehore, (Madhya Pradesh)

**Abstract** - Ralph Emerson & Henry Thoreau are often held up as the epitome of the transcendentalist movement by literary critics. This is predicated on the belief that one's intuition is the surest guide to reality. The function of nature and human interaction with it are also discussed.

Emerson would be one of those people in the history of ideas whose ideas were quickly taken up by others. Over time, these same ideas have been a part of many different ideologies and movements. He came up with ideas and ways of thinking that quickly changed educational theory and theology. His lectures and publicly available essays are well known, and people from all walks of life quote, teach, and talk about them.

Emerson wrote that "Within these plantations of God, a decorum and sanctity reign, a perennial festival is dressed, and the guest sees not how he should tire of them in thousand years"<sup>1</sup> in one of his essays. In these forests, we revert back to our senses and to our faith. Aside from that, he views the natural world as a living entity that is capable of reacting to the presence of a human. According to what he stated.

"Nature always wears the colors of the spirit",<sup>2</sup> the response is determined by how a person is now feeling. The only way that humans should think of themselves, according to Emerson, is as "a particle of God" or as a component of the natural world. The author believes that spending time in nature may help a person become more enlightened and independent. The most important point that he wishes to make is that, in the eyes of God so, by extension, in the eyes of nature, all persons are equal, regardless of the social rank to which they belong.

Emerson penned a lengthy piece of writing titled "Nature." (1836) that the universe is composed of Nature and the Soul as one of his central claims in the piece. This is a deep idea that has contemporary resonance.

The idea of communication what Emerson had was rather significant in its own right. Because of the specifics of his own life, Emerson was able to provide the general public with an example of the monumental individuality that was connected with transcendentalism. As a result, Emerson developed a vast and important personality. Emerson once remarked that every one of us is responsible for the development and growth of our own selves. Here's what it takes to rely only on one's own abilities.

**Keywords:** Ideology, intuition, natural environment, self-sufficiency, freedom, Transcendentalism, idealism, mind, commodity, beauty, economy, language, speech, discipline, soul.



**IC-RITSEHM/RFI-2024/182**

**TRENDING TECHNOLOGIES AND THEIR IMPACT ON BUSINESS**

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**Abstract** - The business fraternity is ever-evolving and shaping into a primary pillar of infrastructural development, thanks to emerging technology. With every passing year, the impact of these technologies keeps intensifying. From accelerating productivity to improving efficiency, the benefits of technological advancements on businesses cannot be simply gauged. Even though these technologies, there are certain complexities associated with harnessing their full potential. But once implemented, it takes a business to the heights of success.

**Keywords:** business; technologies; efficiency.

**IC-RITSEHM/RFI-2024/183**

**EVALUATING TRANSFORMATION: A COMPREHENSIVE STUDY ON THE EVOLUTION OF THE BANKING INDUSTRY IN INDIA AFTER LIBERALIZATION**

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**Abstract** - This research paper delves into the multifaceted evolution of the banking industry in India following the liberalisation that began as part of the 1991 economic reforms. The study employs a comprehensive approach to evaluate the transformational journey of the banking sector, analysing key indicators, policy shifts, and market dynamics that have shaped its trajectory. Through a meticulous examination of historical data, regulatory frameworks, and performance metrics, the research aims to uncover the nuanced facets of change and adaptation within the industry. The investigation spans diverse dimensions, including technological advancements, regulatory reforms, market competition, and financial inclusion initiatives. By synthesizing both qualitative and quantitative data, the research seeks to provide a holistic understanding of how liberalization has influenced the banking landscape, shaping its structure, operations, and overall resilience. Special attention is given to identifying challenges encountered by the sector and the strategies employed for overcoming them. The findings of this study are expected to contribute valuable insights for policymakers, industry stakeholders, and researchers interested in the ongoing transformation of banking in India. As the financial sector plays a pivotal role in the nation's economic growth, understanding the nuances of its evolution post-liberalization becomes imperative for fostering sustainable development and ensuring the sector's continued stability and adaptability.

**Keywords:** Banking industry; Post-liberalization; Economic reforms; Technological advancements; Financial inclusion.

**IC-RITSEHM/RFI-2024/186**

**RELEVANCE OF MAHARISHI ASTROLOGY IN MODERN BUSINESS  
EXCELLENCE: AN APPROACH TO BECOME A BUSINESS GURU**

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**Abstract** - This paper investigates the contemporary relevance of Maharishi Astrology in the pursuit of business excellence, presenting a unique approach towards achieving the status of a business guru. Exploring the foundational principles of Maharishi Astrology and its potential impact on business strategies, the study aims to unravel the wisdom embedded in ancient practices and how it can be seamlessly integrated into modern business frameworks. Through a comprehensive analysis, the paper outlines practical applications and strategies derived from Maharishi Astrology that can contribute to individual and organizational success. By providing insights into the transformative power of this ancient knowledge, the study aims to guide aspiring business leaders on a path to becoming revered figures in the business world.

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**IC-RITSEHM/RFI-2024/187**

**JOB OF LIBRARIES IN ADVANCED EDUCATION FRAMEWORK IN INDIA**

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**Abstract** - The current paper mirrors the current portrayal of government drives in the field of advanced education and the job of libraries in advancing the use of these drives for showing examination and expansion exercises in higher instructive organizations. Different developments of libraries for advancing advanced education in the period of data correspondence innovation like library organizations, library consortium, library entryways, computerized assortment improvement, online reference administrations, computerized stores, online inventories, and data proficiency programs have been depicted in the paper. A couple of significant key jobs played by a library as teacher, as space, as an individual, as an information chief and so on. is also discussed in this article.

**Keywords:** Library, information literacy, higher education, and open educational resources.

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**IC-RITSEHM/RFI-2024/195**

**OPTIMIZED AND EFFICIENT ALGORITHM FOR PREDICTION OF CHURN IN  
VARIOUS INDUSTRIES IN THE FAST GROWING WORLD**

**Ajay Varma, Dr. Rajesh Deshmukh**

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**Abstract** - The recent trend and the increase in the boost of the technologies and competition in the various domains where the customers play a very vital role has made the need of the churn analysis for the service providers a very important topic. Also, studies says that attaining of the new customer is very high than the retention of the existing customer. Also, service providers needs to understand the need to take care of the existing customers as well, as in the current scenario, the Word of Mouth is a very important factor, when it comes to referring someone about a particular service provider.

**Keywords:** Competition, Customer Retention, Word of Mouth.

**IC-RITSEHM/RFI-2024/198**

**STUDY THE OPTICAL LIMITING PROPERTIES OF GRATING ASSISTED  
DIRECTIONAL COUPLER UNDER NONLINEAR REGIME**

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**Abstract:** Nonlinear transmission based optical limiting phenomena is investigated analytically in the transmission mode of a Grating Assisted Directional Coupler using coupled mode theory. A simple expression for intensity dependent transitivity has been obtained by incorporating the Kerr effect in nonlinear coupled equations.

The transmission is studied as a function of the incident intensity at various incident wavelengths. We have found that the transmittance of the Grating Assisted Directional Coupler gradually increases as a ramp function and becomes constant after a critical intensity when the wavelength of the incident light is tuned above the Bragg wavelength.

**Keywords:** Optical limiting; Fiber Bragg grating; nonlinear refraction; nonlinear coupled mode equation.

**IC-RITSEHM/RFI-2024/199**

**SERVICE QUALITY AND CUSTOMER SATISFACTION: A COMPARISON  
BETWEEN PUBLIC AND PRIVATE SECTOR BANKS IN RATLAM CITY**

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**Abstract:** This study examine the perceived service quality of bank customers of public and private sector banks in Ratlam city and compare a level of customer satisfaction and quality dimensions using the SERVQUAL model. SERVQUAL appears to be a reliable scale to measure banking service quality. The study

result indicates the high level of service quality in all dimensions (more than 5) . It also reveals that, there is no significant difference in level of service quality and customer satisfaction between public sector and private sector banks in Ratlam. The finding will be useful to service providers for making competitive edge in banking business. It enables us to have an understanding of service quality perceptions of banking customers and leads how to improve the level of customer satisfaction with respect to reliability, responsiveness, assurance, empathy and tangibility aspects. Certainly some limitations must be mentioned. The primary limitation of this study is the size and scope of its sample.

**Keywords:** Service quality, customer satisfaction, public sector bank, private sector bank

**IC-RITSEHM/RFI-2024/201**

**A STUDY OF NETWORK ARCHITECTURE, DEPLOYMENT TOPOLOGY AND APPLICATIONS OF IEEE 802.16E WIMAX STANDARD**

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**Abstract:** An IEEE 802.16 organization is comprises of fixed infrastructural destinations. The network architecture of IEEE 802.16 organization is just like the GSM organization.

1. Hexagonal Cells
2. Base Stations (BS)
3. At least one buy in station (SS)

The BS gives Point to Point (PTP) administration or Point to BSs gives availability to center organizations. The SS are regularly a rooftop mounted or divider mounted client premises hardware (CPE) or an independent hand held gadget like Mobile telephone, individual advanced colleague (PDA) or fringe part interconnect (PCI) card for PC or Laptop. If there should arise an occurrence of an external CPE, the clients inside the structure are associated with a customary organization like Ethernet Local Area Network (IEEE802.3 for LAN) or Wireless LAN (IEEE 802.11b/g for WAN) which approach the CPE. a gaggle of cells are regularly gathered to make an organization, where BSs are associated through a centre organization. The IEEE 802.16 organization likewise support network, where SSs are prepared to impart among themselves without the need of a BS. BSs commonly utilize at least one wide shaft radio wires which will be parceled into a few more modest areas, where all areas entirety to complete 360 degree inclusion. CPEs ordinarily utilize exceptionally directional receiving wires that are pointed towards the BS.

IEEE 802.16 WiMAX supports ATM, IPv4, IPv6, Ethernet and Virtual Local Area Network (VLAN) administrations. Along these lines, it can give an upscale decision of administration prospects to voice and information network specialist co-ops. It's frequently utilized for a decent choice of remote broadband association and arrangements.

**Keywords:** Base Station (BS), client premises hardware (CPE), fringe part interconnect (PCI) card, Virtual Local Area Network (VLAN)

**IC-RITSEHM/RFI-2024/202**

## **THE ESTABLISHMENT AND APPROPRIATENESS OF THE CLOUD COMPUTING SCHEDULE**

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**Abstract:** Cloud computing offers fully dynamic virtualized networking, storage, and computing resources to corporations and individual users via the Internet. These cloud resources are less expensive, easier to manage, and more elastic than sets of local, physical resources. As a result, users are urged to utilise the cloud for their services and applications. When data and applications are moved into a shared environment outside of customers' administrative domains, cross-platform and cross-technology functional concerns occur. This paper provides a contemporary examination of the most important functional challenges surrounding the current state of cloud computing, mostly from a network perspective. The report also includes a brief introduction of cloud computing principles and technologies.

After that, an extensive literature review, an explanation of cloud service architectural models, and a succinct rundown of the most relevant cloud computing solutions are given. This article outlines and examines the most significant and practical network concerns, including security, that are pertinent to the Internet-based delivery of high-assurance cloud services. Finally, trends and ideas for future research are also highlighted.

**Keywords:** Cloud Services, Cloud setup, Security, Networking.

**IC-RITSEHM/RFI-2024/203**

## **LOOPHOLES IN INDIAN CONTRACT ACT: A CRITICAL ANALYSIS**

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**Abstract-** The Indian Contract Act 1872 is a well detailed document that has governed many contracts over the years. It has been so detail drafted by the legislative makers that it has not invited any major changes in its usage in over so many years. It has been governing contracts in the Indian Corporate Sector for an exceptionally long time. However, with the advent of blockchain technology and emerging players with changing contours, it becomes imperative to amend the Indian Contracts Act to incorporate the dynamics of 21st century. It is also in

the interests of modern corporate governance that Indian Contract Act is introduced with some changes. This paper talks about the incorporation of smart contracts based on blockchain technology, amendment of contracts for surrogacy in the medical sector, new dimensions related to article 11 and 27 of Indian Contract Act, new provisions for digital contracts and a relook at section 74 of the Indian Contract Act. All of these are major topics that need amendments for plugging the loopholes in the century old Contracts Act. This paper also provides suggestions that needs to be incorporated into the Indian Contract Act 1872 so that new global companies find it easier and helpful to engage in a wide variety of domestic and International contracts with Indian people. Finally, this paper provides a wide overlook at the Indian Contract Act along with the difficulty in interpretation of certain provisions mentioned in the aforementioned act I argue that reforms in Indian Contract Act based on smart contracts arising out of blockchain technology is the way forward. In addition to that, I dive into the topics of problem of consideration and contract formation in surrogacy.

**Keywords:** Blockchain, Section 27, Section 74, Section 11, Amendment, Indian Contract Act 1872, Digital Contracts.

**IC-RITSEHM/RFI-2024/220**

## **OBJECT DETECTION WITH YOLO: CHALLENGES AND ARCHITECTURAL EVOLUTION**

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**Abstract** - Object detection stands as a pivotal area within computer vision research, and the YOLO series has emerged as a standout performer in this domain. Object detection using YOLO (You Only Look Once) has revolutionized computer vision with its real-time processing capabilities. However, it faces challenges such as accuracy, scale variability, and class imbalance. Architectural successors like YOLOv2, v3, v4, and v5 have evolved to address these challenges, incorporating techniques like feature pyramids and anchor boxes. Object detection with YOLO finds applications in autonomous vehicles, surveillance, healthcare, retail, and industrial automation. This work explores the challenges and architectural evolution of YOLO in object detection tasks.

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