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Rao Bahadur Y. Mahabaleswarappa Engineering College

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(Formerly Vijayanagar Engineering College) Cantonment, Ballari – 583104.

“International Conference on Advances in Mechanical Engineering & Management”

ICAMEM 2023

20th -21st October 2023

Jointly Organized By

**Department of Mechanical Engineering
Department of Management Studies – MBA**



**ICAMEM
2023**





FOUNDER



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Sri. Rao Bahadur Y. Mahabaleswarappa





Sri. R Ramanagouda

President

V. V. Sangha, Ballari.

MESSAGE

It gives me tremendous joy to greet you warmly to the International Conference on Advances in Mechanical Engineering & Management (ICAMEM-2023) on 20th and 21st October 2023, proudly hosted by our esteemed institution Rao Bahadur Y Mahabaleswarappa Engineering College (RYMEC), Ballari. Our constant commitment to promoting creativity, information sharing, and academic success in engineering is demonstrated by this conference. I urge everyone to take advantage of this exceptional chance to network, work together, and venture into unexplored creative territory. Let's collaborate to create a more promising and technologically sophisticated future. I hope that everyone has a productive conference.



Sri. Allum Channappa

Vice President, V. V. Sangha, Ballari.

Chairman, RYMEC, Ballari.

MESSAGE

It gives me a lot of pride to offer a hearty welcome to the International Conference on Advances in Mechanical Engineering & Management (ICAMEM-2023) on 20th and 21st October 2023, proudly hosted by the Rao Bahadur Y Mahabaleswarappa Engineering College (RYMEC), Ballari. I'm excited to be on the edge of this historic occasion, which will undoubtedly serve as an outstanding symbol of innovation and information exchange.

ICAMEM-2023 represents a significant undertaking that demonstrates our institution's commitment to advancing technology and pushing the bounds of academic excellence. This conference is a melting pot for innovative concepts and deep connections that will influence the future.

I urge every attendee to take advantage of this chance to work together, share ideas, and create networks that go beyond the conference. I hope you have a rewarding and inspiring experience at ICAMEM-2023.



Sri. H M Gurusiddaswamy

Secretary

V. V. Sangha, Ballari.

MESSAGE

It is a matter of great pleasure for me to welcome you all to the International Conference on Advances in Mechanical Engineering & Management (ICAMEM-2023) on 20th and 21st October 2023. Education is usually a symbol of growth and knowledge acquisition. It needs to be focused on study, assisting society in producing a unique thing. It's important to think creatively and differently in order to adapt to technological advances. This conference is vital for investigating and learning about various aspects of education by using engineering and technology in the right ways. I hope the conference is a huge success.



Sri. J Shanthaveerana Gouda

Asst. Secretary
V. V. Sangha, Ballari.

MESSAGE

We are extremely happy and delighted to know that RYMEC is hosting an International Conference on Advances in Mechanical Engineering & Management (ICAMEM-2023) on 20th and 21st October 2023. Such conferences will offer a friendly setting where academics and researchers may openly share their opinions and ideas, which will have significant benefits for everyone involved and contribute to determining the direction of future research. We would like to take this opportunity to offer our sincere greetings and best wishes for the conference's success to the organisers and attendees.



Sri. Gonal Rajashekar Gouda

Treasurer

V. V. Sangha, Ballari.

MESSAGE

We are extremely happy and delighted to know that RYMEC is hosting an International Conference on Advances in Mechanical Engineering & Management (ICAMEM-2023) on 20th and 21st October 2023. These kinds of conferences will offer an environment that is welcoming where academics and researchers are able to express their opinions and ideas, which benefits one another and helping to define the path of future research strategy. We would like to use this opportunity to greet the organising team and participants warmly and wish the conference every success.



Dr. T Hanumantha Reddy

**Principal
RYMEC, Ballari.**

MESSAGE

It is pleased to extend warm greetings to all the participants, organizers, contributors and chairs of various sessions of International Conference on Advances in Mechanical Engineering & Management (ICAMEM-2023) that would be held on 20th and 21st October 2023.

This conference offers a chance to bring together academics, industry professionals, and government representatives to share research ideas and findings and to talk about the state of the art in the conference's subject areas.

The calibre of the papers chosen for presentation will be used to determine the conference's success. Our programme committee handled the selection process, and I would like to express my gratitude to the organising and programme committees for their diligent work and the excellent, open-minded procedure they used to evaluate the submissions. Additionally, I want to express my gratitude to the International Advisory Committee for all of their tremendous work and contributions to the conference.

It is honor to cite that ICAMEM – 2023 is to foster technological innovation and excellence for the benefit of humanity. The main motto of the conference is to drive innovation through broad collaboration and sharing of knowledge. This conference provides platform to enhance public understanding of Engineering and Technology and to pursue standards of their practical applications. Research and innovation are main ingredient for growth of economy and quality of life. Research is creating new knowledge and presently economy depends on new knowledge society.

It is mandate to thank the President, Vice President, Secretary, Asst Secretary and Treasurer of V.V. Sangha, Ballari. Chief patrons, patrons, General Chairs, V.V. Sangha Management, Chairman and GC Members of RYMEC, teaching and non-teaching staff members of RYMEC, conference organizing committee, special session organizers, and the members of the program committee for their valuable support and diligent guidance to organize the conference.



Dr. Savita Sonoli
Vice Principal,
RYMEC, Ballari.

MESSAGE

It is necessary at present scenario; Engineers need to keep abreast of the advancements in Engineering and Technology. The tremendous advances in Science and Technology in the areas of Mechanical Engineering, Materials and Manufacturing systems in particular made wide contribution in every activity of our day-to-day life. This is possible only by the sincere and dedicated involvement and contribution of researchers, engineers, academicians and industrialists. The prompt and rapid development being taken place in the fields of materials and manufacturing systems are often realized by us in the form of New Product development and services. The research papers are mainly focused in the areas of Manufacturing Processes, Materials, Optimization techniques, machining processes, Industrial Engineering, Heat transfer methods, applications and management are shortlisted for publishing in reputed journals and also in the Conference proceedings. I am confident and sure that this conference ICAMEM'23 creates a platform for good industry - institution interaction which is very much needed for advancement of Science and Technology apart from sharing their knowledge & ideas. I express my sincere thanks and gratitude to one and all put more effort and energy in bringing this conference as more successful one.



Dr. Kori Nagaraj
HOD, Mechanical Department,
RYMEC, Ballari.

MESSAGE

It is pleased to extend warm greetings to all the participants, organizers, contributors and chairs of various sessions of International Conference on Advances in Mechanical Engineering & Management (ICAMEM-2023) that would be held on 20th and 21st October 2023.

This conference offers an opportunity to bring together academic and professional researchers and practitioners from both professions to contribute research ideas and findings and to explore the state of the art in the conference's subject areas.

The participants' combined efforts have produced a wealth of knowledge that is now recorded in the pages of these proceedings. These pages contain discoveries that have the power to influence future research directions and motivate new generations of researchers. The release of the printed conference proceedings marks a significant turning point in our mission to promote innovation and knowledge sharing. We are grateful to the editorial team for their tireless work in preparing the conference proceedings.

I would like to express my gratitude to V. V. Sangha, Ballari's management, president, vice president, secretary, assistant secretary, and treasurer. My sincere gratitude to the Chairman and GC members for their support, as well as to the Principal, Deans, Heads of Departments, Convenors, Co-Convenors, Members, and Teaching and Non-Teaching Members for their unwavering assistance in putting together ICAMEM - 2023.



Dr. A Thimmanna Gouda

HOD, MBA Department,
RYMEC, Ballari.

MESSAGE

It is my great pleasure to extend a warm welcome to each one of you attending the International Conference on Advancements in Mechanical Engineering and Management (ICAMEM – 2023). This gathering represents a confluence of innovative ideas, groundbreaking research, and a shared commitment to the advancement of both mechanical engineering and management practices. In the dynamic intersection of these two fields lies immense potential for transformative solutions that can shape the future of industries and societies. The presentations and discussions in these proceedings will undoubtedly serve as a testament to the dedication and intellectual prowess of our esteemed contributors. As the Head of the Department of MBA, I am particularly thrilled to witness the collaborative spirit between mechanical engineering and management disciplines. In today's interconnected world, the synergy between technology and effective leadership is more crucial than ever. May this conference be a platform for the exchange of knowledge, the fostering of interdisciplinary collaborations, and the initiation of discussions that will drive progress in both mechanical engineering and management realms. I encourage all participants to engage actively, share insights, and build networks that will endure beyond the confines of this conference.

I extend my gratitude to the organizers, participants, and contributors whose collective efforts have made this event possible. Your commitment to advancing knowledge and promoting excellence is truly commendable. Wishing you all an intellectually stimulating and rewarding conference experience.



Dr. Kondekal Manjunatha

Convener, ICAMEM - 2023
Associate Professor, Mechanical Department,
RYMEC, Ballari



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Convener, ICAMEM - 2023
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Mr. V M R Hiremath

Coordinator, ICAMEM - 2023
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RYMEC, Ballari

MESSAGE

Dear Esteemed Colleagues, Participants, and Distinguished Guests. It is with great pleasure and anticipation that we extend a warm welcome to each of you to the International Conference on Advances in Mechanical Engineering & Management (ICAMEM – 2023). As the Conveners of this prestigious event, we are delighted to witness the convergence of brilliant minds from around the globe to explore and deliberate upon the latest advancements in the realms of Mechanical Engineering and Management. This conference serves as a unique platform for professionals, researchers, and academicians to share their expertise, exchange ideas, and foster collaborative efforts that will undoubtedly contribute to the ever-evolving fields of Mechanical Engineering and Management.

Our distinguished keynote speakers and panellists, hailing from diverse backgrounds and industries, promise to deliver insightful talks that will broaden our perspectives and inspire innovative thinking. The meticulously curated sessions and workshops are designed to provide a comprehensive overview of the cutting-edge research and developments in both Mechanical Engineering and Management practices.

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FABRICATION OF ULTRASONIC WELDING MACHINE USING ULTRASONIC HORN AND GENERATOR

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Abstract: Ultrasonic welding is recognized as the one of the most often used method for joining of thermoplastics. In Ultrasonic welding avoiding thermal decomposition and increasing the weld area are divergent factors in order to enhance the strength of welded polymers. Aim of the project is to review the literature of ultrasonic welding of plastics along with different types of ultrasonic horn and ultrasonic generators used for welding process. Procurement of flat faced Ultrasonic horn and ultrasonic generator of 20kHz frequency, construction of Mild steel support structure along with roller to advance the joining plastic. Higher frequency mechanical vibrations are applied to two plastic parts to be joined through a flat faced ultrasonic horn, this generates heat and locally melts the plastic materials and joins the thermoplastics without filler material.

Keywords: *USW, Ultrasonic Horn, Ultrasonic Generator.*

DEMEANOR ANALYSIS OF SPINAL CORD USING PLIABLE BASED SENSOR

¹Dr. M Neela Harish

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Department of Bio Medical Engineering

Rajalakshmi Engineering College

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Abstract: Improper sitting position causes curvature of spinal cord. This is due to the longtime usage of smart phone and laptop by youngsters, IT professionals and working staff which leads to neck pain and low back pain and in turn leads to spinal related disorders. Best way to prevent this is by keeping a good posture as a daily routine. The focus of this paper is to build a wearable device to detect wearer's bad posture and alert the user to return back to the erect position. As well as provide feedback through voice module and LCD display. In this we use accelerometer sensor for detecting the bending angle once poor posture is detected, and it is processed through Arduino. Massager is attached with this device using DC motor to reduce low back pain and it is switched on whenever needed. Through this project we can train the user to maintain a good posture through its continuous use and we also provide massager to the user and it is used whenever the user experiences an ache in the low back.

A REVIEW ON FABRICATION ROUTES AND MECHANICAL PROPERTIES OF AL BASED METAL MATRIX COMPOSITES

¹Sharanappa Koni, ²Dr. Kori Nagaraj, ³Poornima K, ⁴Dr. Madeva Nagaral

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⁴ Design Engineer, Aircraft Research and Design Centre, Hindustan Aeronautics Limited, Bangalore, India.

Abstract: MMC's has an advantage over other composites because of their ability to resist high temperatures, moisture, radiation and zero outgassing at vacuum, thermal and electrical conductivities, enhanced mechanical properties. Among the several available matrix materials, aluminium and its alloys are widely used to produce MMC's. Some of the attractive properties of aluminium are less weight, economically feasible, easy to process with good mechanical characteristics. This paper reviews various combination of matrix and reinforcement materials available for metal matrix composites, different fabrication methods used and recent studies on mechanical properties of aluminium based metal matrix composites.

PERFORMANCE CALCULATIONS OF THREE IN ONE AIR CONDITIONER

¹K C Mahendra, ²Channaveera Swamy J M, ³Javeed S, ⁴Pavan Kumar B K, ⁵Prince Kumar Singh,
⁶Raghavendra M

¹Assistant Professor, ²Technical Staff, ³⁻⁶UG Students

¹Department of Mechanical Engineering,

¹RYM Engineering College, Ballari, Karnataka, India

Abstract: In the realm of mechanical engineering, the driving force is encapsulated by the term "CHANGE." This concept is at the core of our new project, a pioneering foray into the domain of air temperature regulation, closely intertwined with human comfort. In the pursuit of accommodating both technological breakthroughs and the evolving needs of individuals, our project has emerged as a response. Our venture is centered on the fusion of air temperature management and human comfort, addressing the dichotomy between extreme heat and cold. The crux of our innovation lies in the manipulation of water cooler output to effectively modulate the ambient air's temperature. By amalgamating a cooling system within a singular unit, we propose a revolutionary solution that promises to usher in economic practicality while offering comfort-enhancing conditions universally. This project reflects our dedication to transforming the conventional paradigms of temperature control and advancing the synergy between technology and human well-being.

Keywords: *Piston, Reciprocating Compressor, Design, Specification, Performance characteristics.*

STUDY ON FABRICATION AND MECHANICAL PROPERTIES OF EPOXY/JUTE/CSP FIBER REINFORCED HYBRID COMPOSITES

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Abstract: Composite materials gaining more importance as structural materials in the present day of engineering design and development activity. Natural fiber reinforced composites (NFRCs) have gained significant attention in recent years due to several key reasons such as; environmental sustainability, biodegradability, reduced energy consumption, health and safety, recyclability, and regulatory compliance. Among natural fibers jute are extensively used due to their strength and cost-effectiveness biodegradability and eco-friendliness. In the present project work, epoxy/Jute/ coconut shell powder (CSP) fiber reinforced hybrid composites were fabricated using hand layup and bag molding technique. Jute fiber is added 10, 20 and 30 wt % and CSP kept constant of 10 wt% in all composites. The test samples were evaluated for mechanical properties like tensile, flexural, hardness and impact strength. It is observed that hybrid composite containing 30 wt% of jute fiber and 10 wt% CSP exhibits the maximum tensile strength and modulus compared to the composites containing 10 and 20 wt% of jute fiber. The flexural strength and modulus values also showed the increasing trend as percentage of jute increases. Hardness and impact strength values improved with increase in jute percentage. The composites developed in this project work can be used for the applications which require high stiffness and load-bearing capabilities.

Key words: *hybrid composites, jute, natural, fibre.*

CAD MODELLING AND STUDY ON RUPD (REAR UNDERRUN PROTECTION DEVICE) STRENGTH THROUGH FEM ANALYSIS: A COMPARATIVE STUDY USING SOLID WORKS AND ANSYS SOFTWARE

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Abstract: The World Health Organization reports that road traffic accidents remain a global epidemic, tragically claiming 1.35 million lives yearly. One significant contributor to this alarming statistic is collisions involving cars and heavy trucks. Innovative safety measures, such as Rear Underrun Protection Devices (RUPDs), must be developed and implemented to address this issue. This study evaluated a new RUPD design based on the Indian Automotive Standard of RUPD regulations. This study used 3D-CAD modelling and Finite Element Analysis (FEA) to create a robust RUPD design that could withstand collision forces. Through FEA simulations, we discovered that the RUPD had excellent energy absorption capabilities and reduced deformation during impacts. The 3D-CAD design of this new RUPD emphasises the crucial role RUPDs play in enhancing road safety. SolidWorks CAD modelling and FEM analysis techniques using SolidWorks Simulation & Ansys Software are potent tools for optimising RUPD performance & strength parameters based on deformation for given loading and boundary conditions, setting a benchmark for future research and development efforts in road safety.

Keywords: *Road safety, Rear Underrun Protection Devices (RUPDs), CAD modelling, Finite Element Analysis (FEA), SolidWorks, ANSYS, Automotive safety.*

A COMPREHENSIVE REVIEW OF SDT: EXPLORING CHALLENGES, AND IMPACTS

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Abstract: SDT-Self Determination it has been recognized widely that cope up the motivation of human it always helpful on the behavior as well as well-being Theory or Human Motivation Theory it provides the theoretical Frame-Work to improve employees motivation and to encourage good output such as well-Being of employees, better in Relationship In the Organization and Commitment towards the work. It has been introduced by Deci Ryan in 1980s it always investigates about the individual employee to recognize the SDT. This article Paper is aim to investigate how (SDT) Self Determination Theory exploring about challenges and impact of the employees in the organization.

Keywords: *SDT, Stress management, Good Relationship, Motivation, Intrinsic and Extrinsic.*

AN ANALYSIS OF OPTIMIZATION TECHNIQUES FOR PLANT LAYOUTS IN IMPROVING THE PERFORMANCE – A CASE STUDY

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Abstract: Plant layout is the art and science of bringing together men, machines, materials, methods and supporting facilities in form of given arrangements that suits individual industrial activity to have benefits maximizations through economy, efficiency, effectiveness and productivity. To have better performance optimizing product movements is essential, for this the relative techniques are needed. There are optimization techniques are available namely simulation technique, Heuristic techniques such as Genetic Algorithms (G A). Simulated Annealing (SA) and Tabu Search are the fundamental and commonly used heuristic methods for optimization of the plant layout design. The idea of this paper is to analysis' the few plant layout techniques in order to improve the overall performance of the production system at large. The various measures of the plant layout viz; bottleneck rate, idle time and percentage utilization of men, machines, space and equipment can be improved by effective analysis of plant layout techniques. The researchers have been attempted in order to find optimum plant layout design by using the various plant techniques. At large the simulation abased optimization techniques is more suitable and preferable plant layout technique. This paper present literature, findings and important research direction on plant layout methods proposed a combination of heuristic method base on simulation.

Keywords: *Plant layout, optimization techniques, review, simulation.*

A REVIEW ON MICRO-ALGAE CULTIVATION FOR BIOFUELS PRODUCTION INTEGRATING WITH THE SUGAR FACTORIES

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Abstract: The possibility of using microalgae as a feedstock for the creation of biofuels for sustainable transportation has attracted a lot of interest. Despite its potential as biofuel sources, the large-scale production of biofuels from microalgae is still in doubt, partly because the method does not seem to be feasible and it turns out to be expensive in terms of both capital and energy. It is crucial to combine microalgal production with other methods in order to achieve low-cost nutrient and energy utilization. It is crucial to combine microalgal production with other methods in order to achieve low-cost nutrient and energy utilization. The ability of a sugar factory's wastewater and flue gas to promote the growth of microalgae for the generation of biofuel and biofertilizer is assessed in the current study.

A REVIEW ON SMART MATERIALS, TYPES AND APPLICATIONS

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Abstract: Materials that have been modified to respond in a predictable and reversible manner to external stimuli, such as a specific amount of mechanical stress or a specific temperature, among others, may be referred to as smart materials. The term "responsive materials" also applies to smart materials because of their responsiveness. Although "reactive" materials would be a more appropriate translation, "active" materials are more frequently used. There are many different types of smart materials, such as shape memory alloys, magnetorheological (MR), electro-rheological (ER), and piezoelectric materials. For example, the viscosity of ER and MR fluids can be changed by adjusting the electric supply, and the alignment of the particles between the electrodes can be changed by varying the strength of the electric field. For the first time, these smart materials have been deployed in the automotive and aerospace industries for a variety of applications. This paper highlights the application and use of smart materials.

Keywords: *Materials, responsiveness, smart materials, applications.*

DESIGN & FABRICATION OF QUADRICYCLE

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Abstract: For saving the fuel and electricity, vehicle which can be ecofriendly we design and develop human power quad cycle capable of carrying four people. It is four wheel human powered land vehicle. The problem of energy saving is, at present, more and more important. Nowadays we are heading towards the energy crisis as depletions of fossil fuel is at very high rate, there is need of specific technology which maybe in some way to help conserve much of energy possible. This pedal cycle allows in the rear steer accommodating up to four riders, Quadricycles are a relatively new class of small fuel-efficient vehicles used in rural or urban area. This cycle can be worked on the four-bar chain mechanism; it is a suitable compact model to overcome traffic and parking problems. There will be no gasoline required, zero emission, cheaper in maintain, less wear and tear, four wheel stability, provide exercise, more comfortable.

Keywords: *four- wheel human power land vehicle, safety, zero emission, environment friendly.*

DESIGN AND FABRICATION OF MANUALLY OPERATED FLOOR CLEANER

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Abstract: Mechanically operated floor cleaner is a system that enables cleaning of the floor by the help of mechanical machine elements. The present work targets to use mechanically operated floor cleaner for large floor in house-hold purposes and office floors. The cleaning purpose is specifically carried out by continuous relative motion between a scrubber and the floor surface. During the cleaning and moving operation of vehicle a propulsion mechanism such as driven gear wheels and guide wheels for the dry tracking on the floor surface to be cleaned, supply of water is done by water tank, scrubbing action is done by the scrubber directing water towards rear end. Preferably, a sweeper mechanism is mounted on the body forwarded by propulsion mechanism and operated for sweeping of the floor surface. A pair of bevel gears is used to govern the motion of system which takes the input from the wheels and feeds it back to the brush.

Keywords: *Guide wheels, bevel gears, disc brush, bearings, manual cleaning, gear speed ratio, etc.*

DESIGN AND ANALYSIS OF SIX BAR MECHANISM USING CATIA V5 AND ADAMS VIEW SOFTWARE

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Abstract: The design and analysis of a Six Bar Mechanism play a crucial role in various engineering applications, from automotive suspension systems to robotic arms. In this study, CATIA V5 and Adams View software are employed to create a comprehensive model of Six Bar Mechanism and perform a thorough analysis by using Adams view software. CATIA V5 is utilized for the initial design phase, allowing for precise 3D modeling and visualization of the six bar mechanism parts. This software facilitates the creation of a virtual prototype, enabling to make necessary adjustments and optimize the design of six bar mechanism before analysis in Adams view software. The CATIA V5 facilitates the conversion of CAD model file of six bar mechanism to stp format. Then stp format of six bar mechanism from CATIA V5 is imported in Adams view software. After importing the CAD model of six bar mechanism from CATIA V5 to Adams view, the Adams View is employed for Kinematic analysis, simulation of the motion and behavior of the Six Bar Mechanism under different operating conditions and Plotting the graphs of six bar mechanism. This combination of Catia V5 and Adams View provides a powerful toolset for the design and analysis of complex mechanical systems, ensuring efficiency, accuracy, and reliability in engineering projects involving Six Bar Mechanisms.

Keywords: *Six Bar Mechanism, CATIA V5, Adams software, Kinematics analysis, Movement, Simulation.*

COMPARISION OF PLASMA SPRAY AND PVD COATINGS ON DIFFERENT CUTTING TOOL

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Abstract: In this research work by considering Six different Alloys namely SS316,SS304,SS410, SS440C, Ti-6Al-4V and HSS, plasma spray and PVD coatings is carried out by using different powder particles on these tools to increase the tool hardness life and comparisons made on these tools and from experimental results it is found that HSS and Ti-6Al-4V very good coating properties compared to other tools And comparing the plasma spray and PVD coatings, The PVD coating with TIN shows good results with coating thickness of $\sim 0.5 \mu\text{m}$ to $\sim 3 \mu\text{m}$. and increases tool life.

Keywords: *SS316, SS304, SS410, SS440C, Ti-6Al-4V, HSS, physical vapour deposition with sputtering coating process and plasma spray coating.*

INVESTIGATION OF TOOL WEAR AND TOOL LIFE WITH OPTIMIZATION OF PARAMETERS ON DIFFERENT CUTTING TOOL ALLOYS

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Abstract: In this research work the Investigation of Tool Wear and Tool Life with Optimization of parameters on different tool alloys on S1(SS316), S2(SS304), S3(SS410), S4(SS440C), S5(HSS), S6 Titanium alloy gradeS6 (Ti-6Al-4V) Tool material ,Workpiece material ,Max. Time elapsed(in min.)Flank wear(in mm),Wear rate m/min For mild steel workpiece material at low cutting speed the shear force of the SS440C(S4) material is high as compared to the HSS(S6) tool.For aluminium workpiece material, at lower cutting speed SS316(S1) has a greater Shear force than the Titanium alloy (Ti-6Al-4V) (S5), but at higher cutting speeds Titaniumalloy(Ti-6Al-4V)(S5)was found to have higher Shearforce than SS316(S1).For mild steel workpiece material, at all cutting speeds tool life of HSS (S6) and SS440C(S4) was found to be relatively close.For aluminium workpiece material, at all speeds Titanium alloy (Ti-6Al-4V) (S5) was found to be having longer tool life than SS316(S1) and (Ti-6Al-4V) S5 tool cost is very high compare to other tools (S6) (S4)(S3) (S2)(S1). Finally the cutting tool Titanium alloy (Ti-6Al-4V) (S6) HSS (S5) is good compare to other alloy materials.

Keywords: S1(SS316), S2(SS304), S3(SS410), S4(SS440C), S5(HSS), S6 Titanium alloy gradeS6 (Ti-6Al-4V) Tool material, Optimization of parameters.

COMPARISON OF EXPERIMENTAL RESULTS OF DIFFERENT TOOL ALLOYS MATERIALS WITH FEA ANALYSIS

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Abstract: In this research work the Investigation of Tool Wear and Tool Life with Optimization of parameters on different tool alloys on S1(SS316), S2(SS304), S3(SS410), S4(SS440C), S5(HSS), S6 Titanium alloy gradeS6 (Ti-6Al-4V) Tool material, Workpiece material, Max. Time elapsed(in min.), Flank wear(in mm), Wear rate m/min For mild steel workpiece material at low cutting speed the shear force of the SS440C(S4) material is high as compared to the HSS (S6) tool. For aluminium workpiece material, at lower cutting speed SS316(S1) has a greater Shear force than the Titanium alloy (Ti-6Al-4V) (S5), but at higher cutting speeds Titanium alloy (Ti-6Al-4V) (S5) was found to have higher Shear force than SS316(S1). For mild steel workpiece material, at all cutting speeds tool life of HSS (S6) and SS440C(S4) was found to be relatively close. For aluminium workpiece material, at all speeds Titanium alloy (Ti-6Al-4V) (S5) was found to be having longer tool life than SS316(S1) and (Ti-6Al-4V) S5 tool cost is very high compare to other tools (S6) (S4)(S3) (S2)(S1). Finally, the cutting tool Titanium alloy (Ti-6Al-4V) (S5) and HSS (S6) is good compare to other alloy materials with FEA analysis is carried with less 10% error.

Keywords: S1(SS316), S2(SS304), S3(SS410), S4(SS440C), S5(HSS), S6 Titanium alloy gradeS6 (Ti-6Al-4V) Tool material, FEA analysis, Optimization of parameters.

DYNAMIC AND IMPACT ANALYSIS ON BATTERY PACK FOR AN E-BIKE

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Abstract: Global warming has been a problem for the world during the last few decades. Burning fossil fuels to produce energy may accelerate technological advancement, but it also causes resources to degrade and the atmosphere to fill with greenhouse gases. Due to its efficiency, environmental friendliness, and quiet operation, EV use is unavoidable. Battery storage systems (BSSs) are into since they are the primary power source for EVs. The EV sector generally prefers Li-ion batteries within this context. The two main obstacles to widespread electrification of the transportation industry for vehicles on roads are safety and dependability. Due to factors like constant mechanical vibration transmission, exposure to strong impact pressures, and thermal runaway, current Li-ion battery packs are vulnerable to failure. Due to their extreme sensitivity to ambient temperature, pressure, and dynamic mechanical loads, lithium-ion (Li-ion) battery packs in electric vehicles (EV) are susceptible to failure in these situations. There will be varying degrees of strains and deformations as a result. The safety of the battery pack, in turn, depends on the mechanical characteristics of the battery pack, such as its resistance to deformation and vibration shocks. The vehicle safety heavily depends on the safety of battery pack which in turn is dependent on its mechanical features, such as the ability to resist deformation and vibration shocks. In this study, a design optimization methodology is proposed to optimize the features of mechanical design (e.g., minimization of mass, maximization of minimum natural frequency and minimization of maximum deformation) of the battery pack enclosure.

Keywords: *EV- Electric vehicle, BEV-Battery electric vehicle, BP-Battery pack, internal combustion engine (ICE) hybrid electric vehicles (HEVs), lithium-ion (Li-ion).*

INFLUENCE OF PROCESSING PARAMETERS ON THE PROPERTIES OF 3D-PRINTED POLY (LACTIC ACID) - THERMOPLASTIC POLYURETHANE BLENDS

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Abstract: Additive manufacturing of smart polymers is an emerging field of research because the structure of these materials responds to external stimulus. 3D printing has been employed to print polymers with shape memory properties using Fused Filament Fabrication (FFF) machines. FFF machines are fed with commercially available filament feedstock. In this study, Polylactic acid and thermoplastic polyurethanes (TPU) blends with different composition ratio were processed by varying printing parameters to evaluate their impacts on the mechanical properties. Processing parameter such as such as infill percentage and raster angle on mechanical behavior have been carried out. The obtained results indicated that, increase of infill percentage tend to increase the elastic modulus and tensile strength significantly and the decrease of print angle increased the elastic modulus. However, increasing the infill percentage decreased the significant impact of change of print angle on elastic modulus. The obtained results showed increase in maximum strain values as the infill percentage is increased except when the sample is printed at 0°. Overall mechanical results indicated that, without sacrificing any tensile strength, the composite with 25 % TPU exhibited better toughness than the neat PLA and can be printed similar to that of PLA. Further, scanning electronic images reveals that, blends showed a homogeneous structure with fibrillar morphology. The results indicate that plastic free forming is an effective technique for creating next generation 4D materials.

Key words: *Polyurethane, stimulus, printing, Additive manufacturing.*

A REVIEW ON LIQUID STATE PROCESSING TECHNIQUES OF METAL MATRIX COMPOSITES

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Abstract: The production processes have a significant influence on the mechanical properties as well as the cost of production. Liquid state processing of MMC's is eye-catching to many industries as they are relatively simple and economical. These processes include either the infiltration methods of molten metal into preforms or fibre pack or by the casting methods such as mixing of molten metal with reinforcement particles This section gives an overview of the various liquid state processing techniques available for the production of MMCs.

DESIGN AND ANALYSIS OF 360° WHEEL ROTATING CHASSIS USING CREO PARAMETRIC 3D MODELING

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Abstract: The normal wheel vehicles face more problems like parking, U turn and much more which consumes more time. These problems can be avoided using 360⁰ degree wheel rotating chassis. The initial dimensions and weight for the vehicle is considered from the internet as a reference. The main objective of this paper is to model and perform static analysis on the chassis of a four-seater car. The initial design for the chassis was a space frame body which is very rigid and had very less deflection. The second and final chassis is a ladder type chassis which is most common chassis type being used in India. The difference in deflection between both the chassis type is very less, which is about 0.3235 mm for a reasonable reduction in weight which is about 120 Kg. The simulation part is carried out in ANSYS software. The result is selection of best suitable material for chassis on the basis of ANSYS and theoretically calculated result.

Keywords: *Chassis modelling, Structural Analysis, and ANSYS.*

OPTIMIZATION AND MICROSTRUCTURAL CHARACTERIZATION OF FRICTION STIR WELDED DISSIMILAR MATERIALS: A REVIEW

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Abstract: These days, a wide variety of cutting-edge techniques for joining are accessible in order to meet the requirements of the process problems and to connect the distinct application domains of the industrial sector. Industrial applications in the sectors of autos and aircraft are anticipating the development of procedures that will connect diverse combinations of materials to achieve lightweight and increased performance from engineering designs. This will ensure that current difficult desires are met. In light of the expanding scope of the research, which now includes identifying appropriate material combinations for the purpose of achieving the goal of lower weight and also satisfying application-related characteristics, friction stir welding has emerged as the ideal platform on which to demonstrate fresh forms of material integration. Friction stir welding (FSW) is kind of solid-state bonding operation, plays vital role in industrial sectors like aerospace, automotive and manufacturing industry. Objective of this paper is to research and analyze the influence of critical parameters through FSW. Hence review based on process-based methodology of different materials like ferrous materials, non-ferrous materials and dissimilar material has been focused. Parameters influencing the operations and their effect on mechanical behavioral in the respective categories of material inter-mixing has been highlighted. Further recommendations indicates that FSW can also be used for effective application in case of polymeric materials.

Keywords: *Dissimilar Materials Friction Stir Welding, Microstructure, Tensile Strength, Hardness.*

SLURRY EROSION WEAR BEHAVIOR OF MILD STEEL PLASMA SPRAYED WITH TITANIA

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Abstract: Surface treatment technologies present an effective way of combating degradation of materials. The causes of degradation can be phenomenon such as wear, corrosion and oxidation. Surface treatment offers a method of protecting the base material without sacrificing its bulk properties. Among various surface modifications technologies, thermal spraying has emerged as an important tool for achieving tailor made engineering surfaces by depositing coatings on surfaces. In the present investigation, substrates prepared from mild steel are coated with TiO₂ by plasma spraying and evaluated for resistance to slurry erosion. TiO₂ powders with particle size of about 50µm was used and uniform coatings of thicknesses 100µm was obtained. Slurry erosive wear tests were conducted in 3.5% NaCl solution with sand as erodent. The resistance of coated specimen for slurry erosion were found to be higher than the uncoated substrates for identical test conditions.

Keywords: *Plasma spray, Titania coating, Mild Steel, Slurry Erosion.*

DESIGN AND ANALYSIS OF FOUR-BAR MECHANISM IN ADAMS VIEW

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Abstract: The aim of this article is to design and analysis of functional four-bar mechanism in Adams View software. A four-bar mechanism is type of mechanical linkage that consists of four rigid bars (or links) connected together by joints. These mechanisms are commonly used in engineering and design to transmit motion or force from one point to another. The four bars are typically connected by a combination of revolute (rotational) and/or prismatic (linear) joints. The simplest closed chain movable linkage is a four-bar linkage, commonly known as a four-bar mechanism. It comprises four bodies called bars or links joined in a loop by four joints. The joints are typically constructed, so the links travel in parallel planes, and the assembly is known as a planar four-bar linkage. The configuration and arrangement of these joints determine the type of motion and mechanical advantage the mechanism can achieve. The present study four bar mechanism involved determination of position, velocity and acceleration characteristics of crank, coupler and output link using ADAMS VIEW software. The obtained result from the software are presented in graph which represent the mechanism behavior and its working aspects. The design and analysis of a four-bar mechanism using Adams software has proven to be a valuable and insightful endeavor. Adams was instrumental in conducting Kinematic simulations and analysis of the four-bar mechanism. Adams powerful simulation capabilities allowed for the investigation of the four Bar Mechanism behavior under different Position, Velocity, and Acceleration conditions. This Adams view was crucial in optimizing the design for desired performance characteristics and ensuring the four Bar mechanism reliability in real-world applications. By using Adams view the graphs obtained are accurate due to this we can save our valuable time in the overall process. The Kinematic simulation of Adams view collectively provided a comprehensive solution for achieving a robust and well performing four Bar Mechanism.

Keywords: *Four-Bar Mechanism, Adams software, Kinematics analysis, Simulation.*

A REVIEW ON ADVANCEMENTS IN SOLAR FLAT PLATE COLLECTORS

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Abstract: Solar collector is an important technology for the effective utilisation of solar energy that the earth is blessed with. Flat plate solar collectors present a simple and easy to maintain design and thus are widely used for low and medium temperature applications. But being less efficient than alternatives, justifying the initial investment of flat plate solar collectors becomes difficult in the long run. This paper presents the efforts of researchers in the past some years to improve the efficiency of flat plate solar collectors through the improvement and optimization of the existing design. This paper will be beneficial for exploring the range of research avenues in the field of optimization and efficiency improvement of flat plate solar collectors .

Keywords: *Solar energy, Solar collector, efficiency, Design.*

THERMO-PHYSICAL CHARACTERISTICS OF ZINC OXIDE/GRAPHENE HYBRID NANOFLUID AND CFD ANALYSIS OF HEAT EXCHANGER PERFORMANCE

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Abstract: This research paper investigates the thermo-physical characteristics of a zinc oxide/graphene hybrid nanofluid and its impact on the performance of a ceramic-coated heat exchanger. The nanofluid is prepared by dispersing zinc oxide and graphene nanoparticles in a 50:50 mixture of ethylene glycol and distilled water. The thermal conductivity, viscosity, density, and specific heat capacity of the nanofluid are measured at various concentrations. Computational Fluid Dynamics (CFD) simulations are performed to analyze the heat exchanger's performance using the nanofluid. The results reveal that increasing nanoparticle concentration enhances thermal conductivity and viscosity while reducing specific heat capacity. The CFD analysis shows improved convective heat transfer and temperature distributions in the heat exchanger with the nanofluid. The findings demonstrate the potential of the zinc oxide/graphene nanofluid in enhancing heat transfer efficiency, which has implications for designing more efficient and cost-effective heat exchangers for various industrial applications.

Keywords: *Zinc-oxide, Graphene, Ethyl glycol, Nanofluid, Heat transfer efficiency, CFD.*

LINE FOLLOWING ROBOT

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Abstract: Line following is one of the most important aspects of robotics. A Line Following Robot is an autonomous robot which can follow either a black line that is drawn on the surface consist in go for contrasting colour. It is designed to move automatically and follow the line. The robot uses arrays of optical sensors to identify the line, thus assisting the robot to stay on track. The array of correct sensor makes its movement precise and flexible. The robot is driven by DC gearmotors to control the movement of the wheels. The Arduino Uno inter face is used to perform and implement algorithms to control the speed of the motors, steering the robot to travel along the line smoothly. This project aims to implement the algorithm and control the movement of the robot by proper tuning of the control parameters and thus achieve better performance. In addition, with this LCD interface can be added in order to display the distance travelled by the robot. It can be used in industrial automated equipment carriers, small house hold applications, tour guides in museums and other similar applications, etc.

UNDERSTANDING THE TOURIST BEHAVIOUR IN RURAL PILGRIMAGES CENTRES: A STUDY OF SELECT PLACES IN BALLARI DISTRICT

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Abstract: Pilgrimage tourism holds a significant position in India's multifaceted travel sector, encompassing a wide spectrum of religions and faiths. India, as a culturally rich and unified nation, boasts an abundance of pilgrimage destinations that cater to followers of various faiths from around the world. Although India's secular identity ensures the existence of pilgrimage sites for all religions, the preeminence of Hinduism has led to a profusion of Hindu pilgrimage destinations. This study focuses primarily on assessing the perspectives of tourists regarding the promotion of pilgrimage tourism in Ballari District. Ballari District, situated in the heart of India, is a region replete with spiritual significance and offers a unique blend of cultural heritage and religious diversity. By understanding tourists' views on the promotion of pilgrimage tourism in this district, we can gain valuable insights into how to harness its potential for attracting visitors and fostering economic growth, all while preserving its rich religious and cultural heritage

Keywords: *Spiritual Tourism, Hindu pilgrimage, Travel landscape etc.,*

INVESTIGATION AND ANALYSIS AND THE IMPACT OF EMPLOYEE ENGAGEMENT ON ORGANIZATIONAL DEVELOPMENT AT THE HALLEY'S BLUE COMPANY, BELLARI

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Abstract: Employee engagement plays a pivotal role in the success of any organization, as it directly impacts employee morale, productivity, and overall business performance. This abstract provides an overview of the strategies and initiatives undertaken by Halley's Blue Bellary, a fictional company in the hospitality industry, to enhance employee engagement. Halley's Blue Bellary recognizes the significance of engaged employees in delivering exceptional guest experiences and sustaining a competitive edge. To achieve this, the organization has implemented several key strategies: **Effective Communication:** Halley's Blue Bellary places a strong emphasis on transparent and open communication. Regular team meetings, one-on-one sessions, and anonymous feedback channels have been established to ensure that employees' voices are heard and valued. **Professional Development:** The company is committed to nurturing talent from within. It offers a range of training and development programs to help employees acquire new skills, grow within their roles, and advance their careers. **Recognition and Rewards:** Halley's Blue Bellary has established a robust rewards and recognition program to celebrate employees' achievements and hard work. This includes bonuses, awards, and acknowledgment in front of peers. **Work-Life Balance:** The organization understands the importance of work-life balance and has implemented policies and practices to support it. Flexible working hours, remote work options, and wellness programs contribute to employees' well-being. **Employee Well-being:** Halley's Blue Bellary is committed to the physical and mental well-being of its staff. It provides access to healthcare facilities, counseling services, and wellness initiatives to help employees maintain a healthy lifestyle. **Employee Involvement:** The company actively involves employees in decision-making processes and

encourages them to contribute ideas for continuous improvement. Cross-functional teams are formed to address challenges and brainstorm innovative solutions. Diversity and Inclusion: Halley's Blue Bellary values diversity and inclusion and fosters a culture of respect and equality. Employee resource groups and diversity training programs are in place to promote a diverse and inclusive workplace. By implementing these strategies, Halley's Blue Bellary aims to create an environment where employees are not just satisfied with their work but are truly engaged and motivated to contribute their best efforts. This abstract provides a glimpse into the organization's commitment to employee engagement, ultimately resulting in enhanced guest satisfaction and sustainable growth in the competitive hospitality industry.

Keywords: Employee Engagement, Recognition and Rewards, Workplace, Employee Wellbeing, Diversity characteristics.

ANALYZING THE VALUATION AND EFFICIENCY OF IPO'S ON THE NSE PLATFORM

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Abstract: The primary focus of this study was to analyze the pricing and performance of equity Initial Public Offerings (IPOs) that were listed on the National Stock Exchange (NSE). The central goals included understanding the process of IPO issuance, conducting thorough assessments of both short-term and long-term IPO performance, and investigating how the emergence of the COVID-19 pandemic influenced the performance of IPOs. The research problem addressed in this study aimed to provide valuable insights to investors, with a particular emphasis on IPOs that were listed during the COVID-19 period in 2019. The study's intention was to empower investors with informed perspectives, aiding them in making prudent decisions when considering investments in IPOs, particularly those which are listed during pandemic. To effectively fulfill these objectives and tackle the research problem, the study employed standard return calculation formulas to gauge the performance of IPOs in both the short and long term. The results were presented using column charts, which served as a clear and visual means to analyze the data. Significantly, the study revealed a noteworthy observation that the COVID-19 pandemic had a substantial impact on the post-pandemic performance of IPOs. Engaging with this study enriched my understanding of IPOs, financial market.

A STUDY OF VOLATILITY OF INDIAN STOCK MARKET WITH CONTEXT TO BSE

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Abstract: Volatility refers to the degree of fluctuation or variation in something. It is a measure of how much something's value or price changes over time. This research is going to analyze the volatility of stock market by considering SENSEX 30 companies by taking returns of all 30 companies.

COMPREHENSIVE SECURITY ANALYSIS OF SELECTED STOCKS LISTED ON THE BSE: A COMPARATIVE STUDY

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Abstract: This research aimed to conduct a thorough security analysis of specific stocks listed in BSE. This analysis is made for the year 2022. The study had two main objectives firstly to assess the suitability of applying the CAPM model in the Indian stock market context, and secondly to conduct comprehensive performance evaluation of stocks belongs to distinct industries like Textile, Automobile, Pharmaceutical, and IT. The primary intention of this research was to offer valuable insights to potential investors, aiding them in making well-informed choices when selecting stocks from various companies. To enhance clarity in the analysis, visual aids such as column charts were utilized to compare general stock returns and CAPM returns, which served as a clear and visual means to analyze the data.

A DIAGNOSIS ON HUMAN CAPITAL RETURN ON INVESTMENT AT SRI BALAJI TVS MOTORS, BALLARI

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Abstract: The "Diagnostic on Human Capital Return on Investment" delves deep into the evaluation of investments in human capital within organizations, offering a holistic assessment of their effectiveness and efficiency. By extensively examining key facets such as recruitment, training, development, recognition and reward, and wellness programs, this study sheds light on the profound impact these investments have on an organization's overall performance and profitability. The findings of this study provide invaluable insights into how well companies harness their human resources to achieve strategic objectives, while also pinpointing areas for potential improvement and highlighting best practices. This research underscores not only the pivotal role of human capital in propelling business success but also offers actionable recommendations to optimize the return on investment in this critical asset, thereby guiding organizations towards more informed and strategic human resource management decisions. The study's compelling findings reveal that investments made in recruitment, training, recognition, and wellness programs have yielded remarkable returns, ranging from 200% to an astonishing 485.75%, resulting in an overall Human Capital Return on Investment of 330.07%. This underscores the substantial positive impact of the workforce on an organization's performance and financial gains. To sustain and build upon this success, the study advises organizations to continue prioritizing human capital development, particularly through employee development initiatives. Moreover, it emphasizes the importance of consistent monitoring and optimization of HR strategies to ensure competitiveness in the ever-evolving market landscape. These findings provide compelling evidence that investments in human resource development not only yield substantial returns on investment but are also indispensable for long-term organizational growth and prosperity.

Keywords: *Recruitment and Hiring, Training & Development, Recognition and Rewards, Wellness programs, Return on Investment.*

TRANSFORMING EDUCATION: THE EVOLUTION OF AI'S IMPACT FROM PRE-IMPLEMENTATION TO POST-IMPLEMENTATION

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Abstract: This article delves into the dynamic landscape of integrating artificial intelligence (AI) into educational systems, exploring the evolution of its impact from the pre-implementation phase to the post-implementation stage. Through a comprehensive analysis of diverse data sources, including academic studies, industry reports, and case studies, and questionnaires, the article sheds light on the various ways AI is being embraced by educational institutions worldwide. The article provides a holistic view of the transformative journey of AI in education, offering valuable insights for educators, policymakers, and technology developers. By addressing challenges and leveraging opportunities, the education sector can harness the full potential of AI to enhance learning experiences and prepare students for the evolving demands of the future.

Keywords: *Technology, Education, Artificial intelligence.*

CUSTOMER SATISFACTION ON PURE EV, JD MOTORS, BALLARI

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Abstract: Customer satisfaction is crucial for marketing and loyalty. JD Motors, under the PURE EV brand, focuses on electric vehicles and high-performance lithium batteries. They understand customer preferences, build trust, and deliver quality products. PURE EV faces challenges in market trends, competition, and technological advancements. They aim to expand globally and diversify production, focusing on innovation, employee motivation, and reliable transportation infrastructure. Theoretical research explores consumer satisfaction from various perspectives, including normative, psychological, and somatic. It assesses a company's products, services, and capabilities, using techniques like surveys, scores, and Kano models. The study aims to understand customer satisfaction levels and their perceptions of JD Motors' EV products in Ballari. It aims to understand consumer attitudes, strengths, weaknesses, customer opinions, awareness, and customer fulfilment stages. The research methodology includes primary data collection through questionnaires and secondary data from previous projects and internet sources. The study's limitations include a short time period, lack of proper interaction with consumers, and limited data collection in the Ballari region.

A STUDY ON IDENTIFYING CROSS CULTURAL ISSUES AND GIVE SUGGESTIVE SOLUTIONS AT BALA REGENCY BALLARI

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Abstract: The hotel industry is crucial for global economic growth, offering accommodation, dining, and hospitality services to travelers. Hotel Bala Regency, a 3-star hotel in Bellary, Karnataka, has over 80 employees and offers 55 elegantly designed rooms. However, research on this topic is limited in the hospitality and service industry. This research gap presents an opportunity to study the impact of technology on customer satisfaction, the role of technology in addressing it, and best practices for managing the issue. By addressing this research gap, researchers can contribute valuable insights to the field of hospitality and service management. The study examines cross-cultural management in the hotel industry, focusing on cultural diversity, employee engagement, guest satisfaction, intercultural communication, global operations, leadership, management styles, training, reputation, brand image, and ethical and social responsibility implications. It analyzes 70 Bala Regency hotel employees, analyzing the impact of cultural diversity on organizational culture, employee engagement, guest satisfaction, and service offerings. The company's workforce is relatively young, with 30.5 employees aged 18-25. Most employees have secondary education, but some lack it. The hotel focuses on excellent customer service, but needs improvement in food service and security departments. Addressing workplace challenges like language barriers, communication styles, and guest complaints requires training, mediation, cultural competence, equal opportunity hiring, and cultural exchange programs. Offering multilingual staff, translation services, and language classes can help overcome language barriers and promote cross-cultural teamwork. To improve productivity and career advancement, the company should offer training and development opportunities for employees, hire more staff in food service and security departments, and foster open communication. Address language barriers, mediation, cultural competence, equal opportunity hiring, market research, and offer multilingual staff or

translation services. Encourage effective communication, collaboration, and respecting diverse perspectives in cross-cultural teamwork. The business should improve customer support by providing training and development opportunities for employees, especially those without high school education. Educating employees on cultural competence, fair hiring procedures, and exchange programs can help organizations effectively manage cross-cultural Conflicts.

A COMPREHENSIVE STUDY ON LONG TERM RETENTION OF EMPLOYEES

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Abstract: Employee retention is a critical concern for organizations seeking sustainable growth and success. This abstract explores strategies for enhancing long-term employee retention specifically tailored to G-Square Relators, a real estate company located in Bellary. The real estate industry is characterized by competitive dynamics and evolving market trends, making employee retention paramount to maintain a competitive edge. This study delves into the unique challenges faced by G-Square Relators in retaining skilled and motivated employees in the Bellary region. Through a combination of qualitative and quantitative research methods, the study identifies key factors influencing employee retention, including organizational culture, compensation and benefits, career development opportunities, work-life balance, and effective leadership. The research highlights the significance of cultivating a positive organizational culture that fosters a sense of belonging and purpose among employees. It also explores the correlation between competitive compensation packages and employee commitment. Furthermore, the study investigates the impact of career growth pathways, training programs, and mentorship initiatives on employee engagement and long-term commitment.

Key Words: *Employee, Retention, skilled employees, Motivation, quantitative, qualitative.*

IMPLEMENTATION OF E-COMMERCE ON SMALL BUSINESS

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Abstract: As the digital landscape continues to evolve, small businesses face both opportunities and challenges in adopting e-commerce as a means of expanding their market reach. This survey study aims to investigate the extent and impact of e-commerce implementation among small businesses. **Benefits and Challenges:** We assess the perceived benefits and challenges associated with e-commerce adoption, including increased sales, cost-effectiveness, competitive advantage, and concerns related to cybersecurity and technology infrastructure. **Customer Experience:** We analyze the impact of e-commerce on customer experience, including convenience, accessibility, and personalization, and its role in customer retention and loyalty. **Future Prospects:** This research investigates the future outlook for e-commerce in the small business sector, including emerging technologies, market trends, and strategies for sustainable growth. Our findings contribute to a deeper understanding of the evolving role of e-commerce in small businesses and provide insights that can inform business owners, policymakers, and researchers in fostering the successful integration of e-commerce into small business operations. **Keywords:** E-commerce, Small Businesses, Adoption, Benefits, Challenges, Customer Experience, Future Prospects. Please note that this abstract is a general template and can be customized based on the specific focus and findings of your survey study.

Keywords: *Employee Engagement, Recognition and Rewards, Workplace, Employee Wellbeing, Diversity characteristics.*

A COMPREHENSIVE STUDY ON WORK LIFE BALANCE AT VON ROLL PVT LTD. BANGALAORE

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Abstract: Von Roll Holding AG, one of the oldest industrial businesses in Switzerland with a lineage dating back to 1803, has established itself as a prominent player in the energy and electricity generation sector. Through endeavours to create a positive and conducive work atmosphere, ensuring that its employees can efficiently manage their professional responsibilities while also enjoying quality time with their families and pursuing personal interests. Von Roll understands that a healthy work-life balance is essential for maintaining a motivated and productive workforce. By valuing the physical and emotional well-being of its employees, the company strives to enhance job satisfaction, foster loyalty, and encourage long-term commitment among its workforce. Through this approach, Von Roll Holding AG not only upholds its historic legacy of excellence in the energy industry but also demonstrates a modern and forward-thinking approach towards its employees' overall happiness and fulfilment. Von Roll also invests in employee development and growth opportunities, recognizing that a fulfilled and engaged workforce is crucial to maintaining a healthy work-life balance. The company offers training programs, workshops, and mentorship initiatives to empower employees with the necessary skills and knowledge for career advancement. By nurturing talent from within, Von Roll encourages a sense of loyalty and belonging among its employees, further contributing to a positive.

Keywords: *work life balance, professional life, von roll, job satisfaction, management.*

BEHAVIOURAL BIASES AND ITS IMPACT ON INVESTORS: A LITERATURE

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Abstract: Behavioural finance has been growing over the last twenty years specifically because investors rarely behave according to the assumptions made in traditional financial and economic theory. Behavioural finance is an-add on theory to the paradigm of finance. In contrary to the traditional and Markowitz modern theory of decision-making process, Behavioural finance theories incorporated Behavioural aspects to the investment decision making process. Behavioural biases are irrational beliefs or behaviours that can unconsciously influence our decision-making process. Research in psychology has evidenced and documented a range of decision-making behaviours called biases. These biases can affect almost all types of decision making, but have particular implications in relation to financial activities. These biases are related to how investors process information to reach decisions and the preferences they exhibit in the process of investment. As defined by Shefrin (1985), bias is nothing else but the inclination toward error. Understanding the effect of behaviour biases on the investment process, investors and their advisors may be able to improve economic outcomes and attain stated financial objectives. Simply identifying behavioural biases at the right time can save client from potential financial disaster. Investors while investing incur emotional and cognitive weaknesses that lead to faulty assessment in making trades/investment decisions. Kahneman and Reipe (1998) introduced biases of decisions and judgement as cognitive illusions. They stated that as visual illusions exist, errors in intuitive reasoning cannot be ignored. Financial decisions are made under severe complexities and uncertainties that influence investors/traders to believe on intuitions. Hence, the author stated that intuitions play a very important role in decision making. The present working paper aims to identify the future scope for further research in this area.

Key words: *Behavioural biases, investing pattern, investing behaviour, heuristic biases, frame biases.*

COMPREHENSIVE STUDY ON SECURITY ANALYSIS OF SELECTED STOCKS LISTED AT BSE-A COMPARATIVE STUDY

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Abstract: This research aimed to conduct a thorough security analysis of specific stocks listed in BSE. This analysis is made for the year 2022. The study had two main objectives firstly to assess the suitability of applying the CAPM model in the Indian stock market context, and secondly to conduct comprehensive performance evaluation of stocks belongs to distinct industries like Textile, Automobile, Pharmaceutical, and IT. The primary intention of this research was to offer valuable insights to potential investors, aiding them in making well-informed choices when selecting stocks from various companies. For this research secondary data is applied. To enhance clarity in research chi square test is applied to the returns. Visual aids such as column charts were utilised to compare general stock returns and CAPM returns, which served as a clear and visual means to analyse the data.

Key words: *Security analysis, CAPM, BSE Stocks.*

IMPACT OF CAPITAL STRUCTURE ON FINANCIAL PERFORMANCE OF SELECTED COMMERCIAL BANKS

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Abstract: This study examines the impact of capital structure on the financial performance of selected commercial banks. Capital structure plays a pivotal role in financial decision-making, determining a firm's effectiveness and value. It encompasses the blend of equity and debt a company employs for financing operations. The study utilizes the debt-to-equity ratio to measure capital structure and financial metrics like return on equity, return on capital employed, net interest margin, and net profit margin to gauge financial performance. Five years of data (2017-2018) from five commercial banks were analyzed using statistical tools such as regression analysis and ANOVA via PSPP software to test hypotheses and draw conclusions. The study reveals a significant and positive correlation between the debt-to-equity ratio and return on equity, net interest margin, and net profit margin. However, an inverse relationship is observed between the debt-to-equity ratio and return on capital employed.

AN EXPLORATORY STUDY ON GREEN MARKETING - ANALYSING CUSTOMER PREFERENCES AT BALLARI

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Abstract: The ecological and environmental issues take precedence. one of the elements that contributed to the growth of green marketing The promotion of ecologically friendly products is known as "green marketing," according to the American Marketing Association. Thus, green marketing encompasses a wide variety of actions such as product modification, manufacturing process modification, packaging adaptation, and advertising modification. Given the growing awareness of the effects of global warming, non-biodegradable solid waste, the harmful effects of pollution, and other environmental issues, green marketing refers to a holistic marketing concept in which product marketing, consumption, and disposal of Items and offerings occur in an environmentally friendly manner. Both marketers and customers are become more conscious of green products Despite the fact that a lot was spoken, about green marketing in the 1970s, the idea did delay till later 1980s. It all started in Europe in the early 1980s, when it was discovered that some manufactured items were damaging the environment. The procedure was divided into three sections. evolution utilizing eco-friendly branding since then. When the concept underlying ecological advertising was initially addressed During the late 1980s, it was still in its early stages. In the beginning utilizing eco-friendly branding an ecological focus was used. All marketing campaigns attempted to provide Sustainability problems issues.

Key words: *Green marketing, customer preference, Eco friendly products.*

EMPLOYEES SATISFACTION AT KANAKA DURGA RCC SPUN PIPE INDUSTRY, BALLARI

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Abstract: Employee satisfaction is a crucial aspect of organizational success, impacting productivity, staff retention, and overall business performance. A positive work environment that fosters employee satisfaction includes fair compensation, opportunities for growth and development, recognition for achievements, work-life balance, effective communication, supportive management, and a healthy organizational culture. When these elements are present, employees feel valued, respected, and appreciated, leading to increased satisfaction. Organizations that prioritize employee satisfaction recognize the direct links between employee satisfaction, customer satisfaction, and business success. They invest in creating a positive work environment, fostering open communication, and providing opportunities for growth and advancement. Regular monitoring and assessment of employee satisfaction through surveys, feedback mechanisms, and performance evaluations helps identify areas of improvement and address concerns. This prompt response can enhance employee satisfaction, boost morale, and create a thriving work environment that attracts and retains top talent.

A STUDY ON THE INVESTMENT INCLINATIONS OF UGC COLLEGE TEACHERS TOWARDS VARIOUS INVESTMENT ALTERNATIVES: A SPECIAL REFERENCE TO KARNATAKA STATE

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Abstract: Individual and institutional investors' decisions are significantly influenced by their investment inclinations. Market players, financial specialists, and policymakers who want to refine investment strategies and improve market efficiency must understand these inclinations. Investment inclinations of investors are not static; they keep changing based on so many factors, such as demographic factors, risk tolerance, type of investor, financial literacy level, peer influence, return expectations, time horizon, asset class allocation, etc. Hence, it is very crucial to know the investment inclinations of investors. Investment inclinations prioritize capital appreciation, income generation, preservation of capital, or a combination of these factors based on the investment's safety, liquidity, and profitability. The main purpose of this study is to determine the investment inclinations towards variable income investments and fixed income investments of UGC-scale teachers and to know the differences between investments and demographic variables such as gender, age, annual family income, designation, etc. The study is conducted using primary information gathered from UGC-scale teachers in the state of Karnataka. 80 respondents are given the structured questionnaire, which is then gathered using both Google Forms and hardcopy handouts. The data is analyzed using descriptive statistics, such as tables, percentages, and Garret ranking, and inferential statistics such as the chi-square test. The research results found that overall investment inclinations were towards the top three fixed-return products, such as post-office savings, KGID/insurance, and bank deposits, by the UGC college teachers. In the case of variable-income securities, the top

three products were mutual funds, equity shares, and real estate. Male UGC college teachers prefer the top three fixed-income products, viz., KGID/insurance, POS, and SSY, and the top three variable-income products, viz., real estate, mutual funds, and equity shares, respectively.

Keywords: inclinations, Preferences, fixed, variable, teachers.

IMPACT OF TECHNOLOGY AND EVALUATION OF CANDIDATE APPLICATION AND INTERVIEW PROCESS IN ONLINE MODE

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Abstract: The digital age has significantly impacted human resource management, particularly in the recruitment and selection processes. Online platforms have streamlined application submission and screening, allowing for a broader reach and diverse applicant pools. Automated systems save time for HR professionals, but raise concerns about potential biases in algorithms. Online interviews offer flexibility for candidates and interviewers, allowing for a deeper understanding of communication and interpersonal skills. However, technological glitches and lack of face-to-face interactions may impact assessment depth. The integration of AI and machine learning algorithms in candidate evaluation promises to enhance objectivity and efficiency, but ethical considerations and potential biases need continuous vigilance. The article emphasizes the need for a balanced approach, where technology augments human judgment rather than replacing it entirely. While technology accelerates the process and increases accessibility, the human touch remains essential for gauging cultural fit, soft skills, and emotional intelligence. A successful integration of technology requires a harmonious blend of automated processes and human expertise.

AN IMPACT STUDY OF PROBLEMS AND CHALLENGES OF HIGHER EDUCATION TEACHERS ON THE TYPE OF INSTITUTION WITH SPECIAL REFERENCE TO BALLARI CITY

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Abstract: Problems and challenges of teachers is never ending process. Even after adopting modern method of teaching, teacher face many situations that impact directly or indirectly on their career. It has become part and parcel of teacher's life. Teachers who possess competencies and who do not possess competencies both are one at the same in educational institution. Institution may or may not motivate and support their teachers but teachers always expect good support from their institutions to prove their competencies at work place. Every educational institution does have certain drawbacks, problems, competitions & challenges. The gap of the study is to find the impact of such problems & challenges that directly or indirectly effect on the competencies of the teachers. The aim of this paper is to study the differences in problems & challenges faced by the teachers of various types of institution viz., Government, Aided, Private and to find the impact of problems & challenges faced by the teachers of various types of institution viz., Government, Aided, Private and its effects on competencies of teachers. The independent variables considered for the study was problems & challenges of teacher and dependent variable are teachers of types of institutions. The article undergoes the study using empirical with convenient sample size of 65 teachers of higher education. Data was collected from primary source using structured questionnaire form higher education teachers of Government, Aided & Private of Ballari city, are the main respondents of the study. As the data collected couldn't reach the normality, Chi-square and Multi nominal logistic tools (Model fitting information, Goodness-of-fit, Pseudo R-Square, Parametric estimation classification)

was used for analysis in SPSS. The findings as per first objective discovers there is a significant difference of problems and challenges with the type of institutions and the finding as per second objective explore that there is significant impact of problems and challenges on teachers of different types of institutions.

Keywords: Problems & Challenges, Teachers of Higher Education Institution, government, aided and private.

DEMONETIZATION'S RIPPLE EFFECT: TRANSFORMING ONLINE BANKING AT SUCO SOUHARA SAHAKARI BANK BALLARI

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Abstract: The study explores the impact of the Indian government's 2016 demonetization policy on the online banking sector. The policy aimed to combat corruption, eliminate black money, and promote digital transactions. It led to increased digital adoption, improved infrastructure, and a shift in consumer behavior. SUCO Bank, a cooperative bank in Karnataka, played a crucial role in promoting financial inclusion through innovative services and remote branches. The study found that demonetization increased demand for online banking services, with respondents citing convenience, limited cash availability, and security as key motivators. To capitalize on this, banks should improve e-banking customer service, companies should adopt internet banking services, innovate features, and collaborate with organizations. Further research is recommended for online banking success in India.

Key Words: *Demonetisation, Online Banking, Banking Sector.*

ANALYZING DEBT MUTUAL FUND SCHEMES: A COMPARATIVE STUDY OF CORPORATIVE BONDS AND GILTS BONDS

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Abstract: This paper analyzes debt mutual fund schemes in India and compares the performance of corporate bond and gilt funds. The study finds that ICICI Prudential outperformed Birla Sun Life Corporate Bond, with the highest average return and Sharpe ratios. Aditya Birla Sun Life Gilt Bond, ICICI Prudential, and HDFC Gilt Bond offer high-return investments. The study also highlights the importance of investor awareness and education, as well as the need for a strong regulatory framework for the mutual fund industry. The data is collected through secondary data through money control website. The analytical research methodology is applied for this study and sharpes ratio is used for data analysis and interpreting the results. The study concludes which type of mutual funds are preferred for investment.

Key words: *Mutual funds, Corporative bonds, Guilt bonds.*

COMPARITIVE STUDY OF TRADITIONAL BANKING AND NEO BANKING SYSTEM

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Abstract: This particular study was conducted to understand the concept of neo banking system and the traditional banking system where the current market is booming with the neo banking facilities in the traditional banking the main aim of the study is to understand the major differences in the area of traditional banking and neo banking system and the I also came to know how the neo banking system is impacting the traditional banking and also the market places and the facilities of the neo banking system, also I was educated about the merits and demerits of neo banking & traditional banking and Strength, Weakness, opportunities and threats of the neo banking and future growth was studied.

Key words: *Indian Payment system, Banking, Finance, Neo Banking, Indian Banking.*

THE IMPACT OF MERGERS ON PROFITABILITY IN THE BANKING SECTOR

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Abstract: The paper discusses the impact of mergers and acquisitions (M&A) in the tertiary industry, particularly in the banking sector. It highlights that M&A can lead to market share growth and cost reduction, but can also result in increased prices and communication gaps. The authors note that India's M&A market is evolving, with a focus on digitalization, sustainability, cross-border mergers, strategic partnerships, and increased regulatory scrutiny. They also investigate the long-term profitability of bank mergers, finding that 77.7% of mergers lead to profits and 22.3% cause losses. They suggest that banks under losses should undergo mergers to survive in the market, as they can increase consumer base, reduce maintenance costs, and make the industry more profitable.

Keywords: *Mergers, Acquisitions, Profitability, Banks, Indian financial system.*

A STUDY ON EVALUATION OF TRADITIONAL PAYMENT AND DIGITAL PAYMENT SYSTEM IN INDIA

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Abstract: Indian payment system always have taken turn by turn until it reached today's stage of evolution which resulted in lightening fat payments, this paper examines the evaluation of traditional payment and digital payment system in India over the years. An honest attempt is made to review and check the history of payment system to know the factors and importance of the payment system and its integrity and correctness. This paper depicts that a payment system is only strong as its basics and foundations and also the success of the evolution is primarily based on the awareness of people who uses the payment system.

Key Words: *Banking system, Financial System, payment system, Traditional Payment, digital Payment.*

HEALTH CARE AND EDUCATION – A CATALYST FOR TRANSFORMING THE INDIAN ECONOMY

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Abstract: Healthcare has become one of India's largest sectors, both in terms of revenue and employment. Healthcare comprises hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance, and medical equipment. The Indian healthcare sector is growing briskly due to its strengthening coverage, services, and increasing expenditure by public and private players. India's competitive advantage lies in its large pool of well-trained medical professionals. India is also cost-competitive compared to its peers in Asia and western countries. The cost of surgery in India is about one-tenth of that in the US or Western Europe. The low cost of medical services has resulted in a rise in the country's medical tourism, attracting patients from across the world. Moreover, India has emerged as a hub for R&D activities for international players due to its relatively low cost of clinical research. Education is important for having awareness of almost everything in life and it is a basic right of every human being. The education system is very advanced in urban areas for people with good income sources but still needs to be improved for rural areas and people below the poverty line. The Educational Development of these two sections of the country determines the country's growth. As the government already leads and initiated new programs to motivate people to education still many obstacles prevent these programs from being successful. Some of the issues are lack of awareness, poverty, and poor infrastructure and facilities, resulting in many people leaving or not going to school.

Keywords: *Healthcare, Education, Revenue and Employment, Development.*

ONLINE EDUCATION - A BOON FOR WORKLIFE BALANCE

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Abstract: In today's contemporary world scenario, our professional life one must need to gain more education and knowledge to do a particular given task. A particular degree is very much necessary for higher level job posts. A certificate is required to get a task to perform and also to upgrade our knowledge, skills, in order to continue our journey in professional life. If we are a working employee for a full time, then really, it's a great wonder that how we are going to manage the "Time" in travelling and sincerely attend the classes effectively. Especially if we are working late night or having our personal family commitment. In today's challenging life one must keep on updating their knowledge, skills through the help of some certification courses. Because without the certification courses one cannot able to go for reputed top positions by doing the challenging task in the world. As today there is a drastic development in the field of information and technology which surprise all personal and professional activities. Today's knowledge and skills for doing a particular task or a job has very less life span because of the improvement in the science and technology. In present context everything was becoming outdated very easily in a very short span of time. So, to survive in the present competitive world one must keep on upgrading their skills and knowledge throughout their life.

Keywords: *Online education, work life balance, challenging days, science and technology.*

WORK LIFE BALANCE - NEED FOR CONTEMPORARY CHALLENGES IN INDIAN BANKING SECTOR

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Abstract: Dynamic fast paced world of money, share, credit, investments are explored by banking and finance. The most essential part of the economy is finance. Banking refers to a financial activity to manage and safeguard the hard earned money. It is providing liquidity in terms of money, assets which are utmost needed by individuals and businesses. Banking and finance helps to find systematic movement of money and money management. It caters to the needs of all sorts of individuals, small and large organizations by providing various loans and accounts. Banking industry is having transformational growth. Growth and innovation in banking sector is the challenge faced by the HR's. Up skilling and re-skilling, high volume skill based hiring, recruiting and retaining the millennial, learning and development, work force planning, employee performance and management are the challenges faced by the HR in banking due to its growth and transformation. Human resource today is one of the most significant sources of banks, in creating and surviving of the banking sector. Knowledge, abilities and skills of the human beings adds value and hence being it is called as Human capital. In the present market competition, the organization's success depends on qualified, contented and efficient workforce. This contented employees play a significant role in building the organization and act as a real asset of the organization. But due to today's increasing ego, stress, increasing greediness, endless satisfaction of employers or organization makes employees life so hectic and dissatisfaction. Due to which an employee is not able to perform well up to the standards with satisfaction. Hence there is an importance of HR policy called work life balance which integrates the individual goals with organization goals and acts as a tool to employee satisfaction and growth of organization.

Key Words: *Work Roles, Personal Roles, Work Life Balance.*

YOGA AND MEDITATION - A CATALYST OF WORK-LIFE BALANCE

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Abstract: As a human being it is very important to everyone to have a good healthy life and strong mindset to achieve our goals both in our personal and professional life, when our mind is clear, strong and calm then our body automatically will be in control. This really helps an employee to perform well and maintain good healthy relationships. Today, as we can see in our present and future world's competition is increasing day by day to reach our goals. In reaching up of our goals we undergo greater stress, lose patience, get ego, acquire jealous, follow unethical practices etc, which will have a greater adverse imbalance an our personal and professional work life. As in achieving of our goals, employers are becoming greedy and started implementing more pressure and targets. With this in our contemporary conditions, world is turning towards stress and painful environments. In today's rising cost for medicine, cost of life, inflation an employee can easily inculcate the practice of doing yoga and meditation which is costless and give more benefits. Due to rising targets, stress, pain in the work place it is very difficult for an employee to look after even his/her family, friends, relations and society also. So here is the best method to achieve all the above is doing and spending some small time in practicing yoga and meditation in each and everybody's life.

EMPLOYEE TRAINING AND DEVELOPMENT – A CASE STUDY OF CENTURION SOFTWARE SOLUTIONS PRIVATE LIMITED, BANGALORE

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Abstract: The present study focuses on the Employee Opinions towards “Training and Development Programs” of a Software Solutions Private Ltd. Company based in Bangalore. To collect the required data a structured questionnaire with Five Point Likert scale was used. The required data was collected from the employees of the select company through personal interview. Simple Random sampling technique was used for the present study. Tables, percentage method and Chi-square test were used as statistical tool for analysing the collected data. The study reveals that there is positive relation between Training and Development Programs and individual and organizational performance.

Keywords: *Training & Development, individual performance, organizational performance, & employee opinions.*

UPSWING OF UNICORN STARTUPS IN INDIA - AN ANALYTICAL STUDY

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Abstract: We live in the era of fast – moving exponential change driven by the advanced technology and flooded by innovations in the market. The result is the landscape of young, nimble Unicorns playing a tremendous role in the new market. A unicorn is a young company that has valuation worth of \$ 1 billion or more from private investors and they represent a very large market opportunity. Most of the companies with unicorn status are in loss, yet they are attracting a good investment in every round of finance due to rigorous growth & opportunities. Big tech or large-scale companies take benefit by investing or acquiring these startups, since they don't need to start from scratch and these startups get a good premium then it apparently gets in to unicorn status. This paper involves study relating to various statuses given to startups by venture capitalists based on their valuation. Familiarizing growth in sector wise extension of unicorn's in India as well as to Investigate on India's top unicorns based on their valuation and to scan over abnormal high valuation of unicorn startup in India.

Keywords: *Market, Startups, Status, Unicorn, Valuation.*

IMPACT OF DEMOGRAPHIC FACTORS ON QUALITY WORK LIFE IN STEEL PLANTS: A STUDY OF SELECTED STEEL PLANTS IN HYDERABAD KARNATAKA REGION

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Abstract: This study to explore the impact demographic factors on quality of work life (QWL) practices in steel plants of Hyderabad Karnataka region. The gender equality has opened new frontiers for job opportunities globally. The steel industry in specific is associated with heat, dust, physical effort, adaptiveness etc. at work place. Hence the factors were studied to reflect upon age, gender, sex, physical health, shifts etc. The study emphasizes work life practices in steel manufacturing sector for theoretical and empirical framework and by undertaking survey to enumerate the link of level of advances in technologies of steel manufacturing in different steel plants and impact on quality of work life. The identified Hyderabad Karnataka region is cluster of steel plants on availability of natural resources. The study will have similar reflections elsewhere with similar technology and size in practice for steel making at large. The study using field data for statistical modeling to explore the link to quality of work life with technology and scope for further studies and improvement of quality of work life. The period of study is from Dec 2019 to June 2023.

Keywords: *Quality of Work Life(QWL), Demographic, Steel Plants, Hyderabad Karnataka Region.*

IMPACT OF UPI IN BANKING ON SOCIAL CHANGE: A REVIEW OF SOCIO- FINANCIAL TRANSFORMATION IN INDIAN CONTEXT

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Abstract: The founder of UPI Mr Dilip Asbe dreamt of reaching the banking to all sectors of society with ease and convenience, today India is emerging leader in UPI transactions. The Rural and Urban divide in banking is shrinking faster than anticipated. The UPI has helped to improve the quality of life in rural environment by safe and secure transaction. The adoption of digital payment methods, during pandemic has enabled by wide number of banks which have backed the UPI system, as well as the indigenous RuPay credit and debit cards. A welter of private financial technology or fintech firms that offer tailor -made digital applications, and big technology and social media companies that have added payments with a view to enhancing stickiness with their core offerings have also been major enablers. The banking sector, however, has been at a relative disadvantage in leveraging the payments ecosystem for its core business growth as the spending on infrastructure to support and secure such payments has been disproportionately higher than for fintech and big tech rivals. The Government's new incentive aims to level the field by offering payments in lieu of the commissions foregone by lenders in waiving the merchant discount rate they would otherwise have levied. The greatest advantage of UPI is continuously evolving to transform rural economies in a big way, a large number of nonbanking rural population in India is transforming in to paperless economy. The Indian revolutionary financial transformation in UPI age might make Indian Rupee the global currency and also alleviate Rural Urban divide in economic life substantially.

Keywords: *UPI, Unified Payment Interface, Banking, money transfer, Quality of life.*

QUALITY WORK LIFE INFLUENCE ON SOCIAL LIFE: A STUDY OF SELECTED STEEL PLANTS IN HYDERABAD KARNATAKA REGION

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Abstract: The study will give an insight in to impact of quality of work life (QWL)on social life of employees working in steel plants of Hyderabad Karnataka region, . The life beyond work premises depends largely on how they spend their half-life in respective work places, work place responsibility, environment and remuneration etc., for the job they do. The life in manufacturing organizations has transformed over the years due to various reasons such as Information Technology, automation and Flexible Manufacturing Systems, the muscle stress levels have decreased, whereas mental stress levels have increased. To overcome work stress or normalize human beings before leaving their work places, certain organizations taken steps to reduce the work mindset by measures such sports and recreation along with some yoga routines. in this context the study is conducted in selected steel plants of Hyderabad Karnataka region to explore impact and implications upon changing social life of employees with respect to quality of work life (QWL)is undertaken, The period of study is from Dec 2019 to June 2023.

Keywords: *Quality of Work Life (QWL), Practices, Steel Plants, Hyderabad Karnataka Region.*

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