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COLLEGE OF ENGINEERING AND TECHNOLOGY
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Avadi, Chennai, Tamil Nadu – 600 054

List of students undertaking project work during the
Academic Year 2022-2023

Program Name: Biotechnology Program Code: 214

PROJECT BATCH LIST (2022-2023)

S No	Register Number	Name of the Student	Title of the Project	Supervisor
1	112719214003	Allen Sharni S	Preliminary Design and Performance of Novel Sparger Designs for Algal Growth	Dr. P. Hari Babu
2	112719214022	Sumithra V		
3	112719214002	Abraham A	Zebrafish Model for Studying Behavioural Changes in Neuro Degenerative Diseases	Ms.T.Devi
4	112719214009	Gowthaman G		
5	112719214001	Abinaya B	Molecular Docking Analysis of Gc/Ms Compound Obtain from Different Plants on Snake Bite	Dr. B.A.Gowri Shankar
6	112719214024	Vinodhini K		
7	112719214004	Ashok Kumar N	Characterisation of Physiological And Biochemical Changes in Abiotic Stress in Rice Plant(Drought)	Ms.B.Tajsabreen
8	112719214018	Samuthiram M		
9	112719214005	Bharath K	Study on Effects of Photo Penetration Depth on Haematococcus Pluvialis Cultivation	Dr. P. Hari Babu
10	112719214006	Bhuvaneshwari R		
11	112719214008	Charulatha K	Molecular characterization of achyranthas and calotropis	Dr. B.A.Gowri Shankar
12	112719214010	Guna Varshini G		
13	112719214011	Keerthilakshmi S	Synthesis of silver nanoclusters using glutathione as stabilizing agent and it's application in cancer cell	Dr. B.A.Gowri Shankar



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S No	Register Number	Name of the Student	Title of the Project	Supervisor
14	112719214012	Mukesh S	Study of Phytochemical, Antibacterial and Anti Oxidant Properties in Africam Gaint Snail (Achatina Fulica), Slime	Dr. B.A.Gowri Shankar
15	112719214013	Naga Sivanesh S T		
16	112719214014	Parkavi D	Antibacterial And Antifungal Potential of Seeds Kernels of Caesalpinia Bonducella Extracts and Isolated Phytoconstituents In-Vitro Analysis	Dr. B.A.Gowri Shankar
17	112719214023	Vidhya B		
18	112719214015	Pooja R	Molecular Analysis and Therapeutic Potential of Bee Venom	Dr. B.A.Gowri Shankar
19	112719214019	Shyni S		
20	112719214016	Priyanka A	Molecular Docking Analysis of Gc/Ms Compounds Obtain from Different Plants on Scorpion Venom	Dr. B.A.Gowri Shankar
21	112719214021	Subalakshmi J		
22	112719214020	Sowmiya M	Molecular Characterization and It's Antimicrobial Antifilarial Antibacterial Activities of Azardirachta Indica Resin Extraction	Dr. B.A.Gowri Shankar

Head of the Department

PRILIMINARY DESIGN AND PERFORMANCE OF NOVEL SPARGER DESIGNS FOR ALGAL GROWTH

A PROJECT REPORT

Submitted by

ALLEN SHARNIS (112719214003)

SUMITHRA.V (112719214022)

in partial fulfillment for the award of the degree

of

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IN

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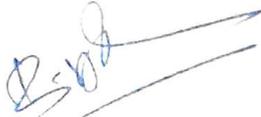
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May 2023

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Certified that this Thesis titled “**Preliminary Design and Performance of Novel Sparger Designs for Algal Growth**” is the bonafide work of **ALLEN SHARNIS (112719214003)** and **SUMITHRA.V (112719214022)** who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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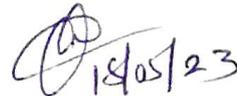
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Microalgae are an assemblage of photosynthetic organisms that need light, CO₂, and nutrients to flourish. Algae are abundant in vitamins, enzymes, proteins, fibre, and carbs. Up to 50% of the O₂ in the earth's atmosphere is produced by it, and it also stores CO₂ to prevent it from entering the atmosphere. Micro or macro algae are grown in bioreactors. It is grown for the purpose of producing biomass, treating waste water, etc. The work's objectives include developing several sparger designs, installing an aeration system, and evaluating algae growth. We developed four tubular bioreactors with various sparger types (encapsulated, segregated, unilateral, and bilateral) that are filled with various materials, including zeolites and activated carbon. For ten days during this study, a controlled environment is used to sustain *Haematococcus pluvialis*. The construction and cultivation are cost effective. The materials inside the packaging are readily available goods. Aeration is provided in various ways using spargers, which are constructed of certain materials to promote the growth of marine microalgae. In the tubular bioreactors, along with the materials employed to enhance algae growth, biomass output and algal growth are compared in this study that demonstrates the sparger design that is more efficient.

KEYWORDS:

Tubular bioreactors, Aeration, Sparger design, Microalgae, Zeolites, Activated Carbon.

CHAPTER 5- CONCLUSION

It is readily apparent that adding specific materials to the reactor can significantly alter how quickly algae grow in relation to the compounds produced. This study provides insight into the extent to which an external stimulus may affect an organism's ability to grow.

It appears that the entire system has improved when a novel sparger design is added to a reactor with all other parameters kept constant, which is a very good reflection of the growth outcomes. However, a rise in an algae's growth will never alter its biological metabolites. The production of these compounds can be increased by manipulating several factors and optimizing the current conditions.

This comprehensive analysis of a photobioreactors infused with Zeolites in different types of spargers has given us the anticipated high growth rates of between 40 and 50 percent. versus the activated carbon and mixture of Activated Carbon and zeolites infused photobioreactors.

When the four types of spargers were compared the Bilateral sparger is likely to show elevated growth rate even though the Unilateral sparger and Encapsulated Sparger stand near to it. The Segregated sparger shows the least growth among the four still standing high than the normal sparger design used.

By reducing the conditions for an even better yield and expanding the process of scaling up, more research may be done.

**ZEBRAFISH MODEL FOR STUDYING BEHAVIOURAL
CHANGES IN NEURODEGENERATIVE DISEASE**

Submitted By

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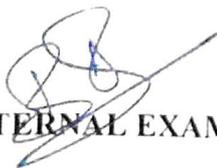
Certified that this Thesis titled “ZEBRAFISH MODEL FOR STUDYING BEHAVIOURAL CHANGES IN NEURO DEGENERATIVE DISEASES” is the bonafide work of ABRAHAM.A (112719214002) and GOWTHAMAN.G (112719214009) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Neurodegenerative disease is a major health problem occurring in many individuals in the brain. A demyelinating disease is any condition that causes damage to the protective covering (myelin sheath) that surrounds nerve fibres in your brain, the nerves leading to the eyes (optic nerves) and spinal cord. When the myelin sheath is damaged, nerve impulses slow or even stop, causing neurological problems. The worldwide incidence of neurodegenerative disease is quite high, there is a medicine for the disease but they are very slow in the process of curing the disease. But in our project we study about the demyelination in the zebra fish and its behavioural changes.

Keywords: Demyelination, Zebra fish, Neurodegenerative disease, Demyelination, Morphological Changes, Behavioural Changes, RNA Isolation.

CHAPTER 5

CONCLUSION

- In this study, the quickest and less expensive in vivo model for drug discovery for neurodegenerative disease was identified.
- Behavioural changes through the 6 assays thigmotaxis, startle response, locomotion, prey capture, sleep/ awake, T-maze & habituation, colour identification was studied and significant changes were observed which resembles neurodegenerative model.
- Therefore this model can be used for preliminary drug screening.
- This zebra fish model need to undergo a wide validation by using larger set of drug and curatives to treat neurodegenerative model.

**MOLECULAR DOCKING ANALYSIS OF GC/MS COMPOUNDS
OBTAIN FROM DIFFERENT PLANTS ON SNAKE BITE**

A PROJECT REPORT

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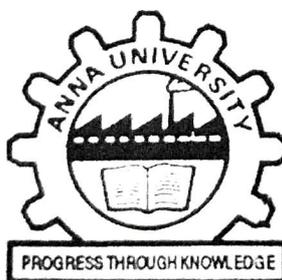
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Plants are excellent sources of functionally bioactive compounds and essential nutrients. The phytochemical constituents have enormous potential in treating both plant and human diseases. *Parkia timoriana* (Yongchak/Zawngtah), one of the most important underutilized plants popularly consumed in Manipur and Mizoram states of Northeastern region of India, is known for its ethnobotanical and ethnomedicinal values. A significant DPPH (2,2-diphenyl-1-picrylhydrazyl), ABTS (2,2'-azino-bis (3-ethylbenzothiazoline-6-sulfonic acid)), and Phosphomolybdate scavenging activity corresponding to high antioxidant potentials was shown by the extracts from different edible parts of *P. timoriana*. *P. timoriana* extract showed significant antibacterial potential against *Bacillus pumilus*, *Bacillus subtilis*, *Escherichia coli* and *Pseudomonas aeruginosa*.

Fourier transform infrared spectroscopy and gas chromatography-mass spectrometry (GC-MS) analyses of the extracts revealed the functional groups and bioactive compounds present in different edible parts of the plant. Characteristic peaks of phenols, carboxylic acids, alkenes, glycogen, alkyl halides, halogen, aliphatic amines, primary and secondary amines, esters, ether, aromatics, lipids, triglycerides, nitro compounds that had antimicrobial, anti-cancer and anti-inflammatory properties etc. were observed.

The GC-MS analysis also revealed the occurrence of 49 bioactive compounds that are known to possess a variety of pharmacological activities. Subsequently, in silico molecular docking studies of the identified bioactive compounds predicted potential anticancer and anti-inflammatory properties.

To the best of our knowledge, this is the first-hand report on the bioactive compounds of edible parts of *P. timoriana* extracts showing antioxidant, antimicrobial and pharmacological significance.

This study can lead to the production of new herbal medicines for various diseases employing *P. timoriana* and perhaps leading to the creation of new medications.

CONCLUSION AND FUTURE ENHANCEMENTS

Natural products play an important role in the field of research and development of new drugs. Knowledge of biologically active compounds and their mechanism of action in plants are desirable not only for the discovery of novel therapeutics that would validate remedies but also for the design of new active molecules. Most of the developing countries are now focusing the practice towards traditional medicine as an integral part of their culture. This is because medicinal plants have shown to possess many constituents in them which can be put in use for therapeutic purposes.

The protein-ligand interaction plays a significant role in structural based drug designing. In the present work I have worked with three different traditional medicinal plants *A.aspera*, *A.paniculata*, *A.lanata*, used for snake bite treatment in Indian villages. I identified the compounds using TLC and GC-MS. These compounds were further screened and this was subjected to molecular docking analysis against Acetylcholine Receptor.

Compounds α – Caryophyllene from *A.aspera* , Pentadecanoic acid, 14-methyl ,- methyl ester from *A.paniculata* all Triacontan from *A.lanata* posses minimum affinity. The binding energy of the ligand-protein interactions also confirmed that ligand fits to the receptor target site. Hence these compounds posses the characteristics of an antidote to snake bite.

Thus these results substantiate the compounds isolated from that leaf extract of the three plants can be used as an effective and potential antidote against snake bite. So it is used as antidote to snake bite. These potential drugs can further be validated wet lab studies for its proper function.

FUTURE ENHANCEMENTS

A PROJECT REPORT

**CHARACTERIZATION OF PHYSIOLOGICAL AND BIOCHEMICAL
CHANGES - DROUGHT STRESS IN RICE PLANT**

Submitted by

ASHOKKUMAR .N (112719214004)

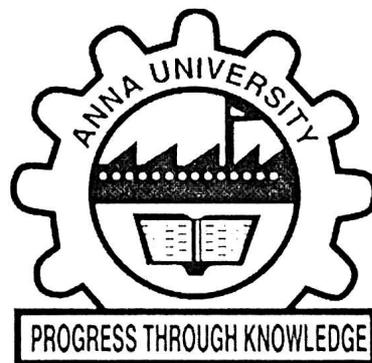
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

The rice is the majorly crop in which the drought stress is inevitable and not even compatible to overcome in the natural way o doe we predict only the possibilities of the drought tress that occurs in the environment PEG 3% and PEG 12% shows the varient changes in the characterization of the rice plant in the drought stress condition and make them very volatile for yield Delay in flowering is another strategy adapted by plants to escape from the drought environment. Drought tolerance is the ability of the plant to minimize reduction in grain yield even after exposure to drought conditions. Several phenotypic and physiological adaptive mechanisms protect rice plants under drought stress. Higher leaf rolling, reduction in spikelet fertility, and reduction in grain yield are some of the major phenotypic changes in rice plants under drought stress The present study was undertaken with the aim to investigate the effect of water deficit imposed by PEG-6000, 40 old day seedlings were treated with varying concentrations of polyethylene glycol-6000 (PEG-6000; w/v-5%, 10%, 15% & 20%) for 24 h. The results showed that RNA content and Relative water content (RWC) content was significantly reduced in both leaves and roots with increased concentration of PEG.

Keywords; PEG Polyethylene glycol, ultrasonicator, microfuge and centrifugation, phenotypic changes

CONCLUSION

The rice is the majorly crop in which the drought stress is inevitable and not even compatible to overcome in the natural way o doe we predict only the possibilities of the drought tress that occurs in the environment PEG 3% and PEG 12% shows the varient changes in the characterization of the rice plant in the drought stress condition and make them very volatile for yield Delay in flowering is another strategy adapted by plants to escape from the drought environment. Drought tolerance is the ability of the plant to minimize reduction in grain yield even after exposure to drought conditions. Several phenotypic and physiological adaptive mechanisms protect rice plants under drought stress. Higher leaf rolling, reduction in spikelet fertility, and reduction in grain yield are some of the major phenotypic changes in rice plants under drought stress The present study was undertaken with the aim to investigate the effect of water deficit imposed by PEG-6000, 40 old day seedlings were treated with varying concentrations of polyethylene glycol-6000 (PEG-6000; w/v-5%, 10%, 15% & 20%) for 24 h. The results showed that RNA content and Relative water content (RWC) content was significantly reduced in both leaves and roots with increased concentration of PEG.

**STUDY OF EFFECTS OF PHOTO PENETRATION DEPTH
ON HAEMATOCOCCUS PLUVIALIS CULTIVATION**

A PROJECT REPORT

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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Microalgae were generally recognized as safe and a promising source of proteins, carbohydrates and other bioactive substances. In the industrial application such as foods, health supplements, biofuels and pharmaceuticals algae plays a vital role. Although the potential of photosynthetic microorganisms for production of various metabolites and in environmental bioremediation is recognized, their practical application has been limited by the difficulty in supplying light efficiently to photobioreactors. Various types of photobioreactor with high illumination to volume ratios have been proposed, but most are limited by cost, mass transfer, contamination, scale-up or a combination of these. The problem of light supply to photobioreactors can be solved by developing photosynthetic cell cultivation.

systems where light is either substituted or supplemented. For cultivation production four different sized has been utilized for microalgal growth .Aim of this project is to analyze the photobioreactor with depth & light intensity. In this study *Haematococcus pluvialis* is maintained under the controlled environment for 10days and observed the photo penetration with four different light source. The light penetration, biomass ,cell count of microalgae were further detected. The pH values of microalgae ranged from 6.5 to 7.0 within 10days cultivation. The light penetration with an assures stability of the photobioreactor material (Aryclic) to some extent.

Keywords: photobioreactor, photo light penetration depth, microalgae

CHAPTER 5- CONCLUSION

Tubular photobioreactors require adequate light distribution throughout the culture to ensure optimal growth of photosynthetic microorganisms. Uneven light distribution can lead to variations in growth rates and biomass productivity. It is important to design the reactor system and optimize light sources to ensure uniform illumination. Proper light distribution is crucial for uniform growth and productivity of photosynthetic microorganisms. Some clear clarifications were observed in this current study with various tubular reactor dimensions, different light sources, changing light intensity and different light.

Preliminary studies showed that tubular reactor behavior on light penetration though the empty reactors showed significant reduction in light at the back of the reactors. But very high penetration was observed with water or any other algae media like OHM. This indicates that very less light loss will be observed due the tubular design, but presence of clear liquid wont effectively interferes with the light penetration. Biomass growth in the different reactors shows that faster growth was observed in 3-inch reactor and slowest in 1 inch reactor. Due to the high light exposure algae growth was significantly subdued in 1 inch reactor.

Light sources play a vital role in the growth of algae and affects the light penetration in reactor as well. 3 inch reactor is consistent in all the light sources with 4 inch showing the typical light penetration effects in different light sources.

Point source of the light source to the tubular reactor affects the algae growth as in light source kept parallel to the reactor tubes shows clear growth and proper light penetration over time with growth of algae. But single point source like using light bulb increases the chances of dead zones in parts of the tubular reactor. Neary as 50% of light was lost in the most parts of the tubular reactor compared to parallel focused light.

Effects of light penetration were consistent with amount of light intensity

supplied even with various light sources. This indicates that tubular reactor behavior in light penetration is constant different light sources and different intensities even with variable dimensions (1 to 4 inches).

This research helps to address complications related to light distribution in tubular photobioreactors, as well as choosing the right reactors of the algae growth. 3 inch reactor is proven ideal for the growth of *haematococcus pluvialis* in tubular photobioreactor. Apart from dimensions, light penetration behavior studies shows that placing LED light at 12 inch from the reactor parallel to the tubular systems proved ideal.

By implementing these strategies, it is possible to improve light distribution within tubular photobioreactors, minimizing complications associated with uneven growth and biomass productivity.

**MOLECULAR CHARACTERIZATION AND ITS ANTIMICROBIAL,
ANTIBACTERIAL, ANTIFILARIAL ACTIVITIES OF ACHYRANTHES
ASPERA AND CALOTROPIS GIGANTEA**

A PROJECT REPORT

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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Achyranthes aspera (Amaranthaceae) is an important medicinal herb found as a weed throughout India. Though almost all of its parts are used in traditional systems of medicines, seeds, roots and shoots are the most important parts which are used medicinally. The present article gives an account of updated information on its phytochemical and pharmacological properties. The review reveals that wide numbers of phytochemical constituents have been isolated from the plant which possesses activities like antiperiodic, diuretic, purgative, laxative, antiasthmatic, hepatoprotective, anti-allergic and various other important medicinal properties. The crushed plant is used in pneumonia and infusion of the root is used as mild astringent in bowel complaints. Decoction of powdered leaves with honey or sugar candy is useful in early stages of diarrhoea and dysentery. For the last few decades or so, extensive research work has been done to prove its biological activities and pharmacology of its extracts. Saponins, oleonic acid, dihydroxy ketones, alkaloids, long chain compounds and many other chemical constituents have been isolated.

Key Words: *Achyranthes aspera*, Latjeera, Medicinal properties, chemical constituents, pharmacological activitie

CHAPTER 5

5.CONCLUSION

Natural products play an important role in the field of research and development of new drugs. Knowledge of biologically active compounds and their mechanism of action in plants are desirable not only for the discovery of novel therapeutics that would validate remedies but also for the design of new active molecules. Most of the developing countries are now focusing the practice towards traditional medicine as a integral part of their culture. This is because medicinal plants have shown to possess many constituents in them which can be put in use for therapeutic purposes.

The present study involve the use of *A. aspera* was analysed for different compounds in TLC and can be subjected to further identification and purification.

Thus these results substantiate the compounds isolated from that leaf extract of the three plants can be used as a effective and potential antidote against snake bite.

SYNTHESIS OF SILVER NANOCCLUSERS USING GLUTATHIONE AS STABILIZING AGENT AND IT'S APPLICATIONS IN CANCER CELL IMAGING

A PROJECT REPORT

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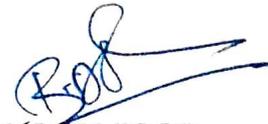
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

In this study, glutathione (GSH), a tripeptide amino acid, was utilized for the synthesis of silver nanoclusters (Ag-GSH NCs). The synthesized nanoclusters were characterized using various analytical techniques including UV-Fluorimeter, Dynamic Light Scattering (DLS), Zeta Potential, Transmission Electron Microscopy/High-Angle Annular Dark-Field Imaging (TEM/HAADF), TEM Energy Dispersive X-ray Spectroscopy (EDAX), and Selected Area Electron Diffraction (SEAD) patterns. These techniques provided valuable insights into the compounds present and their role in facilitating the formation and confirmation of nanoclusters. Furthermore, the synthesized Ag-GSH NCs were subjected to cell imaging processes to evaluate their fluorescent capacity. The results of the cell imaging process confirmed the ability of the nanoclusters to exhibit fluorescence. Importantly, the Ag-GSH NCs demonstrated long-term stability, making them suitable for imaging cancer cells. Overall, this study demonstrates the successful synthesis of silver nanoclusters using glutathione as a precursor. The comprehensive characterization using various analytical techniques helped in understanding the formation and confirmation of nanoclusters. Moreover, the fluorescent capacity of the nanoclusters was confirmed through cell imaging, suggesting their potential application in cancer cell imaging. The developed Ag-GSH NCs also exhibited long-term stability, further enhancing their suitability for imaging applications.

Chapter 6

6. Conclusion

In this study, researchers utilized Glutathione (GSH), a tripeptide amino acid, as a precursor to synthesize silver nanoclusters (Ag-NCs). These nanoclusters were then subjected to various analytical techniques to characterize their properties and determine their suitability for cell imaging, specifically in cancer cells.

The first analytical technique employed was UV-Fluorimeter, which measures the absorption and emission of light by the nanoclusters. This technique helps to determine the optical properties and fluorescence of the synthesized nanoclusters.

Dynamic Light Scattering (DLS) was used to assess the size distribution and stability of the nanoclusters. By analyzing the intensity fluctuations of scattered light, DLS provides information about the average size and polydispersity of the nanoclusters.

Zeta Potential measurements were performed to evaluate the surface charge of the nanoclusters. Zeta Potential indicates the stability of the nanoclusters by determining the electrostatic repulsion or attraction between particles, which can affect their aggregation or dispersion behavior.

TEM (Transmission Electron Microscopy) and HAADF (High-Angle Annular Dark-Field) imaging techniques were employed to visualize the morphology and structure of the synthesized nanoclusters at high resolution. TEM enables direct observation of the size, shape, and arrangement of the nanoclusters, while HAADF provides contrast based on atomic number, allowing detailed examination of the composition and distribution of silver atoms.

TEM EDAX (Energy-Dispersive X-ray Spectroscopy) analysis was used to identify the elemental composition of the nanoclusters. By measuring the characteristic X-ray emissions, researchers can confirm the presence of silver atoms and other elements in the nanoclusters.

SEAD (Selected Area Electron Diffraction) patterns were obtained during TEM analysis to study the crystalline nature of the nanoclusters. This technique provides information about the arrangement of atoms in the nanoclusters and helps confirm their crystalline structure.

Finally, the synthesized nanoclusters were exposed to cell imaging processes to confirm their fluorescent properties. It was found that the nanoclusters exhibited fluorescence, indicating their potential for use in imaging cancer cells. The ability of the nanoclusters to emit fluorescent light allows for their detection and visualization within cells.

Overall, the study successfully synthesized silver nanoclusters using Glutathione as a precursor and characterized their properties using a range of analytical techniques. The nanoclusters showed long-term stability and demonstrated fluorescence, making them suitable candidates for imaging cancer cells.

**STUDY OF PHYTOCHEMICAL, ANTIBACTERIAL AND
ANTIOXIDANT PROPERTIES IN AFRICAN GIANT SNAIL
(*ACHITINA FULICA*) SLIME**

A PROJECT REPORT

Submitted by

MUKESH S (112719214012)

NAGA SIVANESH S.T(112719214013)

in partial fulfillment for the award of the degree

of

BACHELOR OF TECHNOLOGY

IN

BIOTECHNOLOGY



**St. Peter's College of Engineering and Technology Avadi
ANNA UNIVERSITY: CHENNAI 600 025**

MAY 2023

BONAFIDE CERTIFICATE

Certified that this Thesis titled “STUDY OF PHYTOCHEMICAL, ANTIBACTERIAL AND ANTIOXIDANT PROPERTIES IN AFRICAN GIANT SNAIL (*ACHITINA FULICA*) SLIME” is the bonafide work of MUKESH.S (112719214012) and NAGA SIVANESH S.T (112719214013) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported here in does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

The purpose of the study is to assess the antibacterial properties of mucin from the species of the enormous African land snail *Achatina fulica*. 45 snails of the species, which are found in the southwest of Nigeria, were collected for their snail slime. Using the agar well diffusion method and liquid broth, the mucus mucin's antibacterial potential and bacteria growth rate (measured in hours) were assessed. The slime was extracted using aqueous water, acetic acid (an acid), and ammonium bicarbonate (an alkaline). On both gram-positive and gram-negative bacteria, snail mucus extract demonstrated antibacterial properties. Acid extracts had a higher inhibitory activity regardless of storage duration, but mucus extracts' inhibitory effects varied depending on the treatment method and amount of time they were stored. Mucus secretions from *A. fulica* demonstrated a greater antibacterial effect on *Bacillus subtilis*. For *A. fulica*, the zone of mucus mucin inhibition in solid agar ranged from 21.0 to 15.0 mm after 2-72 hours of storage. Although mucus mucin appears to lose some of its antibacterial power over time, the big African snail species' antibacterial properties may hold the key to combating antibiotic resistance.

An analysis of the solubility profile of the snail slime revealed that it was only moderately soluble at ambient temperature in distilled water but partially soluble at its boiling point. At normal temperature, n-hexane, petroleum ether, methanol, acetone, ethanol, aqueous ammonia, concentrated and dilute hydrochloric acid (HCl), sulfuric acid (H₂SO₄), and sodium hydroxide (NaOH) were all insoluble in snail slime. The snail slime's phytochemical study revealed that its protein level was significantly higher than its carbohydrate and lipid contents.

KEYWORDS: Mucous mucin, Antibacterial activity, Pathogenic bacteria, Antibiotic resistance, Phytochemical.

CHAPTER-5

5. CONCLUSION

This study showed that the pathogenic bacterial organisms tested (specifically, *P. aeruginosa*, *S. aureus*, *E. coli*, *S. typhi*, *B. subtilis*, and *K. pneumoniae*) can be inhibited from proliferating by the mucus mucin from the gigantic African land snail (*A. fulica*). The key area where snail mucus features varied noticeably was in how long each type of mucus extraction could maintain its inhibitory potential against bacterial growth. In addition, depending on the kind of snail and the medium used to collect the mucus, mucus mucin showed variations in the degree of the bacterium growth inhibition. It is necessary to separate the active components from different species' mucus for future research and potential use in the creation of pharmacological and therapeutic products.

There was no improvement in the microbial load of the slime under the UV-C applied conditions. Injurious visual alterations could also be seen, however prolonged thermal treatment is required to attain levels near to the detection limit. Without any visible changes, high hydrostatic pressure (around 400 MPa) has been shown to be a promising treatment for lowering the microbial load in snail slime. To maximise the regeneration capabilities of slime, additional research on other physico-chemical features (such as antimicrobials and proteins) and more intense pressure treatments (high intensity, short period) should also be addressed.

According to the literature that is now accessible, achacin, achatina CRP, and mytimacin-AF, which are derivatives of snail and slug mucus, have a high level of action against Gramme positive and Gramme negative bacteria, virus, and yeast. Its antibacterial effectiveness against other microbes, particularly against multidrug resistant bacteria like MRSA (methicillin-resistant *Staphylococcus aureus*), could

also be the subject of numerous investigations. This is especially essential because an increasing number of germs that are resistant to antibiotics is currently one of the biggest public health issues. Antibiotics are being used carelessly, which has resulted in the selection of resistant clones, many of which frequently do not receive sufficient treatment. Management of multidrug resistant bacteria necessitates a greater focus on the antibacterial compounds or products being employed. Due to this, recent research has focused on finding novel antimicrobial chemicals, particularly those that are natural, such plant extracts, essential oils, and antimicrobial peptides extracted from a variety of animals. It is obvious that this natural substance could be a possible target for further research based on the findings of various studies on the antibacterial capabilities of snail and slug mucus. The latest research on the compound's active ingredients, their internal mechanisms of action, and the potential for isolating and purifying the pure substances serve as a springboard for the development of novel therapeutic and pharmacological products that could replace conventional antibiotics. Natural peptides, such as those obtained from the mucus of snails and slugs, could be thought of as alternative treatments.

According to the results of the snail slime extract's physicochemical study, there was a significant concentration of protein present, while sugar and carbohydrate levels were found to be modest. Compared to its carbohydrate and fat levels, there were very few fats and oils present.

Due to its slight solubility in both acidic and alkaline media, snail slime has the potential to play a significant role in acting as a carrier of chemical and biological components for use as nanoparticles in the medical and pharmaceutical industries. Additionally, because of its potential for intermittent drug release, it may be well suited for this purpose. Most importantly, since snails use their slime to restore their shell and skin when wounded, their slime has a higher potential for regeneration.

This investigation demonstrates the possibility of a promising antioxidant properties, cosmeceutical and nutraceutical efficacy of snail slime as a natural source of remedy for key health conditions such as inflammations and free radical scavenging, hence the need for its characterization to justify these outlined properties.

**ANTI BACTERIAL AND ANTIFUNGAL POTENTIALS OF
SEEDS AND SEED KERNELS OF *caesalpinia bonducella*
EXTRACTS AND ISOLATED PHYTOCONSTITUENTS:
IN-VITRO ANALYSIS**

A PROJECT REPORT

Submitted by

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In partial fulfillment for the award of the degree

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Certified that this Thesis titled “ANTI-BACTERIAL AND ANTI-FUNGAL POTENTIAL OF SEEDS AND SEED KERNELS OF *CAESALPINIA BONDUCELLA* EXTRACTS AND ISOLATED PHYTOCONSTITUENTS: *IN VITRO* ANALYSIS” is the bonafide work of VIDHYA B (112719214023) and PARKAVI D (112719214014) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported here does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

The study was intended to investigate requisite detail about pharmacognostics characteristics and phytochemical profile of *caesalpinia bonducella* seeds, a critical plant in a the Indian system of medicine. Pharmacognostics investigation of anatomical section of the dried seeds as well as powder microscope carried out to determine it's morphological, anatomical and phytochemical diagnostics features. The qualitative and quantitative microscopy, macroscopy, and other WHO suggested parameters of standardization of dried seeds and powder were carried out as per standard procedures. Pharmacognostic assessment of *Caesalpinia bonducella* seeds of antibacterial, antifungal activities. Then preliminary phytochemical examination demonstrated the presence of steroids, saponins, flavanoids, alkaloids, and tannins. The previously stated phytochemicals were further confirmed by Thin Layer Chromatography (TLC) and Gas Chromatography-Mass Spectroscopy (GC-MS). In a molecular docking study, five of ten molecules docked in the active site of the protein . The major findings of this study are that phytochemical constituents of seed kernel of *Caesalpinia bonducella* have the ability to inhibit drug-resistance fungal. Also, the existence of an eminent amount of compounds indicates the effectiveness of the use the plant in traditional medicine.

KEYWORDS: *Caesalpinia bonducella*, GC-MS analysis, Molecular docking, antibacterial activity, seed kernel

CHAPTER 5

SUMMARY AND CONCLUSION

Although there are several allopathic drugs available, many people still rely on nature that has blessed the human species with abundant herbs. The review on literature showed other works have been done on this plant but still activity against cervical cancer has not been reported so far.

The project entitled Anti-tumor potential of seed kernels of *Caesalpinia bonducella*(Fabaceae)extracts and isolated phytoconstituents: in vitro has been achieved with the following results.

Macroscopical studies states the characteristic features of *Caesalpinia bonducella* seeds such as globular shape, characteristic odour, green in colour and other morphological characters has been well studied and established.

Microscopic investigations are the diagnostic features and its powder analysis helps to distinguish this particular plant (leaves) in whole form and in crude powder form. Microscopical analysis in *Caesalpinia bonducella* showed the presence of schlerenchymatous fibres, Starch grains, Parenchyma cells, Oil Globules, Stone cells and calcium oxalate crystals[40]. The above findings help to bring the identity determined the seeds by both morphology and anatomy.

Various physicochemical constants were determined for the seeds of *Caesalpinia bonducella* such as Ash values, Extractive values and loss on

drying. This helps in confirming the identity and purity of this plant and to detect adulterants and its nature.

The phytochemical studies on the seeds of *Caesalpinia bonducella* were carried out to bring its importance as a valuable medicinal plant. The total methanolic extract was carried out using Hot continuous extraction apparatus. The percentage yield of methanolic extract was 8.3% w/w.

The extract was subjected to preliminary phytochemical screening which revealed the presence of Flavonoids, Phenols, Saponins, Terpenoids, Alkaloids, Cardiac Glycosides and Tannins. It has been tested for Anti-bacterial and Anti-fungal potentials of *caesalpinia bonducella*.

Molecular Docking process is done for the identification of compounds as 3D ligand interaction.

**MOLECULAR ANALYSIS AND THERAPEUTIC POTENTIAL
OF BEE VENOM AND ITS COMPONENTS ON NEUROPATHIC
PAIN**

A PROJECT REPORT

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EXTERNAL EXAMINER

ABSTRACT

Bee venom (BV) is a rich source of secondary metabolites from honeybees (*Apis mellifera*) contains a variety of bioactive ingredients including peptides, proteins, enzymes, and volatile metabolites. The compounds contribute to the venom's observed biological functions as per its anti-inflammatory and anti-microbial effects. The antimicrobial action of Bee Venom has been shown in vitro experiments against bacteria, viruses, and fungi. The synergistic therapeutic interactions of Bee Venom with antibiotics has been reported. The bee venom extracts and melittins showed more antibacterial activities against Gram-positive than Gram-negative bacteria have antimicrobial activity at higher concentrations than the bee venom extract. The purpose of this report is to address the molecular analysis and therapeutic potential of Bee Venom and its compounds. Molecular docking was done using Sodium channel as receptor and different components from Honey Bee venom. Also to find the components responsible for neuropathic pain.

Keywords: bee venom, antimicrobial properties, melittin, apamin, phospholipase A2 (PLA2)

CHAPTER 5

SUMMARY AND CONCLUSION

The use of BV for medical applications can be traced back thousands of years. Here, the therapeutic interests of crude bee venom and/or its main compounds, particularly melittin, are discussed. The latter grants broad anti-inflammatory properties by affecting primary inflammation signaling pathways and inducing the inhibition of pro-inflammatory genes expression. BV also possesses a neuroprotective potential in neurodegenerative diseases such as PD, AD, and ALS by significantly blocking their progression and improving cognitive functioning in mice models. In terms of antitumor activity, both melittin and BV have a cytotoxic effect on cancer cells and a significant anti-metastatic activity. Optimization approaches are currently focusing on the possible use of nanoparticle-based delivery of melittin, or even BV, in order to avoid their nonspecific cytotoxic effect. The antiviral activity of BV is also promising since BV and melittin have notable toxic effects against a broad spectrum of enveloped viruses, including the challenging HIV, and few non-enveloped viruses. Finally, the clinical application of BV therapy is still a long way ahead, but researchers believe that the ongoing work on this topic will eventually allow BV and its compounds to be considered as definitive candidates in various therapies in upcoming years.

BV contains pharmacologically important constituents. The important constituents present in BV are melittin, apamin, hyaluronidase, phospholipase and histamine. Melittin is considered to be the major constituent of BV.

The present study analyzed the venom of *Apis mellifera* with regard to anti-coagulation activities. Its anti-coagulation proteins were isolated and evaluated by using chromatographic methods.

The fraction extracted from the *Apis mellifera* contained protein similar to anti-coagulation proteins such as PLA₂ and melittin, which are able to increase the blood clotting time *in vitro*.

In summary, bee products are very interesting and can either be developed further into medicinal products when they offer new and better treatment alternatives, or form the basis for the identification of new drugs that can be used according to the principles of pharmacology. In either case, much effort will be necessary in order to establish their position in modern medicine.

Bee venom proves to be a promising remedy and/or adjunct for the treatment of numerous ailments. Its antibacterial, antiviral, and anti-parasitic capacities make it extremely attractive for reducing the use of conventional drugs and associated drug-resistance phenomena. Moreover, its use for one condition can also have positive implications for other concomitant diseases, as shown in this in-depth dissertation on its anti-inflammatory, anti-tumour, etc., properties. Certainly, its use in the clinical setting must follow careful efficacy studies aimed at determining the best doses to achieve the pharmacological response while avoiding the side effects associated with its use. As in human medicine, therefore, the already numerous *in vitro* studies must be followed by clinical trials to determine a conscious and effective use of bee venom in veterinary clinical practice.

**MOLECULAR DOCKING ANALYSIS OF GC/MS COMPOUNDS
OBTAIN FROM DIFFERENT PLANTS ON SCORPION VENOM**

A PROJECT REPORT

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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Scorpions are arthropods which are known for its dangerous stings leading to human health issues. In spite of all these, their venom components can be as a therapeutics. In recent years, the characterization of scorpion venom has gain lot of attention in pharmaceutical world. *Heterometrus swammerdami*, Indian black scorpion whose venom is not characterized till now. The species was confirmed using morphological and analytical techniques like Scanning Electron Microscopy (SEM). In this research, I have characterized the venom components especially peptides using Reverse Phase High Pressure Liquid Chromatography (RP-HPLC) and Liquid Chromatography Mass Spectrometry (LC-MS). This resulted in identification of five peptide sequences which were obtained from two fractions of RP-HPLC.

Keywords: Scorpion; *Heterometrus swammerdami*; Characterization; Peptides.

ABSTRACT

Scorpions are arthropods which are known for its dangerous stings leading to human health issues. In spite of all these, their venom components can be as a therapeutics. In recent years, the characterization of scorpion venom has gain lot of attention in pharmaceutical world. *Heterometrus swammerdami*, Indian black scorpion whose venom is not characterized till now. The species was confirmed using morphological and analytical techniques like Scanning Electron Microscopy (SEM). In this research, I have characterized the venom components especially peptides using Reverse Phase High Pressure Liquid Chromatography (RP-HPLC) and Liquid Chromatography Mass Spectrometry (LC-MS). This resulted in identification of five peptide sequences which were obtained from two fractions of RP-HPLC.

Keywords: Scorpion; *Heterometrus swammerdami*; Characterization; Peptides.

**MOLECULAR CHARECTERIZATION AND ITS
ANTIMICROBIAL, ANTIFUNGAL, ANTIFILARIAL
ACTIVITES OF *AZADIRACHTA INDICA* RESIN
EXTRACTION**

A PROJECT REPORT

Submitted by

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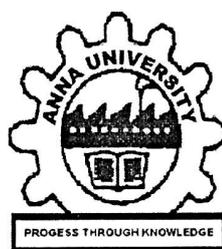
in partial fulfillment for the award of the degree

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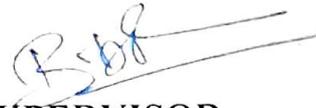
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Certified that this Thesis titled “MOLECULAR CHARACTERIZATION AND ITS ANTIMICROBIAL, ANTIFUNGAL, ANTIFILARIAL ACTIVITIES OF *AZADIRACHTA INDICA* RESIN EXTRACTION” is the bonafide work of SOWMIYA M (112719214020) who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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INTERNAL EXAMINER
EXAMINER



EXTERNAL

ABSTRACT

The study was intended to investigate requisite detail about pharmacognostics characteristics and phytochemical profile of *azadirachta indica* seeds, a critical plant in the Indian system of medicine. Pharmacognostics investigation of anatomical section of the dried seeds as well as powder microscope carried out to determine its morphological, anatomical and phytochemical diagnostics features. The qualitative and quantitative microscopy, macroscopy, and other WHO suggested parameters of standardization of dried seeds and powder were carried out as per standard procedures. Pharmacognostic assessment of *azadirachta indica* seeds of antibacterial, antifungal activities. Then preliminary phytochemical examination demonstrated the presence of steroids, saponins, flavanoids, alkaloids, and tannins. The previously stated phytochemicals were further confirmed by Thin Layer Chromatography (TLC) and Gas Chromatography- Mass Spectroscopy (GC-MS). *Azadirachta indica* (Neem) has a dynamic role in various problems associated with human health. Each part of the Neem tree has some medicinal property and is thus commercially utilizable. The plant parts such as leaves, flowers, seeds, fruits, roots and bark have been used traditionally for the treatment of inflammation, infections, fever, skin diseases and dental disorders. The aim of this study is to identify and characterize the vital bioactive compounds from the Neem sap by Gas chromatography and Mass spectroscopy (GC-MS). The GC-MS analysis of the Neem sap revealed the presence of 30 volatile compounds. Among the 30 compounds, the most predominant compounds are fatty acids like Hexadecanoic acid and Pentadecanoic acid. Hence, this current attempt forms a basis for the biological characterization and importance of the compounds which could be exploited for future development of drugs.

Keywords: Antifilarial activity, GC-MS analysis; Volatile compounds; *Azadirachta indica*.

CHAPTER 5

5.1 Conclusion

The presence of various volatile bioactive compounds in the Neem sap justifies the use of this in treating various ailments. Hence, this result also enhances the traditional usage of *A.indica* which possesses a number of bioactive compounds. Therefore, it is recommended as a source of pharmaceutical importance and can be used as target for many known and unknown ailments. Future work on this study is to isolate and characterize the useful bioactive compounds for treating various diseases. Methanolic extracts of plants *P.corylifolia* and *M.elengi* were found to be effective against bovine filarial parasite *S.cervi* invitro. TLC and GC MS analysis of these extracts revealed the presence of abundant phytochemicals responsible for the activity. Insilico studies of these identified compounds were found to effectively bind with GST, Major Sperm Protein and Coproporphyrinogen oxidase receptors in different key pathways. Hence, targeting by this approach serve as an effective method to control filariasis rather than using antibiotics to kill microfilariae. Filariasis is epidemic diseases wide spread in many Asian, African and other tropical continents all over the world. There is no one right course of action to eliminate filariasis. Current treatments and several studies including Antigen specific reaction were found to be less effective. To overcome the problem of filoridae newer technologies and ancient science should be combined to identify and target new ligands and receptors. Thus in the present study new class of ligand compounds were identified from plants targeting different receptor pathway leading to downfall of adult worms and arresting the production of microfilariae.



ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY :: CHENNAI

(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.
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List of Students undertaking Project Work for the Academic Year 2022-2023

Program Name: Chemical Engineering

Program Code: 203

PROJECT BATCHLIST (2022-2023)

Batch No	Register No	Name of the Student	Title of the project	Supervisor
1	112719203003	BOOMIKA K	Method development and validation for determination of free ferrate using N, N' - diethyl - p -phenylenediamine (DPD) Reagent	Ms. J.Keren Vinoliya Ebenezer /AP /Chemical
	112719203017	SHRINIVETHA S		
2	112719203010	PHILSHIA THARO P	Production of Ferrate Tablets for Water Treatment	Dr. S.Thenesh Kumar /Prof&Head /Chemical
	112719203018	SILVYA V		
3	112719203014	SARAVANAKUMAR K	Design of Paddle Dryer to produce Fly Ash from sludge using Flue Gas	Dr. S.Thenesh Kumar /Prof&Head /Chemical
4	112719203005	JACK ALWIN A	Increasing the conversion rate of Linear Alkyl Benzene Sulphonic Acid using ageing tank	Mrs.J.Sheeba Vinolia Priyadharshini /AP /Chemical
	112719203008	MANIKANDAN R		
	112719203012	SAIRAM B		
5	112719203001	AKASH R	Production of Biofuel using pyrolysis process and modelling using ASPEN PLUS software	Mr. T.T.Israel /AP /Chemical
	112719203006	JAGADEESH E		
	112719203007	LOGANATHAN M		
6	112719203011	PURUSHOTHAMAN R	Fabrication of boiler with automated sensor	Mrs.J.Sheeba Vinolia Priyadharshini /AP /Chemical
	112719203020	TONY FRANKLIN		
	112719203021	ULAGANATHAN A		
7	112719203002	BHARATH V	Degradative Transesterification of Terephthalate polyesters to obtain DOTP Plasticizers for flexible PVC	Mrs.A.Arokia Pushpa Agal /AP /Chemical
	112719203013	SANTHOSH KUMAR S		
	112719203015	SATHISH S		
8	112719203004	FREDRICK ROSHAN M	Design of Adiabatic system and its improvement	Mrs.A.Arokia Pushpa Agal /AP /Chemical
	112719203009	NAVEEN KUMAR J		
	112719203016	T SHIVA SUBRAMANI		

**DEGRADATIVE TRANSESTERIFICATION OF
TEREPHTHALATE POLYESTERS TO OBTAIN
DOTP PLASTICIZER FOR FLEXIBLE PVC**

A PROJECT REPORT

Submitted by

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of

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MAY- 2023

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Submitted for the Project Viva Voce Examination held at17/5/23.....



INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

This project focuses on the production of DOTP plasticizer for flexible PVC through the degradation of terephthalate polyesters via transesterification. The aim is to develop a method that is both efficient and economically viable. The project involves a literature review to identify the current state of research on the subject, as well as the design and execution of experiments to test the effectiveness of the proposed method. The resulting product will be analyzed using various analytical techniques, and an economic analysis will be conducted to determine the viability of the method for commercial production.

CHAPTER 8

CONCLUSION

In conclusion, the production of Dioctyl Terephthalate (DOTP) via the degradative transesterification process offers several benefits as a plasticizer for flexible PVC. The project focuses on converting Terephthalate Polyesters into DOTP through a chemical reaction using methanol and catalysts. Throughout the project, various aspects such as the process description, mass balance, energy balance, safety measures, and literature review are considered. DOTP finds wide applications in industries such as automotive, construction, packaging, and healthcare due to its excellent plasticizing properties and compatibility with PVC. It enhances the flexibility, durability, and mechanical properties of PVC while reducing the migration and environmental concerns associated with traditional plasticizers like phthalates.

DESIGN OF AN ADIABATIC SYSTEM AND ITS IMPROVEMENTS

A PROJECT REPORT

Submitted by

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FREDRICK ROSHAN M

112719203004

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112719203016

in partial fulfillment for the award of the degree

of

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in

CHEMICAL ENGINEERING



**St. PETER'S COLLEGE OF ENGINEERING AND
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ANNA UNIVERSITY CHENNAI 600 025

BONAFIDE CERTIFICATE

Certified that this project report “**DESIGN OF AN ADIABATIC SYSTEM AND ITS IMPROVEMENTS**” is the bonafide work of “**NAVEENKUMAR J (112719203009)**, **FREDRICK ROSHAN M (112719203004)** and **SHIVASUBRAMANI T (112719203016)**” who carried out the project work under my supervision.


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INTERNAL EXAMINER 17/5/23


EXTERNAL EXAMINER 17/5/23

ABSTRACT

The project aims to develop a mini fridge utilizing insulated phase change material in an adiabatic system. The mini fridge is designed to provide efficient cooling using the latent heat absorption and release properties of the phase change material. The insulated design ensures minimal heat transfer to the surroundings, improving energy efficiency. The project involves selecting and procuring the phase change material, designing and manufacturing the fridge with appropriate insulation, and implementing an adiabatic system for optimal cooling performance. The project also considers process safety measures and evaluates the process economics. The outcome of the project is a compact and energy-efficient mini fridge that offers effective cooling while minimizing energy consumption and operating costs.

CHAPTER 10

CONCLUSION

The project focused on the manufacturing of a mini fridge using insulated phase change material in an adiabatic system. Through careful design and implementation, the project successfully developed an energy-efficient cooling solution. The mini fridge utilizes the latent heat absorption and release properties of the phase change material, resulting in effective temperature control. The incorporation of insulation minimizes heat transfer to the surroundings, ensuring optimal energy efficiency. Safety measures were implemented throughout the project to ensure the secure handling of materials and the overall manufacturing process. Additionally, a process economics estimation provided valuable insights into the project's cost-effectiveness. Overall, the project achieved its objectives by delivering a compact, energy-efficient, and cost-effective mini fridge that meets the cooling needs while prioritizing energy conservation and user safety.

Method Development and Validation for Determination of Free Ferrate Using N, N'-diethyl- p-phenylenediamine (DPD) Reagent

A PROJECT REPORT

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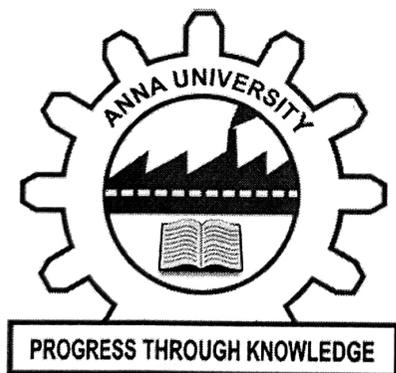
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Certified that this project report “METHOD DEVELOPMENT AND VALIDATION FOR DETERMINATION OF FREE FERRATE USING N, N'-DIETHYL-P-PHENYLENEDIAMINE (DPD) REAGENT” is the bonafide work of “SHRINIVETHA S (112719203017) and BOOMIKA K (112719203003)” who carried out the project work under my supervision.


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17/05/23
INTERNAL EXAMINER


17/05/23
EXTERNAL EXAMINER

ABSTRACT

Ferrate is a powerful oxidant and coagulant that has the potential to revolutionize water treatment processes. However, the accurate and reliable analysis of ferrate in water is essential for its effective application in the water industry. This study focuses on the development and validation of a method for the analysis of free ferrate in water using the DPD reagent. A new method for the determination of low concentrations (0.5-2.2 mg/ μ l) of the aqueous ferrate (Fe (VI)) was developed. The method is based on the reaction of Fe (VI) with N, N'-Diethyl-P-Phenylenediamine Reagent (DPD) which forms a pink color that can be measured spectrophotometrically at 510 nm (DPD method). The increase in absorbance at 510 nm for DPD generation was linear with respect to Fe (VI) added (0.5-2.2 mg/ μ l) in phosphate buffered solutions. This enables the DPD method to measure Fe (VI) selectively. The residual absorbance of DPD was found to be stable in several water matrices (Phosphate buffer solution and natural waters) and concentrations of Fe (VI) spiked in natural waters could be determined with high accuracy. The developed method was validated using several parameters, including accuracy, precision, linearity, and sensitivity, to ensure that it met the required performance criteria. The developed method was successfully applied for the analysis of free ferrate in different water bodies, including drinking water, surface water, and wastewater. The developed method offers several advantages, including simplicity, sensitivity, and specificity, making it a reliable tool for ferrate analysis.

7. CONCLUSION

In conclusion, the development and validation of a method for the analysis of free ferrate in water using the DPD reagent is a critical process that has significant implications for environmental monitoring, water treatment, and public health. This method for the determination of low concentrations (0.5-2.2 mg/ μ l) of the aqueous ferrate (Fe (VI)) was developed. The method is based on the reaction of Fe (VI) with N, N'-Diethyl-P-Phenylenediamine Reagent (DPD) which forms a pink colour that can be measured spectrophotometrically at 510 nm (DPD method). The increase in absorbance at 510 nm for DPD generation was linear with respect to Fe (VI) added (0.5-2.2 mg/ μ l) in phosphate buffered solutions. This enables the DPD method to measure Fe (VI) selectively. The residual absorbance of DPD was found to be stable in several water matrices (Phosphate buffer solution and natural waters) and concentrations of Fe (VI) spiked in natural waters could be determined with high accuracy. Through, this method, accurate and reliable results can be obtained for a wide range of ferrate concentrations in various water matrices. The development and validation of this method provide a reliable tool for the analysis of free ferrate in water, enabling better understanding and management of water quality and public health concerns related to ferrate. The application of this method in the water industry and research can lead to improvements in water treatment processes and environmental protection efforts.

**PRODUCTION OF BIOFUEL USING PYROLYSIS PROCESS AND
MODELLING USING ASPEN PLUS SOFTWARE**

A PROJECT REPORT

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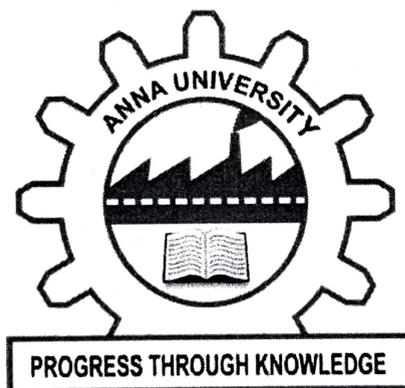
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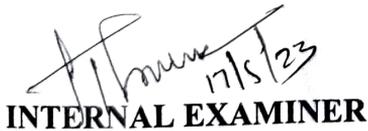

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INTERNAL EXAMINER


EXTERNAL EXAMINER

ABSTRACT

The production of biofuels using pyrolysis process is a promising alternative to conventional fossil fuels .In this process, Pyrolysis is a thermochemical conversion process that involves the heating of biomass in the absence of oxygen to produce bio-oil, biochar, and syngas .The biofuels produced from pyrolysis have the potential to reduce greenhouse gas emissions and provide a sustainable alternative to fossil fuels.. Biofuels are increasingly gaining attention as a renewable source of energy due to their lower carbon footprint compared to traditional fossil fuels. One such biofuel, produced using the pyrolysis process, has shown promising results in terms of its potential to replace conventional fuels .This process involves heating biomass materials in the absence of oxygen, resulting in the production of bio-oil, bio-char, and syngas. The bio-oil can be further refined into a transportation fuel, while bio-char and syngas can be used as solid fuel and feedstock for other processes, respectively .The study evaluates the optimal pyrolysis conditions, such as temperature, pressure, and residence time, for producing high-quality biofuels from sawdust .The results demonstrate that pyrolysis is a viable method for the production of biofuels from biodegradable waste, and Aspen Plus is a process simulation software, a valuable tool for process optimization and simulation. It can be used to model and optimise the pyrolysis process.

This paper presents a study on the production of biofuels using pyrolysis process and the modelling of the process using Aspen Plus.

CHAPTER 7

CONCLUSION

The production of biofuel using sawdust as a biomass feedstock through the pyrolysis process has the potential to provide a sustainable and renewable source of energy. Pyrolysis involves the thermal decomposition of the sawdust at high temperatures in the absence of oxygen, resulting in the production of bio oil, biochar, and syngas. The quality and yield of the bio oil and biochar produced are influenced by several factors, including the characteristics of the feedstock, pyrolysis process parameters, reactor design, catalysts and additives, and post-processing techniques. Therefore, careful selection and optimization of these factors are critical to achieving high-quality bio oil and biochar with desirable properties and applications.

- Bio oil produced from sawdust can be used as a fuel to reduce greenhouse gas emissions and dependence on fossil fuels.
- Biochar produced from sawdust can be used as a soil amendment to enhance soil fertility and carbon sequestration.

The production of biochar and bio oil from sawdust through pyrolysis can provide a solution to the problem of waste management. Further research is needed to optimize the process and develop cost-effective and scalable solutions for commercial applications.

**PRODUCTION OF FERRATE TABLET FOR WATER
TREATMENT
A PROJECT REPORT**

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SILVYA V (112719203018)

In partial fulfilment for the award of the degree

Of

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IN

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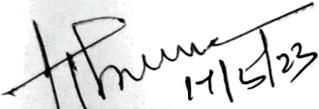
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MAY 2023

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INTERNAL EXAMINER


EXTERNAL EXAMINER

ABSTRACT

A ferrate tablet is a promising alternative for water treatment due to its unique properties, including high oxidative power, stability, and ease of handling. Ferrate tablets can efficiently remove various pollutants, including organic compounds, bacteria, and viruses, from water sources. Use of ferrate as an alternate coagulant for the large-scale water treatment has been studied and reported in this thesis. More stringent water standards and increasing pollution in raw water sources have motivated to seek new and advanced technologies for water treatment and this is the aim of this study. The tablets are made by compressing powdered ferrate salts with an effervescent, resulting in a stable and easy-to-use form. In this abstract, we review the current state of research on ferrate tablets for water treatment, including their effectiveness, mechanism of action, and potential applications. We also discuss the challenges and opportunities associated with the use of ferrate tablets for water treatment scalability, and environmental impact. Overall, ferrate tablets show great promise as a sustainable and effective solution for water treatment, with the potential to address a range of global water challenges.

5 . CONCLUCTION

In conclusion, the development of an effervescent ferrate tablet for water treatment is a promising approach to improving the efficiency and convenience of water treatment processes. Ferrate is a strong oxidizing agent that can effectively remove contaminants from water, while the effervescence of the tablet can help to promote the dissolution of the ferrate and increase its surface area, leading to more efficient oxidation of contaminants in water.

The effervescent ferrate tablet can also be designed to release the ferrate and effervescent components at a controlled rate, ensuring optimal oxidation and effervescence. Additionally, the tablet can be formulated to contain coagulant aids or pH buffers, further enhancing its effectiveness in water treatment applications.

The effervescent ferrate tablet has the potential to be a convenient and effective way to deliver ferrate for water treatment applications, potentially reducing the required dosage of ferrate and improving treatment efficiency. However, further research is needed to optimize the stability, dissolution properties, and effectiveness of the tablet for different water treatment applications and conditions. Overall, the development of an effervescent ferrate tablet is a promising innovation in the field of water treatment that has the potential to improve the quality and accessibility of safe drinking water for communities around the world.

Ferrate provides an excellent possibility in drinking water treatment when comes toutilizing existing resources and is still able to meet future water quality standards. Ferrate tablets can be produced and it increases the stability. Major disadvantage in using ferrate commercially will be the cost, but it can be overcome with more research works related to ferrate production.

The studies results (TS, TDS, Turbidity, pH, Conductivity, coliform, dissolution and distribution, stability) of ferrate composite tablets gave better results when compared to the tablets which are made only with ferrate. When ferrate composite tablets are used in the water sample the dissolution & distribution rate are higher (takes 30sec) when compared to the ferrate tablets(takes 3mins) .With higher dissolution rate the reaction time of ferrate will be faster and also pH of the water samples are balanced better when treated with ferrate composite. So we conclude that the tablets made with ferrate, effervescent and coagulant aid are more effective than the tablets made only with ferrate.

Design of Paddle Dryer for Sludge Disposal Using Flue Gas

A PROJECT REPORT

Submitted by

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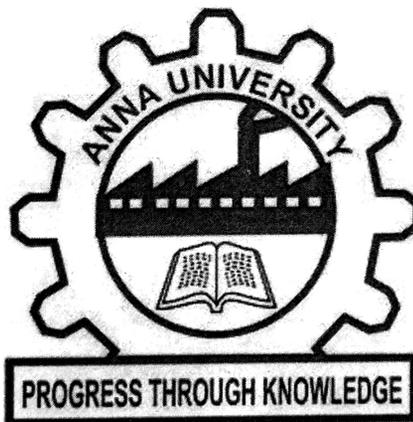
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INTERNAL EXAMINER


EXTERNAL EXAMINER

Abstract

In the pharmaceutical industry the disposal of sludge is difficult as it contains pollutants. There are two methods in which sludge is disposed using Bio enzyme and multiple effect evaporator. These two methods are ineffective due to high amount of organic and inorganic contaminants. The flue gas method which can be used to treat the effluent using paddle dryer. Paddle dryers are highly efficient, mechanically stirred, indirect heat transfer devices that can add or remove heat from process materials. The intermeshing motion of the paddle ensures uniform and constant mixing of the material in continuous or batch operation. The utility plant flue gas was used to remove the moisture content. By applying this process steam economy was improved. By analysis for efficient process the paddle dryer was designed with an increase in area and number of plates. After analysis the moisture content has decreased from 80% to 8%. Amount of sludge is decreased so this method is suggested for the safe disposal of pharma industrial sludge.

8. Conclusion

In conclusion, the paddle dryer has been designed efficiently with a high conversion rate. By incorporating this paddle dryer, moisture in the sludge can be reduced from 80% to 8%. The area of the paddle dryer and parameters of the design, as well as the number of paddles determined, are all provided in the report and their mass and energy balance has been accomplished in an effective manner. The safe operation of a paddle dryer for sludge disposal utilising flue gas necessitates the implementation of many safety measures. Proper ventilation, explosion protection, temperature monitoring, and material handling safety are among these procedures. These safety measures should be implemented into the dryer's design and operation to ensure crew safety and prevent catastrophic accidents. Regular inspections and maintenance are also required to guarantee that the safety measures are functional. The use of paddle dryers for sludge disposal can be a safe and efficient form of waste management if these safety guidelines are followed.

**INCREASING THE CONVERSION RATE OF LINEAR ALKYL
BENZENE SULPHONIC ACID USING AGEING TANK**

A PROJECT REPORT

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INTERNAL EXAMINER


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ABSTRACT

Linear alkyl benzene sulphonic acid (LABSA) is a synthetic chemical surfactant, which is widely used in industrial detergents. It is used in washing powder, detergent powder, oil soap, cleaning powder and detergent cake. Linear alkyl benzene sulphonic acid (LABSA) was manufacturing using sulphonating linear alkylbenzene (LAB) with sulfur trioxide (SO_3). The conversion rate of LAB to LABSA was found to be 79% and the remaining was found to be unconverted. Therefore, in order to utilize the unconverted product and increase the efficiency of the process a conventional method was proposed. The Disadvantage of the previous method was found to be a temperature of 720°C in falling film reactor preventing the higher conversion of LABSA. In this project, shell and tube heat exchanger was redesigned with increase in heat transfer area enabling increase in the conversion rate. The Redesign of falling film reactor was found to be costlier, therefore an ageing tank was designed to decrease the cost and increase in the conversion rate. The production rate was increased by implementing the above change in the conventional process. Thereby the overall conversion rate was increased from 79 to 91 % and the efficiency of the process also was increased.

CHAPTER 10

CONCLUSION

Linear alkyl benzene sulphonic acid (LABSA) was manufacturing using sulphonating linear alkylbenzene (LAB) with sulfur trioxide (SO_3). The conversion rate of LAB to LABSA was found to be 80% and the remaining was found to be unconverted. Therefore, in order to utilize the unconverted product and increase the efficiency of the process a conventional method was proposed. The Disadvantage of the previous method was found to be a temperature of 720°C in falling film reactor preventing the higher conversion of LABSA. In this project, shell and tube heat exchanger was redesigned with increase in heat transfer area enabling increase in the conversion rate. The Redesign of falling film reactor was found to be costlier, therefore an ageing tank was designed to decrease the cost and increase in the conversion rate. The production rate was increased by implementing the above change in the conventional process. Thereby the overall conversion rate was increased from 80 to 91 % and the efficiency of the process also was increased.

FABRICATION OF BOILER WITH AUTOMATED SENSOR

A PROJECT REPORT

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of

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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

A Boiler is a type of device used to heat water or other fluids, typically for use in heating systems, hot water supply, or industrial processes. Boilers work by heating water or other fluids to generate steam, which can then be used for heating or to power turbines for electricity generation. In our heat transfer laboratory, the electric boiler was found to be not working due to corrosion and improper working of pressure gauge. In this project, the Electric boiler in the Heat transfer laboratory was examined and the troubleshooting was identified. The Electric boiler was redesigned and fabricated with changes such as Blow down valve, pressure gauge, Level glass, safety valve, heating coil and a water level controller with automated sensor. The fabricated boiler was attached to the Vertical condenser in heat transfer laboratory. The readings were taken and the working condition was checked. Thus the Boiler was fabricated with automated the level control using sensor and was found to be efficient .

CHAPTER 7

CONCLUSION

. In our heat transfer laboratory, the electric boiler was found to be not working due to corrosion and improper working of pressure gauge. In this project, the Electric boiler in the Heat transfer laboratory was examined and the troubleshooting was identified. The Electric boiler was redesigned and fabricated. The fabrication of an electric boiler with a Mobrey float ball sensor, safety valve, 0.5 HP motor pump, and level controller switch provides a robust and reliable solution for efficient and safe boiler operation. The Mobrey float ball sensor enables precise monitoring and control of the water level, ensuring optimal performance and preventing potential issues such as water shortages or overflow. The safety valve acts as an essential safety measure, releasing excess pressure to prevent any potential damage or accidents. The 0.5 HP motor pump automates the water filling process, reducing manual intervention and maintaining a constant water level, enhancing efficiency and convenience. The level controller switch offers an additional layer of control and protection by regulating the operation of the boiler based on the water level. Together, these components create a well-integrated system that maximizes safety, efficiency, and reliability in the operation of the electric boiler. The fabrication of this comprehensive setup ensures smooth and hassle-free boiler performance, minimizing the risk of operational issues. The fabricated boiler was attached to the Vertical condenser in heat transfer laboratory. The readings were taken and the working condition was checked. Thus the Boiler was fabricated with automated the level control using sensor and was found to be efficient .



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Program Name: Civil Engineering

Program Code: 103

BATCH NO.	REG NO.	NAME OF THE STUDENT	PROJECT TITLE	PROJECT GUIDE
1	112719103003	KRISHNA KUMAR P.	REUSE OF PLASTIC WASTE IN PAVER BLOCK	Mr. Vinoth P., AP/ Civil
	112719103005	SATHISH R.		
	112719103007	VIKEY A.		
	112719103301	GOKULAN P.		
2	112719103001	HAMSHAWARTHINI M.	LATERITE WALL PANEL FOR EARTHQUAKE PRONE AREAS	Ms. Maria Vensa S., AP/ Civil
	112719103006	SWEATHA A.		
3	112719103002	HEPSIBA T.	SELF-HEALING CRACK PROOF CONCRETE USING BACILIUS SUBTILIUS	Ms. Maria Vensa S., AP/ Civil

Head of the Department

PRINCIPAL

**EXPERIMENTAL INVESTIGATION ON PROPERTIES OF
CONCRETE WHICH MADE BY PARTIAL
REPLACEMENT OF CEMENT BY GGBS AND COARSE
AGGREGATE BY WOOD WASTE**

CREATIVE AND INNOVATIVE PROJECT REPORT

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DECEMBER 2022

EXPERIMENTAL INVESTIGATION ON PROPERTIES OF CONCRETE WHICH MADE BY PARTIAL REPLACEMENT OF CEMENT BY GGBS AND COARSE AGGREGATE BY WOOD WASTE

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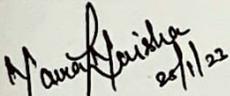


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DECEMBER 2022

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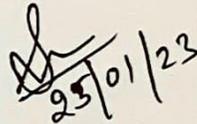
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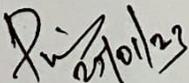
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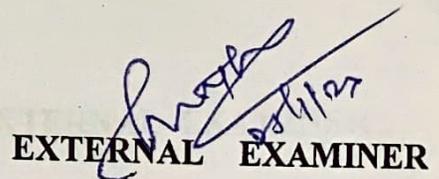
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INTERNAL EXAMINER


25/1/23

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ABSTRACT

Wood waste has been used in concrete in 19th century. Its light-weight and cost effectiveness are main recognized characteristics. To reduce the environmental burden, nowadays developed countries have opportunities to use wood waste in concrete construction. This research presents experimental program results on mechanical and physical properties of ninety-six specimens of concrete blocks units. The experimental program concluded three groups of mixes plus the control mix. In Group 1 GGBS(GROUND GRANULATED BLAST furnace SLAG) has been used as a partial replacement of 10%, 15%, 20%, 25% and 30% by volume of cement . In Group 2, wood waste aggregate has been used as a partial replacement of 10%, 15%, 20%, 25% and 30% by volume of coarse aggregate. The specimens were conditioned for 28-days at $80\pm 5\%$ Relative humidity and $24\pm 2^{\circ}\text{C}$ and tested. Slump, compressive strength, water absorption, dry density, porosity and thermal conductivity tests have been conducted. The compressive strength of concrete blocks units decreased due to the effect of GGBS and wood waste aggregate by increasing the replacement ratio instead of cement, sand and coarse aggregate. The results showed the mixes of group1 produced structural concrete blocks units at 20% replacement ratio of GGBS instead of cement respectively. Also, the results showed that light-weight concrete blocks units can be obtained at a 25% and 30% replacement ratio in all groups with satisfactory compressive strength. The optimum replacement ratio was about 20% in the three groups so that physical and mechanical properties were satisfactory. This may be considered a solution not only to the problem of the environment but also to the problem of economics in the design of buildings.

Keywords: Concrete blocks units, GGBS, wood waste aggregate, partial replacement, physical properties, mechanical properties

CONCLUSION

The concrete blocks units were designed following the normal-weight concrete blocks unit procedure. lightweight concrete blocks units were obtained with satisfactory compressive strength and physical properties by replacing GGBS and wood waste aggregate as a partial replacement of cement and coarse aggregates in replacement ratios ranged from 10% to 30%. The main conclusions of this research can be summarized below:

- Taking into account the significant reduction in compressive strength and physical properties of concrete blocks units as a sequence of replacement GGBS as a partial replacement of cement. Compressive strength of about 18 MPa can be obtained by replacing 20% of cement by GGBS
- A significant increase in water absorption capacity for all concrete blocks units as soon as wood waste aggregate was replaced. Group 2 was the most affected, with water absorption increasing from 6% to 16.25% when replacing 10% to 30% of wood waste aggregate.
- The effect of wood waste aggregate replacement was clear on the dry densities of concrete blocks units. The dry density of concrete blocks decreased when the ratio of replacement in all mixes was increased.
- Light-weight concrete blocks units with satisfactory mechanical and physical properties can be produced at 25% and 30% replacement ratio of GGBS or wood waste aggregate.
- The porosity of all concrete blocks units increased as soon as wood waste was incorporated. The Porosity was increased by more than 60% when the replacement ratio of wood waste aggregate increased from 10% to 30% for all mixes.

EXPERIMENTAL STUDY ON MECHANICAL PROPERTIES OF RESIN POLYMER CONCRETE USING BINARY CONCEPTS

CREATIVE AND INNOVATIVE PROJECT REPORT

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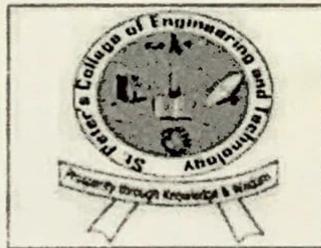
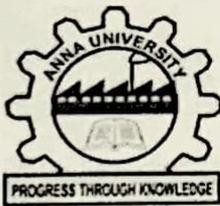
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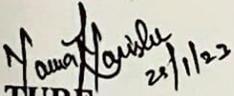


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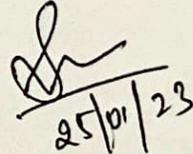
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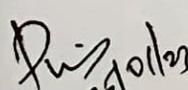
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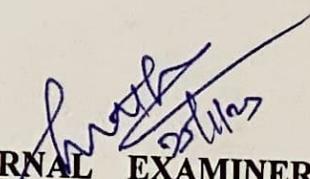
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ABSTRACT

The paper describes the research and development status of epoxy resin concrete composite materials at home and abroad , as well as the development and application in civil engineering field . this paper summarize the development direction of epoxy resin concrete composite material and put forward the view point that epoxy resin concrete is applied to truss structure .

Small and light fly ash is a by product of thermal power plant. In which oxides mainly present in fly ash are suitable to reinforce composite materials . its content accounts for 10,20, and 30% of those materials . however , due to the smooth surface , it cannot stick completely in plastics , therefore , in this work , it was studied to combined saw dust additive with 1,3, and 5% by weight to synergize to improve mechanical strength , fire retardation , and electrical properties . mechanical properties and flame retardant properties have improved markedly. At the combined ratio of 40% by weight of fly ash and 3% saw dust , saw dust composites have tensile strength values of 64.12 MPa , flexural strength of 89.27 MPa , compressive strength of 215.23MPa , and impact resistance of izod 15.45 kj/m² , oxygen index limited to 26.8% of fire retardant material in terms of dielectric strength, the electric strength of pure epoxy is 17.5Kv/mm , higher than that before adding saw dust [12.7kV/mm]. the presence of saw dust in the material creates a tortoise electric path , slowing the propagation of the power plant, which is the main factor that improves the breaking strength of the saw dust.

CHAPTER 6

CONCLUSION

The conclusion made by the project are:

1. By increasing the content of epoxy resin compressive strength of the concrete mixed increase.
2. It is founded that use of epoxy resin could be very conventionally used in making good quality concrete and construction material.
3. Increase in compressive strength was achieved when the replacement of epoxy resin fully.
4. The used epoxy resin can be innovative constructive material but cautious decisions of to be taken by engineers disposal problems of waste and environmental effect can be reduced to this.
5. And innovative supplementary construction material is formed through this study



CAMPUS CENTRAL

A PROJECT REPORT

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ABSTRACT

This document provides an overview of four distinct systems meant to improve college and university management and administration. The Online Project and Assignment Submission, Management, and Progress Monitoring System (OPAS) streamlines the submission and management of academic assignments. The e-circular notification system for android simplifies communication between college management and students. The smart college management system improves administrative operations and decreases workload. The online event management system makes it easier to plan and execute campus activities. These solutions improve educational institution management and administration by lowering administrative workload and boosting student experience. Students can conveniently submit assignments and track academic progress with these programs, while college management may efficiently connect with students, streamline administrative duties, and organize successful events. These systems boost overall productivity and effectiveness of college administration, resulting in a better educational experience for students.

CHAPTER 6

CONCLUSION AND FUTURE ENHANCEMENT

Campus Central provides various beneficial features for students, teachers, and academic institutions. It provides a platform for students to submit their assignments online, allowing teachers to assess and grade them remotely. Furthermore, it allows students to track their progress throughout the academic term, which assists them in improving their academic performance. This system simplifies the process of project and assignment submission while ensuring accuracy and eliminating the need for paper-based submissions. It allows administrators to communicate important messages to teachers, students, and parents in a timely and efficient manner. The system enables real-time delivery of circulars, reducing the need for paper-based circulars and ensuring that important messages are not missed. It enables administrators to manage student admissions, course scheduling, attendance tracking, and examination management. The system streamlines the entire administrative process, providing significant time and cost savings. The system enables event planners to manage event registration, scheduling, and logistics in a centralized location. It simplifies the entire event planning process, reducing the potential for errors and saving time and resources.

In the future, the system could be enhanced to include features such as plagiarism detection to improve the integrity of the submissions. It could also incorporate machine learning algorithms to automatically grade assignments based on predefined criteria. The system could be enhanced to include additional features such as the ability to track and report the delivery and receipt of circulars. The system could be enhanced to include features such as financial management, alumni management, and student engagement tracking. The system could be enhanced to include features such as real-time attendee engagement tracking, automatic feedback collection, and integration with social media platforms.



REAL AND FAKE IMAGE DETECTION USING DEEP LEARNING

A PROJECT REPORT

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ABSTRACT

In the present generation, social media is a big advantage for an individual to grow. On the other hand, we can't neglect the fact that it's a huge platform for negativity too. With the rapid progress of recent years, techniques that generate and manipulate multimedia content can now provide a very advanced level of realism. The boundary between real and synthetic media has become very thin. On the one hand, this opens the door to a series of exciting applications in different fields such as creative arts, advertising, film production, video games. On the other hand, it poses enormous security threats. Software packages freely available on the web allow any individual, without special skills, to create very realistic fake images and videos. These techniques can be used to manipulate public opinion regarding anything and create chaos. We would like to overview few major facts and figures regarding exceeding image forgery techniques that exists and propose a better way on how to detect these forgeries and fakes.

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

7.1 Conclusion

We conclude by saying that this program determines whether a photograph is morphed or not and displays the outcome. In ELA processing, there are two basic methods: deep learning approaches in the form of Convolutional Neural Networks and data Error Level Analysis. ELA is a forensic method to identify portions of an image with a different level of compression. The data from the error level analysis is then fed into the convolutional neural network architecture layer. CNN has numerous fully attached convolutional layers. When picture data is fed into a convolutional neural network, each pixel may be processed. Finally, show if the image is fake or real.

7.2 Enhancement

In future, work square measure for instance employing an additional complicated and deeper model for unpredictable issues. Integration of deep neural networks with the idea of increased learning, wherever the model is simpler. Neural network solutions seldom take under consideration non-linear feature interactions and non-monotonous short-run serial patterns, that square measure necessary to model user behavior in thin sequence information. A model is also integrated with neural networks to unravel this downside. The dataset can be inflated and another variety of images can be used for coaching, for instance, gray-scale pictures.



APTITUDE TEST WEBAPP

A PROJECT REPORT

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ABSTRACT

This is the development of an aptitude test website aimed at assessing cognitive skills in a user-friendly and efficient manner. The website serves as an online platform for conducting aptitude tests in various domains, catering to the needs of educational institutions and job recruitment processes. The design and implementation of the website incorporate key features such as user registration, test selection, timed assessments, and automated result generation. The website utilizes a responsive and intuitive user interface, allowing test-takers to navigate through different categories, such as quantitative aptitude, verbal reasoning, logical reasoning, and data interpretation. Moreover, adaptive algorithms are integrated to ensure that the test difficulty level adjusts dynamically based on the test-taker's performance, providing a personalized and fair assessment experience. Through extensive testing and validation, the aptitude test website demonstrates robust functionality, scalability, and security. The paper highlights the significance of such a platform in promoting objective evaluation, enhancing decision making processes, and enabling efficient talent identification. Furthermore, insights into the website's user experience, system architecture, and future scope are discussed. The research findings contribute to the field of online assessment systems and provide valuable insights for educational practitioners, recruiters, and researchers.

CHAPTER 7 CONCLUSION AND FUTURE ENHANCEMENTS

7.1 CONCLUSION

In conclusion, this project has successfully developed an aptitude website aimed at providing users with a platform to practice and enhance their aptitude skills. The project began with a thorough problem definition, highlighting the need for a comprehensive and user-friendly aptitude testing platform. Extensive research was conducted during the literature survey phase to identify existing solutions and gain insights into the field of aptitude testing. The system analysis phase involved analyzing the existing systems and proposing a new system that addresses the identified limitations and incorporates key features. The system specifications were defined to outline the requirements and functionalities of the aptitude website. System design was carried out to plan the architecture and structure of the project, ensuring modularity and scalability. The implementation phase involved coding and development, resulting in the creation of both the frontend and backend components. The system was thoroughly tested, and improvements were made to ensure its robustness and reliability. The login and authentication mechanisms were implemented to provide secure user access to the system.

7.2 FUTURE ENHANCEMENTS

While the current implementation of the aptitude website has achieved its primary objectives, there are several avenues for future enhancements and improvements. Some potential areas for further development include:

1. **Advanced Analytics:** Incorporating more advanced analytics and data visualization techniques can provide users with in-depth insights into their performance, progress, and areas for improvement. This can include generating detailed progress charts, performance metrics, and personalized recommendations based on user performance.

2. **Additional Test Categories:** Expanding the range of aptitude tests offered on the website can attract a wider audience. Including test categories such as logical reasoning, verbal ability, and numerical aptitude can provide users with a comprehensive aptitude assessment.

3. **Social Features:** Implementing social features like user profiles, leaderboards, and discussion forums can enhance user engagement and create a sense of community among users. This can allow users to compare their performance, share tips and strategies, and seek guidance from other users.

4. **Mobile Application:** Developing a mobile application version of the aptitude website can increase accessibility and convenience for users. Mobile apps can provide a seamless user experience and allow users to practice aptitude tests on the go.

5. **Adaptive Testing:** Implementing adaptive testing techniques can personalize the testing experience based on the user's proficiency level. The system can dynamically adjust the difficulty level of questions based on user performance, ensuring a tailored and challenging experience for each user.

6. **Integration with Learning Management Systems:** Integrating the aptitude website with learning management systems used by educational institutions can facilitate seamless integration of aptitude testing into academic programs. This can enable teachers and administrators to track student progress, assign tests, and provide targeted feedback.



PLACEMENT PORTAL WEB APPLICATION

A PROJECT REPORT

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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

The Placement Management System is a web-based application aimed at simplifying the placement process in colleges. The system provides a centralized platform for students, placement coordinators, and administrators to manage the placement process efficiently. The system is designed to streamline the placement process, reduce manual work, and improve communication between stakeholders. The system has three modules - Admin, Placement Coordinator, and Student. The student module allows students to apply for jobs, upload their resumes, and communicate with the placement coordinator and admin through a mailbox feature. The Placement Coordinator module allows placement coordinators to post job drives, set eligibility criteria for jobs, place or reject students based on the eligibility criteria, and communicate with students and admin through a mailbox feature. The Admin module allows administrators to manipulate student and placement coordinator databases, approve account creation for both students and placement coordinators, post important circulars through the post notice feature, and access the placed students list. By providing these features, the Placement Management System aims to simplify the placement process, reduce manual work, and improve communication between students, placement coordinators, and administrators. The system is developed with JavaScript, HTML, and CSS for frontend and PHP and MYSQL for backend. With its intuitive interface and powerful features, the Placement Management System is an ideal solution for colleges looking to streamline their placement process and provide better opportunities for their students.

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

CONCLUSION

The Placement Management System is an efficient, user-friendly, and powerful tool that simplifies the placement process in colleges. By providing a centralized platform for students, placement coordinators, and administrators, the system streamlines the placement process, reduces manual work, and improves communication between stakeholders. The system's intuitive interface and powerful features such as job posting, resume uploading, eligibility criteria setting, and communication through a mailbox feature make it an ideal solution for colleges looking to improve their placement process and provide better opportunities for their students. During the development of the Placement Management System, various technologies such as JavaScript, HTML, CSS, PHP, and MySQL were used. The frontend of the system was developed using HTML, CSS, and JavaScript, while the backend was developed using PHP and MySQL. This combination of technologies allowed for a robust, scalable, and reliable system that can handle large amounts of data and users. The development process of the system was carried out in several stages, starting with requirements gathering and analysis, system design, implementation, testing, and deployment. The development team ensured that the system met all the requirements and was thoroughly tested before deployment.

Future Enhancements:

In addition to the existing features, several future enhancements can be considered to further improve the Placement Management System. Firstly, the implementation of a job recommendation system based on student skills and interests can greatly enhance the placement process. By analyzing the skills and interests of students, the system can provide personalized job recommendations, increasing the likelihood of a successful match between students and job openings.

Secondly, incorporating a certificate verification feature would add an extra layer of credibility to student profiles and qualifications. This feature would involve integrating with trusted verification platforms or collaborating with educational institutions to verify the authenticity of students' academic certificates and achievements. By ensuring the validity of student

credentials, employers can have greater confidence in considering students for job opportunities.

Lastly, the system can be enhanced by introducing a virtual interview and scheduling feature. This feature would allow for the conducting of remote interviews, providing flexibility and convenience to both employers and students. Additionally, the integration of a scheduling tool would streamline the interview process by automating interview slot selection and confirmation.

These future enhancements would further strengthen the Placement Management System, making it more efficient and effective in facilitating successful job placements for students. By incorporating a job recommendation system, certificate verification, and virtual interview capabilities, the system would provide students with better opportunities, while offering employers a streamlined and reliable process for hiring talented individuals.



WEB-BASED INTERACTIVE COLLEGE ENQUIRY CHATBOT

A PROJECT REPORT

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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Our Voice-Enabled Chatbot for College Websites is a revolutionary solution that offers comprehensive information on all aspects of the college. With a user-friendly interface and menu-based navigation, users can effortlessly access desired information on courses, facilities, admissions, and events. The chatbot engages in voice-based conversations, delivering accurate responses with clarity and convenience. It also includes an admin login for efficient feedback management, allowing authorized personnel to review and delete student feedback. Experience the future of college website interaction with our advanced chatbot. Empower your college community with the convenience and accessibility of our intuitive interface, voice responses, and streamlined feedback system. Whether you're a student, staff member, or visitor, our chatbot acts as a virtual guide, offering real-time responses to all inquiries. Our College Voice-Based Response Enquiry Chatbot provides 24/7 support, helping students easily clarify their doubts while also seamlessly guiding them to the college's social media sites and website.

CHAPTER 8

CONCLUSION AND FUTURE ENHANCEMENTS

In conclusion, a college website with a voice based chatbot system has numerous benefits for students, parents, faculty, and administrative staff. The system can provide quick and accurate responses to user queries, reduce the workload of administrative staff, and improve the overall user experience. The chatbot's ability to respond using voice through text-to-speech technology makes it more user-friendly and accessible to individuals with visual impairments or reading difficulties. Additionally, the integration module allows users to access the chatbot from multiple channels, making it a versatile and valuable tool for the college. Overall, the implementation of a chatbot system with voice response technology is a novel and innovative approach to improving the efficiency and effectiveness of college website.

Some future enhancements of the project include the following:

- 1. Multilingual support:** To cater to a diverse user base, the chatbot can be enhanced to support multiple languages, allowing users to interact with the chatbot in their preferred language.
- 2. Personalization:** The chatbot can be enhanced to provide personalized responses to users based on their previous interactions and preferences.
- 3. Integration with voice assistants:** The chatbot can be integrated with popular voice assistants such as Google Assistant and Amazon Alexa, allowing users to access the chatbot through these platforms.
- 4. Integration with other college systems:** The chatbot can be integrated with other college systems such as the student information system, library management system, and learning management system, allowing users to access information and services across multiple systems through the chatbot.



COLLEGE BUS TRACKING SYSTEM

A PROJECT REPORT

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INTERNAL EXAMINER


EXTERNAL EXAMINER

ABSTRACT

The College Bus Tracking Android Application with QR Scanning Attendance Features is a comprehensive software system designed to provide a seamless transportation and attendance management experience for college students, staff, and faculty members. The application utilizes GPS technology to track the location of buses and displays the information on a map interface, which can be accessed by users through their Android devices. Additionally, the application features a QR scanning attendance system that enables users to scan a QR code on the bus to record their attendance for that class or event. This feature improves attendance management for colleges and universities, while also providing an added layer of security for bus transportation. The application aims to improve reduce wait times and provides an efficient way for students simplifying attendance management for faculty members. This abstract provides a brief overview of the College Bus Tracking Android Application with QR Scanning Attendance Features, which is a powerful tool for enhancing the efficiency of college bus transportation services and attendance management.

CHAPTER 6

CONCLUSION

In conclusion, the College Bus Tracking Android App Project with QR Verification Feature and Attendance Management is an innovative software solution that provides a seamless transportation and attendance management experience for college students, faculty, and staff. By leveraging GPS technology, the app allows users to track the real-time location of buses and view their schedules on a map interface. The integration of QR code verification enables users to record their attendance in a quick and efficient manner, improving attendance management for colleges and universities while also providing an added layer of security for bus transportation.

The app aims to improve efficiency by reducing wait times and providing an efficient way for students to manage their attendance. With a user-friendly interface, the app provides easy access to bus schedules and attendance records, and the notification system ensures that users are kept up-to-date with any changes or delays to the schedule.

FUTURE ENHANCEMENT

The future enhancement for this project is to make the application online for finding the current location of the bus. We are also planning to fix a GPS device on every bus so that it is not essential for the driver to have an Android phone. Due to availability of android phones and GPS devices it is going to stay for long in the future



SPCET DIGITAL CLASSROOM

A PROJECT REPORT

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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

The Digital classroom is a "Technology-enabled" learning environment where Student learn and Interact with the Teacher and Peer is fully supported through strategic use of Information and Communication Technology (ICT). Empowering Teachers and Students using Modern ICT tools. ICT tools are such as computers, microphone, cell phones. Developing future skills in students such as critical thinking, creativity and communication. Creating a unique platform for Teachers to think out of the box and build concepts and develop skills. Stimulating mind of Students, to explore and understand real life application of Maths, Science and other subject concepts. Google Classroom Alarm Combination. While there isn't a specific feature that combines Google Classroom and an alarm within the platform itself, but we created a possible approach by combining Digi class room and alarm. So, we utilised tools and applications to achieve this combination effect. Digi class Creating a class, adding students, and creating assignments and announcements as we needed. Ensure having a network connection on the specific platform. Alarm reminder tool: Setting up alarms and reminders for our specific Digi Classroom activities, so we created this feature to be a part of our Digi Classroom. By combining these 2 features we can ensure that students are getting the same attention in studies as in the class. Creating reminders or events for important deadlines, assignments, or other relevant activities within the papistic the chosen reminder feature, making sure to configure the alarm and notification settings to ensure the students receive timely alerts. Atlast setting the desired alarm sound and notification type that will grab your attention for the work that teacher had given.

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

- The Digi classroom has brought about significant changes to the way education is delivered.
- It has enabled access to education for a wider audience, improved the quality of education, and made it possible for learners to study at their own pace and convenience.
- Our Digi classroom has also facilitated the integration of technology into education, which has made learning more interactive, engaging, and effective

FUTURE IMPLEMENTATION

- In the upcoming future, we are planning to develop a wide software application to be more secure, offer it to other merchants, and create or build the infrastructure needed to maintain it.
- Now that we have created this project only for the single college, in the future this software application will be developed to be used by multiple colleges, simultaneously with an external database maintained by the administrator of the software.



LIBRARY MANAGEMENT SYSTEM

A PROJECT REPORT

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ABSTRACT

The Computer Science Engineering (CSE) department library management system is an essential tool for managing and organizing resources in a college library. The system provides a user-friendly interface for managing the CSE department's books and other material collections. It also incorporates digital resource management tools such as e-books, and e-newspapers giving students and faculty members access to a variety of resources. In addition, this project has several capabilities that are not typically found in traditional library management systems, such as user login and teacher login. It also contains an admin login feature, which allows the administrator to monitor the entire system. Furthermore, it also includes a feature that allows students to see a list of books issued, as well as their issue and return dates, after login into their accounts. Students can also request that the library add additional books by filling out the book request form. After signing into his admin account, the librarian can generate numerous reports such as student reports, issue reports, teacher reports, and book reports. Overall, we are developing this initiative to assist both students and library workers. This project highlights the importance of the CSE department library management system in the context of a college library, as well as its important features, benefits, and challenges. The computer system's implementation can help improve the library's overall efficiency, enhancing the learning experience of students and faculty members in the CSE department.

CHAPTER 7

CONCLUSION & FUTURE ENHANCEMENT

Conclusion

A well-designed and efficiently managed library management system is crucial for a college library to effectively manage its resources, services, and users. By addressing the limitations of existing systems and incorporating future enhancements, a library management system in a college can significantly improve the user experience, streamline library operations, and support the academic goals of the institution. It is important to carefully evaluate and select the appropriate features and functionalities based on the specific needs and requirements of the college library, and regularly update and optimize the system to keep up with evolving technologies and changing user needs.

Future Enhancement

- **Mobile App:** Developing a mobile app for the library management system that allows users to access library services, search and reserve resources, and manage their accounts on their smartphones or tablets. This can provide greater convenience and accessibility for users, especially in the era of mobile technology.
- **Integration with Learning Management Systems (LMS):** Integrating the library management system with the college's learning management system (LMS) to facilitate seamless access to library resources and services from within the LMS. This can enhance the integration of library resources into the curriculum and streamline access for students and faculty.
- **Enhanced Reporting and Analytics:** Adding advanced reporting and analytics capabilities to the library management system to provide in-depth insights into resource utilization, user behavior, and other key performance indicators. This can enable data-driven decision-making, assessment of library services, and optimization of library operations.
- **Personalized Services:** Implementing personalized services, such as recommendations based on user preferences, past borrowing history, and user behavior analysis. This can enhance the user experience by providing customized recommendations and suggestions for resources that match the interests and needs of individual

users. Integration with Open Educational Resources (OER): Integrating the library management system with open educational resources (OER) repositories to provide seamless access to a wider range of digital resources, including open educational content, open textbooks, and other OER materials.



EV CHARGING STATION FINDER AND SLOT BOOKING

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ABSTRACT

With ever-increasing pollution levels and its impact on the environment, governments are looking for alternate energy options for transportation services. Rapidly depleting global oil reserves and rising oil import bills of governments are also driving the need for alternate energy sources for the transport vehicles. Transportation as a whole is undoing a transformational change worldwide and Electric vehicle are the best solution to address both pollution and oil import bills. Electric vehicles are becoming more and more common these days. With the growing demand for Electric vehicles, the charging infrastructure is critical for sustaining the E-Mobility services. As EVs become more commercial, there will be a need to create an efficient slot booking system as the charging process can be time consuming and the need for more stations will be demanding.

Developed the Framework and Architecture of the Next-Generation Communication based Online EVs Charging Slot Booking at Charging Station. We built the stochastic queuing model for EVs in the charging station. We formulated the objective function of EV's charging at charging points in charging stations to determine the optimal charging time, minimal charging cost, least distance, minimal queuing delay and optimal duration for particular charging slots. The proposed model of the booking system is designed to create a cost effective and efficient system. Our Cloud based Charging Station Management platform is developed to network and manage multiple charging stations. The proposed server-based real-time forecast charging infrastructure avoids waiting times and its scheduling management efficiently prevents the EV from halting on the road due to battery drain out.

CHAPTER 7

CONCLUSION

We have implemented a complete system to supervise the charging of EVs in car parks, using small and cheap is connected to the Internet wirelessly. The proposed system allows a user to access the information associated with the charging process (cost, effective elapsed time, estimated time to full charge, etc.), and a supervisor to manage different aspects of the process such as billing of consumed energy, charging priorities, etc. The use of a Wi-Fi connection dramatically reduces the wiring and the complexity of the installation, and simplifies the interaction with the users of the system. The main idea behind this is the fact that every single parking space will need to be adapted to serve as a charging point, and given the shared ownership nature of these garages, we need a way to measure and manage the power consumed by the vehicle recharge. Electric mobility is developing rapidly both in demand and supply. The demand for (better) charging infrastructure is bigger than ever. This is why we've installed charging facilities for electric vehicles in all of our parking locations. Charging stations, charging management, and support services. Our goal is to save you from the hours of administration, by taking care of the installation of our charging stations, the monitoring and balancing of their power consumption, the pricing and invoicing of all charging sessions, and technical support altogether.

7.1 FUTURE ENHANCEMENT

To further extend our work and to analyze the charging process. How to schedule the charging activity according to different pricing schemes and how to integrate the incentive mechanism to achieve a win-win solution for both the customers and the charging operator are some further directions for us to consider.



**ANALYZING PROTEIN-PROTEIN INTERACTION NETWORK
IN CANCER CELL USING MACHINE LEARNING**

A PROJECT REPORT

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ABSTRACT

The task of predicting the function and interaction of proteins in a protein-protein dataset has become very important and crucial in recent times. Various research is going on in this field to extract the maximal amount of information from the interaction of proteins in the biological network, which helps to predict the function of protein. In our project, we have used the Protein-Protein interaction dataset of RAC protein for the link prediction of top 100 protein nodes having the highest interaction scores. RAC proteins are a family of small GTPases that regulate cytoskeletal dynamics and cell motility. They are important in various cellular processes such as phagocytosis, cell migration, and cytokinesis. The interaction of RAC proteins with other proteins in the cell is crucial for their proper functioning. Hence, predicting the interactions between RAC proteins and other proteins can provide insights into the underlying biological processes. To achieve this, we utilized machine learning algorithms to predict protein-protein interactions in the RAC protein dataset. We first selected the top 100 protein nodes with the highest interaction scores in the dataset. We then used various feature engineering techniques to extract important features from the dataset. These features included protein sequence information, protein structure information, and functional annotations. We then used a deep learning-based model to predict the interaction between RAC proteins and other proteins in the dataset. The model was trained on a subset of the dataset and evaluated using a hold-out validation set. We achieved a high accuracy in predicting protein-protein interactions, which indicated that our model was able to extract meaningful information from the dataset.

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

We conclude that, the prediction of protein-protein interactions (PPI) is an essential task in bioinformatics and systems biology. In this task we used three measures, namely preferential attachment, Adamic-Adar, and Jaccard coefficient, were employed to predict the PPI. These measures are based on the idea that proteins with a similar neighborhood in the protein interaction network are more likely to interact. The results showed that these measures are useful in predicting PPI, as evidenced by the high precision, recall, and F1 scores obtained. Moreover, combining these measures can further improve the prediction performance. Therefore, the application of these measures provides an efficient approach for predicting PPI and can be applied to a wide range of biological problems. In future, the network between each of the proteins can be identified.



**AMAZON STOCK PRICE PREDICTION USING
ARTIFICIAL INTELLIGENCE**

A PROJECT REPORT

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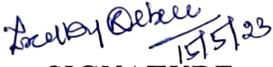
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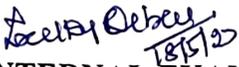
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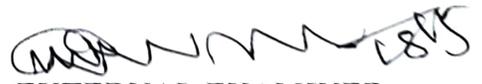
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ABSTRACT

Stock prices are first determined by a company's initial public offering (IPO) when it first puts its shares into the market. Investment firms use a variety of metrics, along with the total number of shares being offered, to determine what the stock's price should be. Afterward, the reasons mentioned above will cause the share price to rise and fall, driven largely by the earnings that can be expected from the company. Traders use financial metrics constantly to determine the value of the company, including its history of earnings, changes in the market, and the profit that it can reasonably be expected to bring in. Hence, stock price prediction has become an important research area. The aim is to predict machine learning based techniques for stock price prediction. The analysis of dataset by supervised machine learning technique (SMLT) using uni-variate analysis, bi-variate and multi-variate analysis. To propose a machine learning-based method to accurately predict the stock price. Proposed machine learning algorithm technique can be compared with best accuracy with precision, Recall and F1 Score.

CHAPTER 7

CONCLUSION & FUTURE ENHANCEMENT

Conclusion

The analytical process started from data cleaning and processing, missing value, exploratory analysis and finally model building and evaluation. The Best accuracy on public test set is higher accuracy score is will be find out. This application can help out to find the Amazon Stock Price

Future Work

- Amazon Stock Price prediction to connect the AI Model
- To automate this process by show the prediction result in web application or desktop application.
- To optimize the work to implement in Artificial Intelligence Environment.



ALUMNI CONNECT

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ABSTRACT

An alumni association is an association of graduates (alumni) or, more broadly, of former students. In today's rapidly evolving professional landscape, the value of a strong network cannot be overstated. Alumni networks play a crucial role in connecting graduates with their alma mater and fostering lifelong relationships among individuals who share a common educational background. This abstract presents an overview of "Alumni Connect," a dynamic platform designed to facilitate meaningful engagement, collaboration, and mentorship opportunities among alumni. The Alumni Connect platform leverages cutting-edge technology to bridge the gap between alumni and their educational institutions. It offers a range of features such as a comprehensive alumni directory, allowing users to search and connect with fellow alumni based on various criteria such as graduation year, industry, or location.

CHAPTER 7

CONCLUSION AND FUTURE ENHANCEMENT

In conclusion, the Alumni Connect project has successfully achieved its objectives of establishing and enhancing connections between the university's alumni network and the current student body. The frontend implementation using React.js, along with the backend built on Flask and MongoDB, has created a robust and user-friendly platform. Future recommendations include continuous enhancements to the platform, incorporating user feedback, expanding the user base, and leveraging data analytics to gain insights and further improve the alumni-student engagement experience. The Alumni Connect project aimed to establish and enhance connections between the university's alumni network and the current student body. Throughout the project, various modules and components were developed to achieve this objective. The frontend was implemented using React.js, while the backend utilized Flask as the framework and MongoDB as the database management system



**EXPLORING THE POTENTIAL ROLE OF
CAESALPINIA BONDUC SEED EXTRACT FOR THE
TREATMENT OF POLYCYSTIC OVARY SYNDROME**

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**INTERNAL EXAMINER
EXAMINER**

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EXTERNAL
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ABSTRACT

Polycystic ovary syndrome (PCOS) is a prevalent endocrine illness that affects women of reproductive age. PCOS has been linked to metabolic and reproductive issues like infertility. Natural substances have received interest as prospective therapeutic agents for PCOS due to their safety, minimal toxicity, and broad pharmacological effects. PREGNENOLONE-7,9(11)-DIEN is a natural steroid molecule that has shown promising results in the treatment of a variety of disorders, including PCOS. This chemical has been demonstrated to have anti-inflammatory, antioxidant, and insulin-sensitizing effects. This work performed molecular docking and simulation studies with the human obesity protein (1AX8), which is important in regulating lipid metabolism and energy balance, to investigate the potential of PREGNENOLONE-7,9(11)-DIEN as a treatment agent for PCOS. The goal was to study the ligand-protein interaction and assess its potential therapeutic effect. According to molecular docking experiments, PREGNENOLONE-7,9(11)-DIEN binds to the 1AX8 active site with a high affinity and stable contacts, suggesting that it might modulate the activity of this protein. The ligand-protein complex's stability over time was further supported by molecular dynamics simulations, which also revealed information about the complex's interactions and conformational changes. Hence, this research offers insightful information about the molecular interaction between PREGNENOLONE-7,9(11)-DIEN and 1AX8, and it raises the possibility that PREGNENOLONE-7,9(11)-DIEN may be useful as a PCOS treatment.

CHAPTER 5

CONCLUSION

In conclusion, our research focused on the analysis of three protein-ligand complexes: high obesity protein (PDB ID: 1AX8), Sex hormone binding globulin (PDB ID: 1D2S), and CYP11A-cytochrome P450 side-chain cleavage enzyme (PDB ID: 3N9Y), all bound to the pregnenolone-7,9(11)-dien ligand. Through extensive simulations and analyses, we gained valuable insights into their absorption, toxicity, conformational stability, and interactions with specific amino acid residues.

The ligand's evaluation for oral bioavailability revealed moderate to high oral bioavailability values for the studied complexes, indicating their potential for efficient absorption through the gastrointestinal tract. Toxicity assessments using PROTOX indicated moderate to low toxicity risk scores for the ligands, suggesting their relative safety.

Moreover, the RMSD analysis demonstrated stable structures for the high obesity protein and Sex hormone binding globulin complexes, while the CYP11A-cytochrome P450 side-chain cleavage enzyme complex exhibited noticeable fluctuations, implying potential conformational instability. Despite these differences, all three systems exhibited similar temperature and density profiles, indicating equilibration and stability within the simulations.

Detailed analysis of specific interactions between the ligand and amino acid residues provided insights into key binding interactions. These included strong bonds with Asn82(A) and Asp85(A) in the high obesity protein complex, interactions with Ser123(A) and Asn82(A) in the Sex hormone binding globulin complex, and interactions with Thr254(B) and Ser352(B) in the CYP11A enzyme complex.

This research contributes to our understanding of the behavior and properties of these protein-ligand complexes, paving the way for future studies and potential applications in drug design and development. The findings highlight the importance of considering ligand-protein interactions, stability, and toxicity profiles in the design and optimization of novel therapeutic agents targeting these proteins. Overall, this research provides valuable insights into the molecular mechanisms underlying ligand binding and lays the foundation for further investigations in the field of medicinal chemistry and drug discovery.



**MONITORING STUDENT ATTENDANCE SYSTEM USING FACIAL
RECOGNITION SYSTEM**

A PROJECT REPORT

Submitted by

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VENKATACHALAM. M - 112719104047

in partial fulfillment for the award of the degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

St. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY

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MAY 2023

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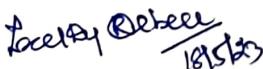
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INTERNAL EXAMINER

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EXTERNAL EXAMINER

ABSTRACT

In colleges, universities, organizations, schools, and offices, taking attendance is one of the most important tasks that must be done on a daily basis. The majority of the time, it is done manually, such as by calling by name or by roll number. The main goal of this project is to create a Face Recognition-based attendance system that will turn this manual process into an automated one. This project meets the requirements for bringing modernization to the way attendance is handled, as well as the criteria for time management. This device is installed in the classroom, where and student's information, such as name, roll number, class, sec, and photographs, is trained. The images are extracted using Open CV. Before the start of the corresponding class, the student can approach the machine, which will begin taking pictures and comparing them to the qualified dataset. Web camera and processing board. The image is processed as follows: first, faces are identified using a Haarcascade classifier, then faces are recognized using the LBPH (Local Binary Pattern Histogram) Algorithm, histogram data is checked against an established dataset, and the device automatically labels attendance.

CHAPTER 7

CONCLUSIONS AND FUTURE WORK

Goal of our project is to make keeping track of attendance at events easier. There are many ways to evident people at events, for example using personalized cards, taking signatures at the beginning of an event, but we found that facial recognition is more practical than any other conventional way. We found that using facial recognition is quite challenging and we tackled many problems throughout the development. Decision that we made is to implement the pictures directly into our program instead of using a database, but only for our testing purposes. Both the face recognition algorithms and a database can be easily implemented in the future, as the number of the users grows.

REFERENCE

- 1) N.Sudhakar Reddy, M.V.Sumanth, S.Suresh Babu, “ A counterpart Approach to attendance and feedback system using machine learning techniques “. Journal of emerging technologies and innovative research (JETIR), Volume 5, Issue 12, Dec 2018
- 2) Samual Lukas, Adithya Rama Mitra, Ririn Ikana Desanti Krishnadi, “Student Attendance System in Classroom using Face Recognition technigue”, Conference paper DOI:10.1109/ICTC.2016.7763360 Oct 2016

**EARLY FIRE DETECTION SYSTEM USING
DEEP LEARNING**

A PROJECT REPORT

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JUNE 2022



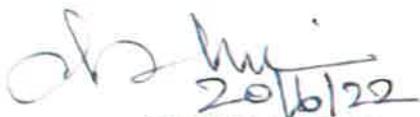

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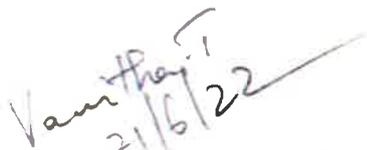

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ABSTRACT

This work discuss about the modern fire detection and safety measures for commercial buildings. It is known that the technological advancement are increasing at a faster rate. But the utilization of technologies in various sectors is very low. Nowadays smoke sensors are used to detect fire, which are placed in the ceiling. The major disadvantage of this type of sensors is the smoke has to reach the ceiling. By that time the fire may become uncontrollable and cause damage to property. As a new fire detection technology, image fire detection has recently played a crucial role in reducing fire losses by alerting users early through early fire detection. Image fire detection is based on CNN architecture analysis of images. We can classify the output of two categories like fire and non-fire. This technique has many advantages such as early fire detection, high accuracy, flexible system installation, and the capability to effectively detect fires in large spaces and complex building structures. It processes image data from a camera by algorithms to determine the presence of a fire or fire risk in damages. Therefore, the detection algorithm is the core of this technology, directly determining the performance of the image fire detector.



CHAPTER 10

CONCLUSION AND FUTURE WORK

10.1 CONCLUSION:

It is important to have a fire protection system in place as a part of a building's safety plan. Without fire protection system, the lives of those who are inside the building is placed at high risk in the event of an emergency. Our proposed system uses image processing method based on CNN. Our main aim of the project is to design the system which eliminates the disadvantage of smoke sensor and implementing latest fire extinguishing techniques to deal with the fire and to reduce false alarm triggering. The proposed system can be effective in commercial and residential buildings. In our design when a fire is detected LCD display shows "Fire detected" and "Motor ON". A GSM module is implemented to send alert message to people in and around the building. And a pump motor is turned ON to indicate the sprinkler action.

10.2 Future Work:

- To deployment real time this process by show the prediction result in web application or desktop application.
- To optimize the work to implement in Artificial Intelligence environment.
- To deploy this model to AI on web application.



**OPTIMIZING POWER CONSUMPTION FOR
OSCILLATOR-BASED WAKE-UP RECEIVERS**

A PROJECT REPORT

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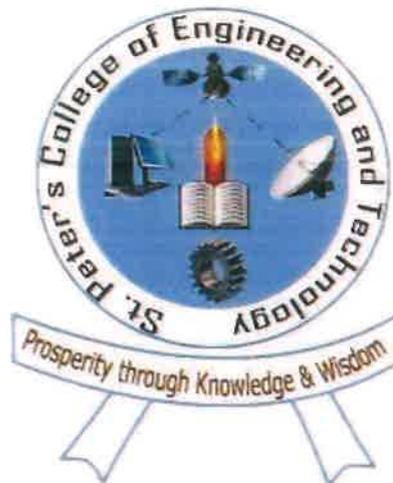
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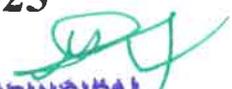


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ABSTRACT

A wake-up receiver is a low power receiver which always senses the medium for a wake-up call in a Wireless Sensor Node (WSN). Thus, only the wake-up receiver is kept active in the Wireless Sensor Node while the main radio is kept in idle state. Most of the previous implementations use active components like operational amplifier which increases power consumption and Bluetooth low power thus reducing the total range of the receiver radio. Thus, an effective wake-up receiver can be designed by using a transformer as the frontend to capture the wake-up call and the pattern received can be extracted into individual bits with the help of a pulse extractor and then can be cross referenced with an oscillator so as to find the exact wake-up call intended to a particular WSN node.




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CHAPTER – 8

CONCLUSION

Thus, the output of the WuRx is verified for the designed sequence and the power consumption during the idle state is found to be in nano watts. The active state power consumption is about several milli watts and the correct wake-up call is identified to wake-up the main radio. The architecture further reduced the total power consumed by using a transformer in the frontend and by using different stages as in a pipelined stage. Thus, it leads the way for stopping the process when a wrong bit is sensed and the bits are checked linearly leading to better address decoding ability.

P_{idle}	300nW – 450 nW
P_{active}	900nW – 1.5 μ W
f_{input}	50 KHz
V_{dd}	0.6V

Table.8.1 Final power consumption

8.1 Future work

Some of the future work includes further power reduction by using different dimensions of the MOSFET and by reducing the number of control signals to be used in each stage thus reducing the delay and ultimately reducing the power consumption.



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**MEASUREMENT OF PHYSICAL PARAMETERS IN
PPGSIGNAL USING SENSSOR**

A PROJECT REPORT

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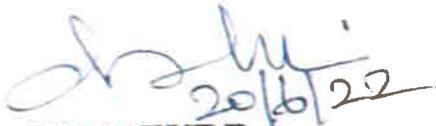

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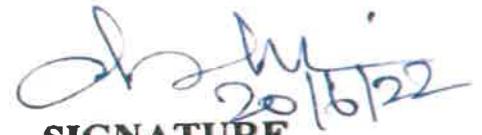
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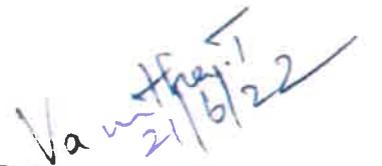

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ABSTRACT

This work discuss about to monitor the heart beat without any physical contact. It is known that the technology advancements are increasing at a faster pace. But the utilization of technologies in various sectors is very low. In the recent years, cardiovascular diseases (CVDs) have become the leading cause of death worldwide. Approximately 17.9 million people died from CVDs in 2016, accounting for 31% of the total global deaths. 85% of these deaths are caused by heart attack and stroke. Heart Rate (HR) is a fore most parameter for the analysis of a patient's physiological conditions. Since the existing prototype using wearable sensor estimating the HRV during daily activity causes irritation and disturbance to the patient, this work deals with contact free photoplethysmography (PPG) that gives various benefits over contact methods. It is a simpler, low-cost and more popular method providing comfort, convenience and minimized risk of infection in medical applications. In this work, use the contact free method that measures the heart rate of a patient by using light sensor. Here corrupted PPG signals i.e, motion artifact are eliminated or removed by using filters.




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CHAPTER 9

CONCLUSION

Finally, In this paper PPG signal as been detected by using heart beat sensor and noise factor, motion artifacts are removed by band pass filter. Here HB is to be continually sensed till the heart rate as been determined. Without usage of gel patches, clips we can monitor the heart rate. This method is developed that can remove even the slightest noise occur due to small movement. This paper depicts how the design lessens the complexity. It is simple to implement, cost effective and convenient for the real time applications. Further developments can be made for the betterment of a healthy life.




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(Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai.
Accredited by NAAC with 'A' Grade and ISO 9001:2015 Certified Institution)

List of students undertaking Mini Project Work during the Academic Year 2022-2023

Program Name: Electrical and Electronics Engineering

Program Code: 105

MINI PROJECT BATCH LIST (2022-2023)

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5	112720105301	CHELLAIYA.S		
6	112720105304	KISHORE KUMAR.S		
7	112720105307	SANTHOSH.S		
8	112720105003	SRILAKSHIDHA.S	AUTOMATIC PLANT WATERING SYSTEM	Mr.P. SARAVANAN
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SMART ENERGY METER

A MINI PROJECT REPORT

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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

A smart energy meter is an electronic device that measures and records the consumption of electricity, gas, or water in a household or commercial setting. Unlike traditional energy meters that only measure the amount of energy used, smart energy meters also provide detailed information about when and how energy is being consumed.

Smart energy meters use advanced technologies such as internet connectivity, data analytics, and machine learning to collect, process, and transmit energy consumption data to utility companies or consumers in near real-time. This allows consumers to monitor their energy usage and make informed decisions about how to reduce their consumption and save money on their energy bills.

Smart energy meters also enable utility companies to improve their network management by identifying areas of high demand and proactively addressing issues before they become problems. Additionally, they can help utilities to integrate renewable energy sources into their grids by providing more accurate and detailed data about energy production and consumption.

Overall, smart energy meters are an important component of the transition to a more sustainable and efficient energy system, and are becoming increasingly popular around the world as governments and utilities seek to modernize their infrastructure and reduce carbon emissions.

CHAPTER 11

CONCLUSION

11.1 Conclusion

In conclusion, smart energy meters are becoming increasingly popular as they offer numerous benefits compared to traditional meters. They provide real-time information on energy consumption, which can help users better understand their energy usage and make informed decisions on how to reduce it. Additionally, they allow for more accurate billing and reduce the need for manual meter readings.

Smart energy meters can also support the integration of renewable energy sources and enable more efficient energy management. They can communicate with other devices in a smart home system to optimize energy use and provide insights into energy patterns.

However, there are also potential concerns related to privacy and data security with the use of smart energy meters. It is important for appropriate measures to be in place to protect user data and ensure privacy.

Overall, smart energy meters have the potential to play a significant role in the transition towards a more sustainable energy system, but it is important to carefully consider the benefits and risks before implementing them on a large scale.

SMART BLIND STICK

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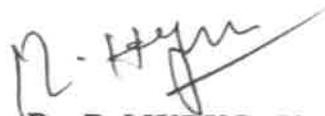
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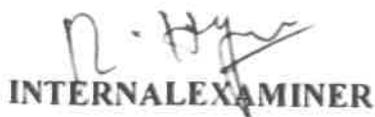
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INTERNALEXAMINER



EXTERNALEXAMINER

Abstract

Blind person finds it difficult to detect the presence of any obstacles in their way while moving from one place to another and it is very difficult to find the exact location of the stick if it have been misplaced. Thus, the smart stick comes as a proposed solution to help the visually impaired people in their day to day living without the help of others. In this paper we proposed a solution for the blind people by using an ultrasonic sensor in the blind stick. The instrument stands used to perceive the obstacles at the range of four meters and infrared instrument is castoff to perceive the nearer complications in front of the blind people. Thus the radio frequency transmitter and receiver help the user to find the exact location of the smart stick with the help of buzzer. The vibration motor which is placed in the smart stick gets activated and produces a vibration when any obstacle is detected. This proposed method uses the Arduino UNO as controller. The branch is accomplished of sensing all difficulties in front of the user. The smart stick is of user friendly, quick response, very low power consumption, lighter weight and it is easy to hold and fold by the user.

CHAPTER 7

CONCLUSIONS AND FUTURE SCOPE

7.1 Conclusions

The project proposed the design and architecture of a new concept of Smart Electronic Guiding Stick for blind people. The blind stick proposed in this paper can aid the visually impaired user by helping him/her navigate through different terrains and obstacles. The advantage of the system lies in the fact that it can prove to be very low cost solution to millions of blind person worldwide. The proposed combination of various working units makes a real-time system that monitors position of the user and provide dual feedback making navigation more safe and secure. It can be further improved to have more decision taking capabilities by employing varied types of sensors and thus could be used for different applications. It aims to solve the problems faced by the blind people in their daily life. This system provides a low-cost, reliable, portable, low-power consumption and powerful solutions for navigation with clear short response time. However, the system is essential with sensors, Arduino and other components. It is light in weight.

Further feature of this system can be improved via wireless connectivity between the system components. Thus, increasing the range of the ultrasonic sensor and implementing a technology for determining the speed of detecting obstacles. At the time of developing such an privilege solution, visually disabled people and blind people in all fast developing countries were on top of our priorities

7.2 Future Scope

In future, we will be modifying the proposed model in better way. Initiating with the addition of Bluetooth module for proper on and off functioning. Integration of GPS module for detecting location of user, in case of an emergency. GPS module will be integrated in combination of Bluetooth Module of Arduino UNO connecting it to the mobile phone for better and smooth location detection. Besides, soil moisture detector can be implemented for detecting the amount of moisture in the soil, providing the safer access of the path to the user. At last, in order to improve the sound notification we are planning to implement sound module which will give instruction in voice form.

The stick system presented in the paper uses artificial intelligence along with various sensors in real time to help the visually disabled people to navigate their environment independently. Image recognition,

Collision detection and obstacle detection are the three tasks performed by the system. Utilize machine learning algorithms to enhance the blind stick's capabilities, such as improving obstacle detection accuracy, personalized navigation based on user. Implement computer vision algorithms using cameras or image sensors to recognize and classify objects in the environment. This can assist the user in identifying specific objects or obstacles, such as doors, stairs, or people.

AUTOMATIC PLANT WATERING SYSTEM

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ANNA UNIVERSITY: CHENNAI 600025

April 2023

BONAFIDE CERTIFICATE

Certified that this mini project report "AUTOMATIC PLANT WATERING SYSTEM" is the bonafide work of "SRI LAKSHIDHA S (112720105003), GOPI A (112720105302), RATAVARMAN T S (112720105306), SRIRAM P (112720105308)" who carried out the project work under my supervision.



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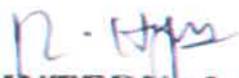
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The project of "AUTOMATIC PLANT WATERING SYSTEM" is submitted on 29.5.23



INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

An automatic plant watering system is a device that automatically waters plants without the need for human intervention. The system can be designed to water plants on a specific schedule or based on the soil moisture level.

The automatic plant watering system consists of a water source, a water pump, tubing, a moisture sensor, and a microcontroller. The water source can be a water reservoir or a tap connected to a water supply. The water pump is used to pump water from the source to the plants. Tubing is used to connect the water pump to the plants. The moisture sensor is placed in the soil to measure the moisture level. The microcontroller is used to control the water pump based on the moisture level readings from the sensor.

The system operates as follows: the moisture sensor continuously measures the soil moisture level and sends the data to the microcontroller. If the moisture level is below a certain threshold, the microcontroller activates the water pump to water the plants. The water pump pumps water through the tubing to the plants until the moisture level reaches the desired level. Once the desired level is reached, the microcontroller deactivates the water pump.

This system provides an efficient way to water plants without human intervention, ensuring that plants receive the optimal amount of water for their growth. Additionally, it helps conserve water by only watering the plants when necessary, reducing water waste.

CHAPTER 6

CONCLUSION

In conclusion, an automatic plant watering system can be a very useful tool for plant care, especially for those who are busy or may have difficulty remembering to water their plants regularly. These systems can vary in complexity, from simple drip irrigation setups to more advanced systems with sensors and timers.

Regardless of the type of system, the benefits of an automatic plant watering system include consistent watering, reduced water usage, and improved plant health. It can also save time and effort for the plant owner. However, it is important to choose a system that is appropriate for the type of plants being grown, and to monitor the system to ensure it is functioning properly.

Overall, an automatic plant watering system can be a valuable investment for those who want to ensure the health and well-being of their plants while minimizing the effort and time required for watering.



St. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY :: CHENNAI

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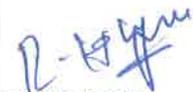
List of students undertaking Mini Project Work during the Academic Year 2022-2023

Program Name: Electrical and Electronics Engineering

Program Code: 105

PROJECT BATCH LIST (2022-2023)

S. No.	Register Number	Name of the Student	Title of the Project	Supervisor
1	112719105004	PRAKASH RAJ.S	ENERGY AUDITING FOR EDUCATIONAL INSTITUTE: A CASE STUDY ON St.PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY	Mr.J.MADHAVAN
2	112719105005	PRINCE KUMAR		
3	112719105007	UMAPATHY.B		
4	112719105002	MALINI.M	STUDY PERFORMANCE OF AUGUMENTED RAILGUN USING FEM TECHNOLOGIES	Dr.R.MURUGAN
5	112719105003	MOHAMMED HUSSAIN.M.R		
6	112719105006	SHAKTHIVEL.S.M		
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**ENERGY AUDITING FOR EDUCATIONAL INSTITUTE: A CASE STUDY
ON ST. PETER'S COLLEGE OF ENGINEERING & TECHNOLOGY**

PROJECT REPORT

Submitted by

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112719105004

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in partial fulfillment of the award of the degree
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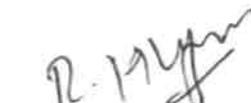
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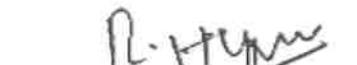
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The project report of "ENERGY AUDITING FOR EDUCATIONAL INSTITUTE: A CASE STUDY ON ST. PETER'S COLLEGE OF ENGINEERING & TECHNOLOGY" is submitted on...18/05/2023


INTERNAL EXAMINER


EXTERNAL EXAMINER

ABSTRACT

This report shows the findings of an energy audit undertaken for St. Peter's College of Engineering & Technology to identify potential for energy savings and increase energy efficiency. A team of experienced energy efficiency specialists conducted the audit over [time] utilizing a complete strategy that includes an initial evaluation, on-site inspection, data collecting and analysis, and the formulation of energy-saving suggestions.

The suggested methods are targeted to St. Peter's College of Engineering & Technology's individual needs and features and are intended to minimize energy usage, lower energy expenditures, and increase sustainability. The paper includes a cost-benefit analysis for each suggested action, estimating the initial investment, prospective cost savings, and environmental advantages of implementing the suggested measure.

Overall, the objective of the report is to help college administration make cautious choices on energy efficiency and sustainability. St. Peter's College of Engineering & Technology may reduce its energy use, minimize its energy expenditures, and contribute to a more sustainable future by following the proposed actions. The paper closes with a call to action for college administration to make energy efficiency and sustainability a priority in their daily activities and decision-making processes.

CHAPTER 8

CONCLUSION

We live in a modern age, where electrical energy is essential for our everyday work. The usage of electrical energy is rising every day because of fast-growing demand in both developing and under-developing countries. The price hike of fuel has now become a common phenomenon and this leads to an increase in the generation cost of electricity. Increasing the generation cost proportionally increases the tariff rates and the consequences are reflected in our monthly bill. Although, energy auditing does not provide the exact solution to reduce the usage then again it provides several opportunities for improving our usage which may lead to a good proportion of savings. Thus, energy conservation and improvement of efficiency can be the cheapest and fastest solution to overcome all the energy demands. Energy conservation means a reduction in energy usage by less energy service and energy efficiency means less energy for constant output. Although, the two concepts differ from each other but can be merged by Energy Audit. Energy Audit is an assessment, survey, and analysis of energy flows for energy conservation in a building, to reduce the amount of energy input into the system without having adverse effects on output. The procedure and techniques that we discussed in our previous chapter include 3 Level ASHRAE audit techniques which can cover any scale of audits. The process of audit is done in three stages namely: scheduling, instrumentation, and measurement. Several analytical techniques are used in the energy management context to help the energy auditing team to arrive at realistic results like incremental cost concept, inventory of energy inputs and rejections, heat transfer calculations, and evaluation of electric load characteristics. The energy balance gives us the systematic presentation of energy flows and transformation in a system. The management techniques of energy monitoring and targeting help us to eliminate waste, reduce and control the current level of energy use and improve the existing operating procedures by using energy information as a basis. We have mainly focused on the St. Peter's college of college of engineering & technology to calculate energy loss, calculating the potential electricity saving in percentage, and finally the payback period. We have used the tool "Microsoft Excel" to analyze the building energy losses and estimate the annual consumption from lighting and power load. Our study depicted that a reasonable amount of energy can be saved if the energy audit is performed properly. However, due to limitations and insufficient measuring equipment, we could

not consider many factors such as infiltration rate, fenestration factors, and others. Also, additional research and data are required to produce better results and can devise an effective method to conserve energy. The techniques and calculation method that we used in St. Peter's college of college of engineering & technology audit may not be appropriate for large-scale industrial audits. It is well known that, the conservation of every kilowatt of energy reduces a significant amount of carbon emission and carbon footprint. Thus, for a sustainable environment and to contribute towards carbon neutrality, it is very much crucial to introduce energy audits in every sector with few changes in existing systems to cut the growing demand in India. The government of India may decide the policies so that all industries and commercial buildings undergo energy audits and this will enhance our economic standing in the world market.

**STUDY PERFORMANCE OF AUGMENTED
RAILGUN USING FEM TECHNIQUES**

PROJECT REPORT

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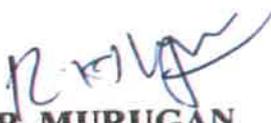
MAY 2023

BONAFIDE CERTIFICATE

Certified that this project report "STUDY PERFORMANCE OF AUGMENTED RAILGUN USING FEM TECHNIQUES" is the bona-fide work of M. MALINI (112719105002), M.R. MOHAMMED HUSSAIN (112719105003), S.M. SHAKTHIVEL (112719105006), I. MOHAMMED MUZZAMIL (112719105701) who carried out the project work under my supervision.

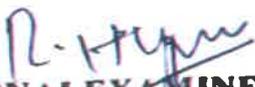

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INTERNALEXAMINER


18/05/23
EXTERNALEXAMINER

ABSTRACT

A rail gun is a device that is used to accelerate a projectile with higher velocity. The main problem in a rail gun design is non-uniform current distribution in the rail and armature which leads to a significant increase in temperature and local erosion due to high current density distribution nearer to the surface of the rail. Therefore, the current densities in the armature need to be decreased without the reduction of the force acting on the armature which is used to accelerate the projectile. Hence, an augmented rail is used. In this work, augmented rail gun geometries are proposed to calculate rail guns. Design parameters such as inductance gradient of the main rails, Mutual inductance gradient between the main rails and augmented rail, current density distribution over the main rails, and augmented rail are calculated using Ansys Maxwell to investigate the influence of augmented rail geometry on rail gun design parameters. Finally, a comparative analysis is conducted based on the obtained simulation results regarding the rail gun design parameters.

CHAPTER 7

CONCLUSION AND FUTURE SCOPE

7.1 CONCLUSION

In this project a cross sectional hardware of the Augmented rail gun has been designed. This was designed completely with the help of ANSYS MAXWELL Software. This software is completely used to analyze the cross-sectional views of the augmented conductors.

By analyzing the 2D dimensions of the rail cross sections with equal areas. Which is then simulated and recorded where the Mutual Inductance and the Inductance Gradient are obtained. Such that the increase in velocity occurs so that the propellant will attack the opponent with the increased force.

So by analyzing, calculating and obtaining the algorithms the hardware is completely designed. The hardware consists of the proposed state of 4 conductors connected with the plywood and the capacitors are being used as the charging gradient then followed by the triggering mechanism.

This Augmented rail gun cross-section proposed can be used in Navy, Army etc. The value of the inductance gradient has been determined over the past few years by applying numerical and analytical techniques. Simple problems can be solved using the analytical approach, but numerical issues require code and programs because they require a time-consuming process.

In this study, regression analysis was used to generate a new empirical formula for L' for both circular and rectangular bore geometries. The extracted formula and the software has been used to calculate the L' values.

7.2 FUTURE SCOPE

The key parameters for a rail gun are estimated using the 2-D FEM approach regarding rail dimensions and rail design. In order to aid in a more forward-thinking design of the rail gun, the critical parameters can be estimated with respect to armature dimension utilizing the 3-D FEM approach.

The simulation models employed in the PSPICE and MATLAB packages for pulsed power supply design are rather straightforward and have not been verified against experimental data.

The precise simulation model and parameters, however, are not revealed by the simulation or the optimization process. That is, after the model is enhanced and confirmed, the entire optimization procedure could be implemented.



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DEPARTMENT OF INFORMATION TECHNOLOGY

ACADEMIC YEAR (2022-2023)

SUB CODE: IT 8811

SUB NAME: PROJECT

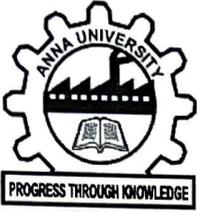
SEMESTER: VIII

YEAR: IV

BATCH NO	REG NO.	NAME	TITLE
1	112719205002	AKILAN	FACE RECOGNITION BASED ATTENDANCE MANAGEMENT SYSTEM
	112719205006	HEMNATH	
	112719205301	KARUNAKARAN	
	112719205301	NARAYANAN	
2	112719205005	GOBISRI	FAKE NEWS DETECTION USING ML
	112719205015	SARANYA	
	112719205017	SWETHA	
3	112719205008	JANSI	SNAKE CLASSIFICATION AS VENOMOUS AND NON-VENOMOUS USING DEEP LEARNING ALGORITHM
	112719205010	MEKALA	
	112719205012	RAKSHAGA	
4	112719205003	ARULRAJA	BIOMETRIC BASED ATTENDANCE MANAGEMENT SYSTEM
	112719205007	JAGANATHAN	
	112719205013	RANJITH	
	112719205016	SIVA	
5	112719205001	AJITH	SMART SURVEILLANCE SYSTEM
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**FACE RECOGNITION BASED ATTENDANCE MANAGEMENT
SYSTEM**

A PROJECT REPORT

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APPENDIX 2

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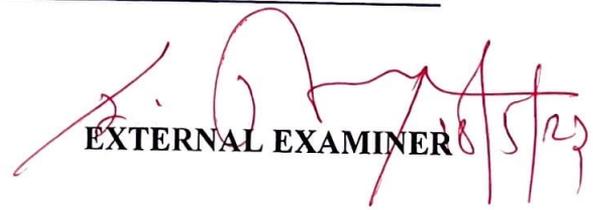
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

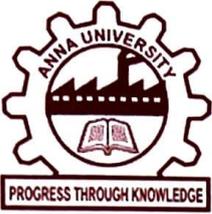
We are living in a world where everything is automated and linked online. The latest technologies like Internet of Things, Image Processing, and Machine Learning are evolving day by day. Many systems have completely changed due to this to achieve automation and more accurate results. The attendance system is a typical example of this transition, starting from the traditional signature on a paper sheet to face recognition. This Project proposes a method of developing a comprehensive embedded class attendance system using facial recognition for identification and marking the attendance. The system is based on the machine learning algorithm which is implemented using python language. A normal web camera is used to capture the user input image. The Face Recognition Based Attendance Management System now uses Local Binary Patterns (LBPS) algorithm for identifying and marking the attendance of the end user.

7.1 CONCLUSION:

Automated Attendance System has been envisioned for the purpose of reducing the errors that occur in the traditional (manual) attendance taking system. The aim is to automate and make a system that is useful to the organization such as an institute. The efficient and accurate method of attendance in the office environment that can replace the old manual methods. This method is secure enough, reliable and available for use. No need for specialized hardware for installing the system in the office. It can be constructed using a camera and computer. In this system we have implemented an attendance system for a lecture, section or laboratory by which lecturer or teaching assistant can record students' attendance. It saves time and effort, especially if it is a lecture with huge number of students. Automated Attendance System has been envisioned for the purpose of reducing the drawbacks in the traditional (manual) system.

7.2 FUTURE ENHANCEMENTS:

In all the biometric modalities -fingerprint, expression, gait, behavioural, DNA, and others - face is gaining adoption faster. Because, it is not only convenient for almost all to use, but a face provides a sensor (here, camera) and device with too much "signal" or data as any other tool. For example, fingerprints cannot suit the many differences in the forms, sizes, distinctive marks, and other distinguishing features of a qualified A.I. Program, for all their simplicity and apparent sophistication. More commonly, the face is often simpler to use in several situations where sunlight, temperature, social restrictions, and physical access to a mobile device will preclude a person from talking to their phone or utilizing a fingerprint reader. Once the technology is fully developed, implemented, and introduced, facial recognition and face authentication can be taken to new heights.



FAKE NEWS DETECTION USING MACHINE LEARNING

A PROJECT REPORT

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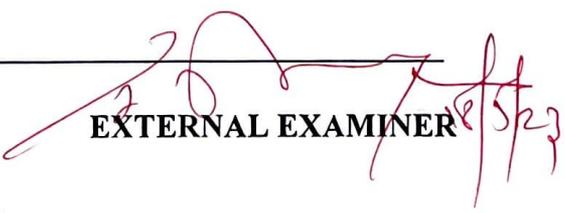
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INTERNAL EXAMINER


EXTERNAL EXAMINER

ABSTRACT

Spreading of fake news is a social phenomenon that is pervasive at the social level between individuals, and also through social media such as Facebook and Twitter. Fake news that we are interested in is one of many kinds of deception in social media, but it's more important one as it is created with dishonest intention to mislead people. This issue because we have noticed that this phenomenon has recently caused through the means of social communication to change the course of society and peoples and also their views, for example, during revolutions in some Arab countries have emerged some false news that led to the absence of truth and stirs up public opinion and also fake of news is one of the factors Trump successes in the presidential election. So it is decided to face and reduce this phenomenon, which is still the main factor to choose most of decisions. Techniques of fake news detection varied, ingenious, and often exciting. In proposed work, is to build a classifier that can predict whether a piece of news is fake or not based only its content, thereby approaching the problem from a purely machine learning perspective by hybrid technique models. The difference and analysis of results are shown by applying them to the dataset that called LAIR.

CHAPTER 9

CONCLUSION AND FUTURE ENHANCEMENT

rs, deception detection in online reviews & fake news has an important role in
ement, national security, political due to the potential impact fake reviews can
behavior and purchasing decisions. Researchers used deep learning with the
ease in learning and thus get the best results by using word embedding for
es that distinguish relations between words in syntactic and semantic.

e have presented a detection model for fake news using n-count analysis as
hniques. The proposed model achieves its highest accuracy when using Count

ANCEMENT

ork, we will run our model on the few other publicly available datasets, such
hich was released only recently and apply some deep learning techniques for



**SNAKE CLASSIFICATION AS VENOMOUS AND
NON -VENOMOUS USING DEEP LEARNING ALGORITHM**

A PROJECT REPORT

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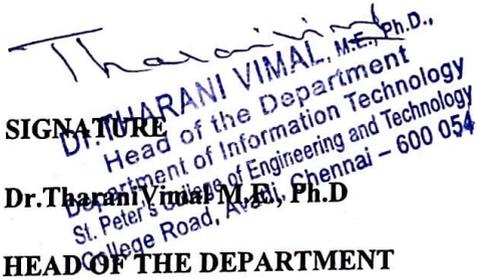
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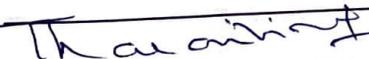


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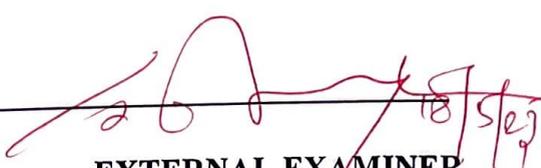
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Snakes are curved, limbless, warm blooded reptiles of the phylum serpents. Any characteristics, including head form, body shape, physical appearance, texture of skin and eye structure, might be used to individually identify nonvenomous and venomous snakes, that are not usual among non-experts peoples. Automated snake image identification is important from different points of view, most importantly, snake bite management. Auto-identification of snake images might help the avoidance of venomous snakes and also providing better treatment for patients. A standard machine learning methodology has also been used to create an automated categorization of species of snake dependent upon the photograph, in which the characteristics must be manually adjusted. As a result, a Convolutional neural network has been proposed in this proposed systems, which classify snakes into two categories: venomous and non-venomous. A set of data of 1766 snake pictures is used to implement CNN model. The dataset is increased with data augmentation technique to enhance the dataset. Experimental results shows that the algorithm has achieved 99.4% accuracy.

CHAPTER 9

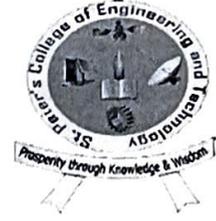
CONCLUSION AND FUTURE ENHANCEMENT

9.1 CONCLUSION

A new Convolutional neural network-based architecture for detecting and classifying venomous and non-venomous snakes was suggested during this work. The framework's ability to acquire snake features using neural network blocks is clearly demonstrated. This study looks at how to develop and create a venomous and non-venomous snake classification model that could help mankind. Snake venomous can be used as medicinal tools by distinguishing between venomous and non-venomous snakes. Snakebite disease may be minimized by identifying the species of snake and administering appropriate treatment.

9.2 FUTURE ENHANCEMENT

In future the work can extended to improve the model with hyper parameter tuning. Also the work can extended to use pre-trained model like VGG16.



BIOMETRIC BASED ATTENDANCE MANAGEMENT SYSTEM

A PROJECT REPORT

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Certified that this project report “**Biometric based attendance management system**” is the bonafide work of “,Arulraja (112719205003), Jaganathan(112719205007), Ranjith (112719205013)”, Siva shankar (112719205016) who carried out the project work under my supervision.


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INTERNAL EXAMINER


EXTERNAL EXAMINER

ABSTRACT

In industrial and domestic applications attendance registering is important at and every moment. Many faces a lot of problems due to lack of proper attendance monitoring system. In this project we use Fingerprint Sensor (R307) which senses the Fingerprint of a particular person; a buzzer and LED gets activated whenever a person places his finger on the sensor. Then the fingerprint is stored in cloud with id no. Many people can store their fingerprints. Then next time any person puts their finger on the sensor it checks there are any matching fingerprints or not. If his fingerprint matches with any of the stored fingerprints then the LCD display shows which person it is and the time & date of checking. In this model, all the fingerprints are stored each and every time someone places his finger. User can connect the system wirelessly with the cloud and monitor the process. When the app is running on the computer, data sent by R307 fingerprint module is received and stored on the cloud and displayed in serial monitor and 16*2 LCD display module. This study has mainly focused to develop IOT based biometric attendance system, that is able to keep record of attendance and count the data for daily purpose. In this project we are going to design Fingerprint Sensor Based Biometric Attendance System using Arduino. Simply we will be interfacing fingerprint sensor with Arduino, LCD Display & RTC Module to design the desired project. In this project, we are using fingerprint Module and Arduino to take and keep attendance data and records. From manually marking the attendance in attendance registers to using high-tech applications and biometric systems, these systems have improved significantly. This presents a simple and portable approach to student attendance in the form of an Internet of Things (IOT) based system that records the attendance using fingerprint based biometric scanner and stores them securely over cloud.

CHAPTER 8

CONCLUSION & FUTURE ENHANCEMENT

8.1. CONCLUSION

The Attendance Management System is developed using Visual Basic.NET fully meets the objectives of the system which it has been developed. The system has reached a steady state where all bugs have been eliminated. The system is operated at a high level of efficiency and all the teachers and user associated with the system understands its advantage. The system solves the problem. It was intended to solve as requirement specification. The advantages of this proposed project accuracy and realtime tracking in fingerprint attendance

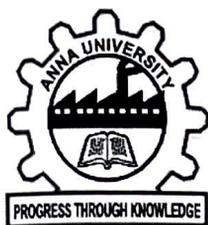
8.2 FUTURE ENHANCEMENT

APPLICATIONS

Education: Fingerprint-based attendance systems can be used in schools, colleges, and universities to track student attendance. The system can capture attendance data in real-time, which can help teachers and administrators monitor student attendance and identify potential issues.

Corporate: Fingerprint-based attendance systems can be used in corporate settings to track employee attendance. The system can be used to monitor employee arrival and departure times, track employee productivity, and calculate payroll accurately.

Healthcare: Fingerprint-based attendance systems can be used in healthcare facilities to track employee attendance and ensure that patient care is not affected by staff absenteeism.



SMART SURVEILLANCE SYSTEM

A PROJECT REPORT

Submitted by

S. AJITH KUMAR (112719205001)

R. MANIKANDAN (112719205009)

R. RAJASEKAR (112719205011)

C.SAFNATH JEBHA PRIYAN (112719205014)

in partial fulfilment for the award of the degree

of

BACHELOR OF TECHNOLOGY

IN

INFORMATION TECHNOLOGY

ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY

ANNA UNIVERSITY: CHENNAI 600 025

MAY 2023

APPENDIX 2

ANNA UNIVERSITY: CHENNAI 600 025

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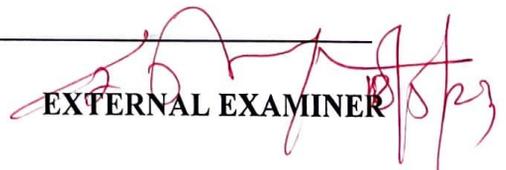
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INTERNAL EXAMINER


EXTERNAL EXAMINER

ABSTRACT

A proper attendance monitoring system is a main issue in many places. To automate this, we have used RFID sensor with tag in our project. This senses the RFID tag of a particular person when a buzzer and LED gets activated. This data is then stored in cloud with the identity number and the name of the user. This information is also displayed in serial monitor and 16*2 LCD display module. The RFID tag attendance system is a technology-enabled solution that automates the process of tracking attendance. The system uses Radio Frequency Identification (RFID) technology to capture data on the attendance of individuals. These tags contain unique identification numbers that are associated with each individual in the system. When the individual enters or exits a particular area, such as a classroom or a workplace, the RFID reader scans the tag and records the individual's attendance data. The RFID tag attendance system offers a reliable, accurate, and efficient way to manage attendance, saving time and resources for organizations and institution. Since each tag is unique to an individual, the system can accurately identify who is present in a particular area at any given time. Live streaming with ESP32 camera involves capturing video footage in real-time and transmitting it over the internet to a remote server or client. Live streaming with ESP32 camera has various applications such as home security systems, remote monitoring, and video conferencing. When an individual approaches the door, they present their RFID tag to the reader, which sends a signal to a microcontroller. The microcontroller then activates the servo motor to unlock the door, allowing the individual to gain access.

CHAPTER 8

8.1 CONCLUSION

In conclusion, the RFID-based attendance tracking system with a servo motor door for access control is an innovative and efficient solution for organizations that require strict access control and attendance tracking. The system provides a high level of accuracy and security, making it suitable for use in various industries, including businesses, schools, and government institutions. The system's use of RFID technology and sensor technology provides a reliable and convenient solution for attendance tracking and access control. The integration of the servo motor door enhances the system's security by ensuring that only authorized individuals can access the restricted area. Overall, the RFID-based attendance tracking system with a servo motor door for access control is a valuable solution that can enhance security and streamline attendance tracking processes in various organizations.

8.2 FUTURE ENHANCEMENT

AI integration could enhance the RFID-based attendance tracking system with a servo motor door for access control by identifying attendance patterns, automating processes, improving facial recognition accuracy and analyzing security footage in real-time for potential security breaches.



**A STUDY ON DEMONITISATION WITH RESPECT TO
MAHINDRA HOME FINANCE CHENNAI**

Project Report submitted in partial fulfillment of the requirement

for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

ANNA UNIVERSITY

Submitted By

S D Aashash

112721631001

Under guidance of

**DR.C.EVANGELINE B.SC, MBA, M.PHIL, PH.D, UGC NET,
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Department of Management Studies

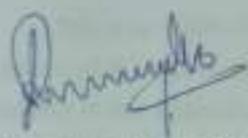


**ST. PETER'S COLLEGE OF ENGINEERING AND
TECHNOLOGY AVADI, CHENNAI-600054.**

JULY 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "AA STUDY ON DEMONITISATION WITH RESPECT TO MAHINDRA HOME FINANCE CHENNAI" is the bonafide work of **S.D. Aashish** (REG No.112721631001) is a record of original work done by her. Certified further, that to the best of my the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



Signature of Supervisor

Assistant Professor



Signature of the HOD

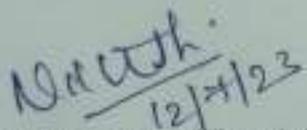
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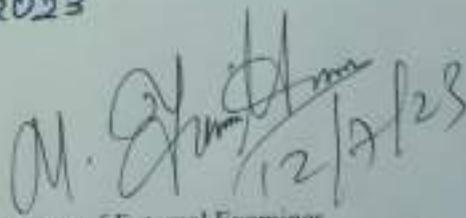
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Submitted for the Viva - Voce examination held on **12-07-2023**



Signature of the Internal Examiner



Signature of External Examiner

ABSTRACT

The main aim of this research is to know the effect of demonetization on the banking sector. This report includes the banking industries of various cities. For the report, I have taken into account 13 banks of various cities. A structured question bank was designed and the bank employees were asked to fill that. The Questionnaire included issues related to online banking accounts, black money, Government's plans for post Demonetization, as well as the individuals preference, for keeping money either at home or at bank. The result Of the analysis indicated that 55% of the bank employees supported the positive impact of demonetization. Savings and current accounts were considered as the most highly accounts amongst all. It is believed by 52% of Employees that cash form black money have been curbed by the authorities. 69% of the bank workers had a Positive view about the customers behavior. By analysing the above stated areas we can strongly believe that, When compared with the last two demonetization, this one have given more positive results and can be termed As the most successful amongst the two, which possesses positive long term impacts. Thus, this paper can Further be used for more research work as it contain data of Chandigarh city banks. Key words- Online banking, Chandigarh, black money, banks, corruption, post demonetization effects.

CONCLUSION

RBI has and might have adequately replaced up to 75% of demonetized value with the new 500 and 1000 notes within the two months it might have had. People of India are very much adaptive and is evident from the massive support for the move and quick change to e-wallets. Even in the first week of demonetization some sectors of the economy have shown growth while some other sectors such as impulsive purchase sector (biscuits, soft drink etc.,) have shown decline. Farmers and RBI sowing do not seem to have been affected, reflected by the increase in sowing area. Currently Indian economy is taking 'V' shape after the effect of demonetization. After demonetization, digital payment is increasing one. All peoples are trying to adopt digital payment. Black money has reduced in Indian economy. Corruption has reduced in India. Deposit in the bank, short term may rise, but in the long term, its effect will come down. Due to demonetization, gross domestic product of India will be decline. The move seems to be an appreciable step by the Modi government, as the intention is to stop tax evasion and to uproot corruption. But the smooth transition of this move must have been facilitated. Government has given plea that public may have to suffer short term pains for long term gains. The public is ready to bear short term pains but there is a doubt that what types of gains will accrue and when? Commonly raised question is whether demonetization solely will be able to uproot corruption. The modern black marketers have found new ways to tackle with the situation: the currency is being replaced with 30-40% commission, people are saving tax by showing their income as agricultural income, as it is exempted from tax u/s10 of Income Tax Act. Another heart breaking issue came on the scene when RBI announced that banks will be required to submit CCTV recordings for this transition period. Such issues give birth to some serious questions: whether we were ready for demonetization, some other aspects must have been taken in account before this move. The country is moving towards card economy, but this swipe and digital system has put forth many security challenges



**A STUDY ON CONSUMER PERCEPTION ON SOCIAL
MEDIA MARKETING WITH REFERENCE TO
HURIX DIGITAL**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

OF

ANNA UNIVERSITY

Submitted By

Ms. AARTHI M

(Reg. No: 112721631002)

Under the guidance of

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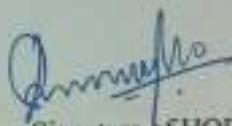
BONAFIDE CERTIFICATE

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Signature of HOD

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Submitted for the Viva-Voce examination held on

12/7/23

N. Lakshmi
12/7/23

Signature of the Internal Examiner

Signature of External Examiner
12/7/2023

Signature of External Examiner

ABSTRACT

This Project is related to **A STUDY OF CONSUMER PERCEPTION ON SOCIAL MEDIA MARKETING AT CHENNAI.**

The scope of the study is to assess the overall customer behavior, response of customers with regard to the social media marketing. The study focuses on consumer's behavior towards social media advertising. As social media is one of the best tools for marketing a product, an attempt is made to find out the consumer perception towards social media marketing. This study helps to understand the consumer's attitude that influences them to purchase the products. The study has been undertaken from the consumer's point of view.

problems, taking suggestions and answering queries this will enhance the relationship between consumers and companies on social media.

- ✓ Through social media marketing companies easily attract more consumers and engaging them in discussions which helps to bring more innovation in products according to consumer demands.
- ✓ Companies who use social media marketing should concentrate on in-built tools such as sending messages, information regarding new products it helps to promote and give awareness to consumers about the launched product.

5.3 CONCLUSION:

In 21st Century social media marketing is something a business cannot ignore there are plenty of competition to market their products on social media. There is no escaping possible from social media these days neither for individuals nor for business. Any organization excluding its self from any of the internet of things would be a losing opportunity to exploit most from the market. It is impossible to separate social media from the online world. The study reveals the customer perception towards social media marketing. From this research we found out today the major percentage of consumers are connected to social media and there shopping trend, being attracted toward a brand by the information they get on social media and being influenced by social media advertisements and most of the respondents do trust online advertisements. The consumer believe social media advertisements will lead them to purchase useful products and there is variety of options available for consumers and they refer social networks for buying products. Thus, social media is emerging as an effective tool for marketing. From this study it has concluded that Consumers have positive perception towards social media marketing.



**A STUDY ON CUSTOMER EXPERIENCE IN
SAKTHI FOREIGN INDUSTRY
INDIAN (P) LIMITED IN CHENNAI**

**Project Report Submitted in partial fulfillment of the requirement for award of the degree of
MASTER OF BUSINESS ADMINISTRATION**

Of

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Submitted By

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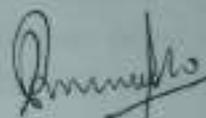
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Submitted for the Viva-Voce Examination held on 12/07/2023

Signature of the Internal Examiner

Signature of the External Examiner

5.3 CONCLUSIONS

This paper highlights main stages of evolution of marketing approaches leading to the most recent customer experience approach, summarize different definitions and point of views on customer experience, how it is perceived by scholars and researchers and thus it helps to create better understanding of this concept. At the same time it contains overview of benefits and outputs of customer experience management with suggestions for its successful implementations, customer experience analysis and measurements. Through this it presents reasons why to embrace customer experience and finally points to potential avenues of further research, such as, co-creation of customer experience, exploration of the experience in business-to-business sphere, public sectors or development of customer experience management framework.

Currently, the customer is not just a customer but also participates in the decisions made in companies. Thus, the use of the CX concept is increasing. In general terms, this concept refers to all of the interactions that the customer has with a company that occurs within the customer's life cycle, and in various phases during the customer's journey. The article seeks to discover information about the CX in retail from an HCI perspective. This expands the scope of the previous research which was focused on the UX. Interest in studying the CX has increased over time. However, because it is a relatively extensive concept, in the current paper, we focused on retail because this is an area in which we work and in which we seek to establish mechanisms that allow us to better understand customers. Given these considerations, a systematic review of the literature on the CX in retail was carried out from the HCI perspective, in which definitions, dimensions, and evaluation methods were identified. Furthermore, a search for potential heuristics related to the CX was also conducted. This review focused on retail, thus helping to establish a mechanism that allows the CX to be evaluated in this specific context. The reviewed research shows that multiple definitions exist that contextualize CX, both from a general point of view and focused directly on the services sector. Based on these definitions, various dimensions have identified that influence the CX. However, this influence depends on the context in which the most appropriate dimension is applied to study CX in retail. Currently, several methods exist that allow evaluation of a part of the CX; that is, no methods were found that evaluate the experience integrally. No evidence of heuristics to evaluate the CX was found and further exploration is required on this topic. However, heuristics were found that evaluate usability and UX.



**A STUDY ON EMPLOYEE PARTICIPATION AT
HUMAN XPRT INDIA PRIVATE LIMITED IN CHENNAI**

**Project Report submitted in partial fulfillment of the requirement
for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION**

of

ANNA UNIVERSITY

Submitted By

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Department of Management Studies



**ST. PETER'S COLLEGE OF ENGINEERING AND
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JULY 2023

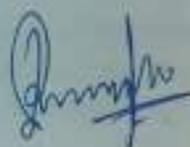
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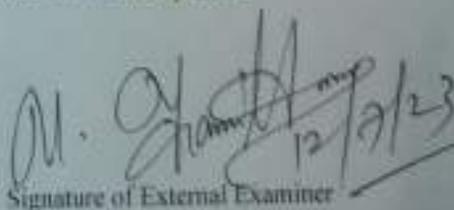
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Submitted for the Viva - Voce examination held on 12/07/2023

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12/7/23

Signature of the Internal Examiner

Signature of External Examiner



12/7/23

ABSTRACT

- Employee participation in management is an essential ingredient of Industrial democracy. The concept of employee participation in management is based on Human Relations approach to Management which brought about a new set of values to employee and management. Traditionally the concept of Employee Participation in Management (WPM) refers to participation of non-managerial employees in the decision-making process of the organization.
- Medical billing is a payment practice within the United States health system. The process involves a healthcare provider obtaining insurance information from a patient and filing, following up on and appealing claims with health insurance companies in order to receive payment for services rendered, such as testing, treatments, and procedures. The same process is used for most insurance companies, whether they are private companies or government sponsored programs.
- Human Medical Billing understands the medical field today and the effects it has on an individual or a group of practitioners. As a result of our knowledge and past experience in Medical Billing, we tailor our services to meet the needs of individual Medical Practices. Our executive staff has experienced first hand the problems as well as the rewards of running successful Medical Practices. Our staff will work closely with you and your staff to enhance your ability to realize the full potential of your medical practice.
- A frame work or blueprint for conducting for the marketing research project it details of the procedures necessary for attaining the information needed to structure and/or solving Marketing research problem.

CONCLUSION :

- This employee Participation is the emotional attachment or feelings of employees towards the organizational vision. It is the measure to analyse the needs and satisfied level of employees inside the organization. In current scenario, employee participation concept is one of the significant mandatory measure in the HR policies of each and every organisation, further it will give positive outcomes to the organization.
- In this company the engagement level of employee is good of the employee are well engaged with their job Nature, work environment and with organization. Thus the needs for employee Participation in this organisation was found. This study focused on various dimensions of employee participation like personal factors, organizational factors, & environmental factors. The organization factor influences more in the organization towards employees. If the organization follows all the above dimension 100% of employee participation will be achieved soon. Thus employee participation is the driving and important factor in the organization.



**A STUDY ON EXTERNAL CUSTOMERS SATISFACTION AND OPINION
TOWARDS PERFORMANCE AND DEVELOPMENT OF
ST PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY**

**Project Report submitted in partial fulfillment of the requirement
for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION**

ANNA UNIVERSITY

Submitted By

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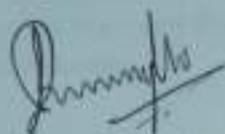


**ST. PETER'S COLLEGE OF ENGINEERING AND
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APRIL 2023

BONAFIDE CERTIFICATE

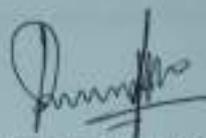
This is to certify that the Project report titled, "A STUDY ON EXTERNAL CUSTOMERS SATISFACTION AND OPINION TOWARDS PERFORMANCE AND DEVELOPMENT OF ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY" is the bonafide work of S. ANAND (REG No.112721631005) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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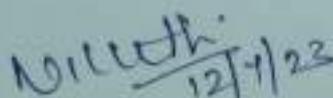
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Submitted for the Viva - Voce examination held on 12/7/2023



Signature of the Internal Examiner



Signature of External Examiner

ABSTRACT

Development and performance are two crucial concepts that impact individuals, organizations, and society as a whole. They are integral to personal growth, professional success, and organizational effectiveness. Understanding the dynamics and interplay between development and performance is essential for individuals and organizations striving for continuous improvement, innovation, and achievement.

Performance refers to the execution and achievement of tasks, goals, or objectives. It reflects how effectively and efficiently individuals, teams, or organizations accomplish their intended outcomes. Performance is measured based on predetermined criteria, such as meeting targets, delivering quality work, meeting customer expectations, or achieving desired results.

St. Peter's College of Engineering and Technology was established in 2008 with a mission to emerge as an institution of excellence in the field of Technical education and to contribute to the economic prosperity of India.

PRIMARY OBJECTIVES

- A study on internal customers satisfaction and opinion towards performance and development of St. Peter's college of engineering and technology.

SECONDARY OBJECTIVES

- To identify the factors affecting St. Peter's college performance and development.
- To rectify the problems which are faced by the faculties who works in St. Peter's College.
- To compete with other leading engineering colleges
- To maintain and enhance the environment of the College.

In conclusion, the study on external customers' opinions towards the performance and development of an educational institution has provided valuable insights. Upgrade and maintain college facilities such as classrooms, libraries, laboratories, and dormitories. Ensure they are well-equipped with the latest technology, comfortable furniture, and conducive learning environments.

5.3 CONCLUSION

In conclusion, the study on external customers' opinions towards the performance and development of an educational institution has provided valuable insights. The findings from the study indicate the following key points:

Importance of External Customers:

The study highlights the significance of external customers, such as students, parents, employers, and community members, in shaping the perception of an educational institution's performance and development. Their opinions play a crucial role in determining the institution's reputation and success.

Positive Feedback:

Overall, the study reveals a positive perception of the educational institution among external customers. Many respondents expressed satisfaction with the institution's performance in areas such as quality of education, curriculum, teaching methods, and student support services. This positive feedback indicates that the institution is meeting the expectations and needs of its external customers.

Room for Improvement:

Despite the generally positive feedback, the study also identifies areas where the educational institution can improve its performance and development. Some external customers provided constructive criticism regarding aspects such as communication, infrastructure, responsiveness to feedback, and alignment with industry trends. These areas present opportunities for the institution to enhance its offerings and better meet the evolving needs of its external customers.

Importance of Continuous Development:

The study underscores the significance of continuous development for an educational institution. It emphasizes that institutions must adapt and evolve in response to changing market dynamics, technological advancements, and societal demands. This adaptive approach ensures that the institution remains relevant and competitive in the long run.

Stakeholder Engagement:

The study highlights the importance of engaging external customers as stakeholders in the educational institution's decision-making processes. By actively involving them in various



**A STUDY ON ORGANIZATION CLIMATE AT
JAYA SPRINGS PVT LTD**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

Of

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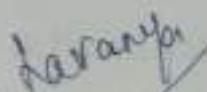
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JULY 2023

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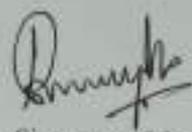
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Assistant Professor



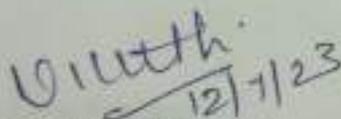
Signature of the HOD

Dr. C. EVANGELINE

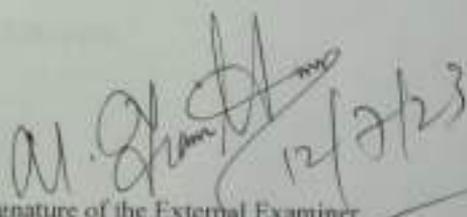
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Submitted for the Viva-Voce Examination held on 12/07/2023



Signature of the Internal Examiner



Signature of the External Examiner

CONCLUSION

Climate is the atmosphere of the organization, a "relatively enduring quality of the Internal environment of an organization, which is experienced by its members and Influences their behavior. "Organizational climate may affect quality of service and employee's commitment and involvement towards the organization. Climate dimensions in one way or other affect the level of organizational climate. It is need to be taken into account while evaluating the organizational effectiveness.

Climate surveys are studies of employees' perceptions and perspectives of an organization. The surveys address attitudes and concerns that help the organization work with employees to instill positive changes. In general, they are aimed at all aspects of the employees' jobs. The study analyzes everything from an employee's workload to their relationships with coworkers and superiors to their salary to company policies and anything in between. The study shows that that there is no significant difference between culture dimensions and organizational climate



**A STUDY ON ORGANIZATIONAL
CLIMATE AT FLUID TECH
TRADE AND EST**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

**OF
ANNA UNIVERSITY**

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Ms. ANUSHA.M

(Reg. No: 112721631008)

Under the guidance of

Mrs. P. LAVANYA,

Assistant Professor

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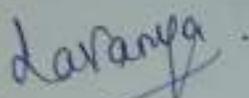
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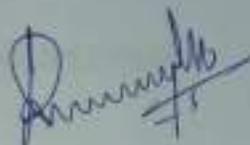
July, 2023

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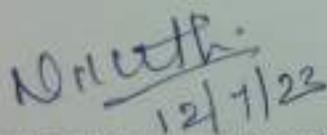
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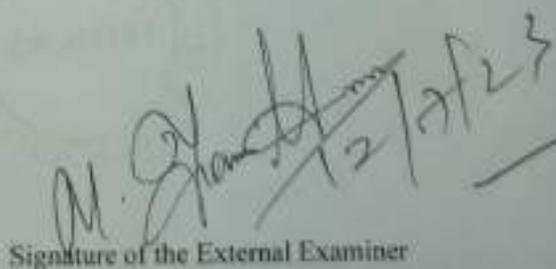
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Head of the Dept.
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Submitted for the Viva-Voce Examination held on 12/07/23


12/7/23

Signature of the Internal Examiner


12/7/23

Signature of the External Examiner

ABSTRACT

This report provides an understanding of the organizational climate in Fluid Tech Trade and Est. The training consisting of a period of 3 months has provided an overview of the skills needed to develop personality. It has also provided an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

Organizational climate reflects a person's perception of the organization to which he belongs. It is a set of unique characteristics and features that are perceived by the employees about their organizations which serves as a major force in influencing their behavior. Thus, the organizational climate in a broad sense can be understood as the social setting of the organization.

The Study carried out was based on descriptive data type.

- Samples of 97 were collected based on sampling methods.
- The data collected were further analyzed by Statistical tools based on Chi square, Anova.
- Percentage analysis is illustrated with charts and inferences.

The research overviews the Organization climate at Fluid tech trading and Est. The research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.



**A STUDY ON LEADERSHIP STYLE ON
EMPLOYEE MOTIVATION AT BRAKES INDIA IN CHENNAI .**

**Project Report submitted in partial fulfillment of the requirement for the
award of the degree of**

MASTER OF BUSINESS ADMINISTRATION

of

ANNA UNIVERSITY

Submitted By

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112721631009

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Assistant Professor

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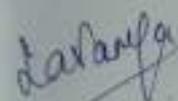


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JULY 2023

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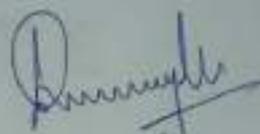
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Signature of Supervisor

Ms. P. LAVANYA

Assistant Professor



Signature of the HOD

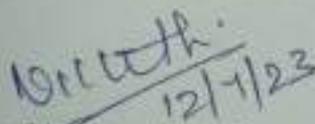
Dr. C. EVANGELINE

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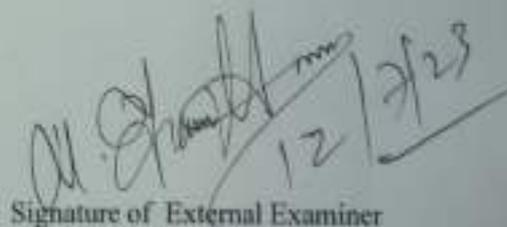
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Submitted for the Viva-Voce examination held on 12-07-2023



10/11/23
12/7/23

Signature of the Internal Examiner



12/7/23

Signature of External Examiner

ABSTRACT

This research paper examines the impact of leadership styles on employee motivation in the automotive industry, with a particular focus on Brakes India Private Limited Padi. It explores the concept of leadership style, the importance of employee motivation, and the relationship between leadership style and employee motivation. The study also provides an industry profile and company profile for Brakes India Private Limited Padi, highlighting its strengths, challenges, products offered, and customers served. Ultimately, the research aims to shed light on the essential role of leadership in employee motivation and organizational success.

Furthermore, the study identifies the objectives, scope, and limitations of the research, with the primary objective being to determine the impact of leadership style on employee motivation. This research will provide insights for organizations and their managers to create better working environments that promote employee satisfaction and productivity while informing practical recommendations to enhance employee motivation through effective leadership style.

This study investigates the relationship between leadership style and employee motivation in an organizational setting. The findings suggest that leaders who adopt a transformational leadership style, characterized by inspiration, intellectual stimulation, and individualized consideration, positively influence employee motivation. The study provides insights for organizations and their managers to create better working environments that promote employee satisfaction and productivity while informing practical recommendations to enhance employee motivation through effective leadership style. Overall, the study underscores the importance of adopting a transformational leadership style to create a motivated workforce and improve business outcomes.

3.5.CONCLUSION

This study found that leadership style has a significant impact on employee motivation. The results suggest that leaders who adopt a transformational leadership style, characterized by inspiration, intellectual stimulation, and individualized consideration, positively influence employee motivation. On the other hand, leaders who adopt a transactional leadership style, characterized by rewards and punishments, do not have the same impact on motivating employees. Overall, these findings underscore the importance of adopting a transformational leadership style to create a motivated workforce. By inspiring and supporting their employees, transformational leaders can create a positive work environment that promotes employee engagement, job satisfaction, and organizational commitment. This, in turn, can lead to higher productivity, greater innovation, and improved business outcomes.



A STUDY ON CONSUMER BUYING BEHAVIOUR

AT

MINDPLM

**Project Report submitted in partial fulfillment of the
requirement for the award of the degree of MASTER OF
BUSINESS ADMINISTRATION of**

ANNA UNIVERSITY

Submitted By

D.BHUVANESHWARI

11221631010

Under guidance of

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AUGUST 2022

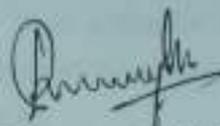
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CERTIFICATE**

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Signature of Supervisor

Ms Lavanya

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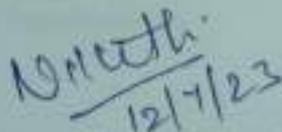


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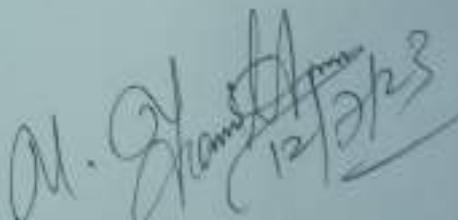
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Signature of the Internal Examiner
Examiner



Signature of External

ABSTRACT

This report provides an understanding of the organizational culture of various departments in MINDPLM . Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

Consumer buying behavior is the process and activity that consumers use to evaluate, purchase, or dispose of goods and services to satisfy their needs. It is a complex process that is influenced by a variety of factors, including personal, social, and environmental factors.

The study carried out was based on descriptive data type.

- Sample size of 120 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Chi – square, Anova and Run Test analysis.
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the Consumer Buying Behavior at MINDPLM . This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

5.3 CONCLUSION

The study had confirmed that the company is having a good interface level between account and H.R. department and SALES department in the organization

From this study, it is found that majority of the workers were satisfied with Software Used in an organization.

To make the software system more efficient and excellent, the company should give Importance to the employee's suggestion related to improvement of software used in pay roll system and thereby makes their software more effective and adequate.

To create awareness among employees and it shall consider some of the ways and means suggested by the employees like addition of parameters such as short cut for calculation PF, ESI, TAX etc.

Dependability and conducting regular training program on the software usage for the employees in an organization

H.R. department should be given more regulatory power to analyze the proper Functioning of the pay roll system and thereby widen up the interaction between finance and H.R. department.



**A STUDY ON SUPPLY CHAIN MANAGEMENT IN
STAR HEATER, AT CHENNAI**

A PROJECT REPORT

Submitted in partial full fulfillment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

OF
ANNA UNIVERSITY

Submitted By:

Ms. BHUVANESHWARI M

(Reg.No:112720631011)

Under the guidance of

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Associate Professor

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July, 2023

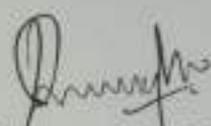
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Signature of Supervisor

Dr. Murali .R

Associate Professor


Signature of the HOD

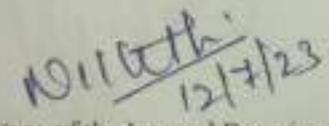
Dr.C.EVANGELINE

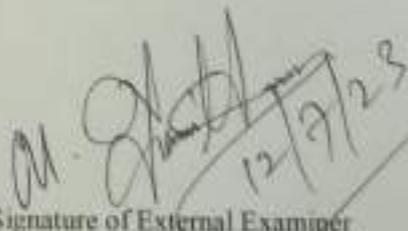
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Submitted for the Viva-Voce examination held on 12/7/23


Signature of the Internal Examiner


Signature of External Examiner

ABSTRACT

This Project is related to **A STUDY ON SUPPLY CHAIN MANAGEMENT IN STAR HEAT TREATERS, AT CHENNAI.**

Supply chain has evolved dramatically over the last four decades. Managing the entire supply chain is a very challenging task. One of the most significant paradigms shifts of modern business management is that individual businesses no longer compete as solely autonomous entities, but rather within supply chains. The ultimate goal of the supply chain management is to deliver the best customer service through coordinated of material, finances and information which flow across a network and the entire customer including internal and the external customers. The key feature of the supply chain system is increasing the use of information technology. Enablement, the which extend to customer and supplier at all the level. In this emerging competitive environment, the ultimate success of the business will depend on management's ability to the integrate the company's intricate network of business relationships. Most of the supply chain management is begin facilitated by the use of enterprise level resource planning and integration system along with the latest technology in transportation, distribution and replenishment

5.3 Limitations

- The biggest disadvantage of global supply chain management is the heavy investment of time, money and resources needed to implement and overlook the supply chain.
- Extensive training and planning required.
- Inaccurate info wreaks havoc.
- Lack of strategic implementation.
- Lear supply chain are vulnerable.

5.4 Conclusion

Supply chain management (SCM) involves joint collaboration between outsourcing partners, suppliers and customers. It comprise the transformation of goods from raw materials through to the delivery of the finished product it also includes the management of key information flows. SCM is closely linked with enterprise resource planning and electronic commerce systems. Future supply chain are likely to be more dynamic in nature and consists of collaborative value networks in which productivity and efficiency are constantly maximized.



**PERFORMANCE APPRAISAL TECHNIQUES ON THE
PRFORMANCE OF EMPLOYEES
AT
BHARATH LAJHNA MULTI STATE HOUSING
CO-OPERATIVE SOCIETY LTD**

Project Report submitted in partial fulfillment of the requirement
for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION
of

ANNA UNIVERSITY

Submitted By

BRIGHT WILSENS

112721631012

Under the guidance of

P.LAVANYA BBA, MBA.,
Associate Professor

Department of Management Studies



**ST. PETER'S COLLEGE OF ENGINEERING AND
TECHNOLOGY AVADI, CHENNAI-600054.**

JULY 2023

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This is to certify that the Project report titled, "PERFORMANCE APPRAISAL TECHNIQUES OF BLM EMPLOYEES" is the bonafide work of S.BRIGHT WILSEN (REG No.112721631012) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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Associate Professor

Dr. C. Evangeline

Signature of the HOD

Dr. C. EVANGELINE

Associate Professor & HOD

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Submitted for the Viva – Voce examination held on ~~12~~ 07-2023

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Signature of the Internal Examiner

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Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in **BHARATH LAJHNA MULTI STATE HOUSING CO-OPERATIVE SOCIETY LTD.** The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

This conceptual abstract aims to provide a comprehensive overview of the relationship between employees and organizational culture in the context of Rhino Facility Management Services. **BHARATH LAJHNA MULTI STATE HOUSING CO-OPERATIVE SOCIETY LTD** operates in a dynamic and competitive environment where maintaining a positive and conducive work culture is crucial for overall organizational success. Understanding the intricate interplay between employees and organizational culture is essential for developing strategies that promote employee satisfaction, engagement, and organizational performance.

The abstract begins by defining organizational culture and highlighting its significance in shaping employee behavior, attitudes, and overall work environment.

The abstract also emphasizes the role of employees in shaping and maintaining the organizational culture within BLM employees. It explores how employees' attitudes, behaviors, and interactions influence the overall work environment and the perception of the organization among clients and stakeholders. Additionally, it highlights the significance of aligning employees' personal values with the organization's values to enhance their sense of belonging and commitment.

The study carried out was based on descriptive data type.

- Sample size of 82 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Chi – square and Anova analysis.
- Percentage Analysis is Illustrated with Charts and Inferences.

This conceptual abstract provides a holistic perspective on the relationship between employees and organizational culture within Rhino Facility Management Services. It highlights the importance of fostering a positive work culture that aligns with employees' values and promotes their well-being, engagement, and performance

5.3 CONCLUSIONS

In Conclusion, Performance appraisal may be understood as the assessment of an individual's performance in a systematic way. The performance being measured against such factors as job knowledge, quality and quantity of output, initiative, leadership abilities, supervision, dependability, co-operation, judgment, versatility, health and the like. It also helps in developing strength and rectifies weakness of the employees.

A Good 360 degree Feedback of Appraisal system provides not only evaluation of an employee's performance but also identification of his competency gaps and to enable the organization to bridge them through appropriate developmental initiatives.

Appraisals are a positive way for a manager to let the employees know how well they are performing the duties that are assigned to them. Sometimes we get caught up in our job and do not realize what all the company strives to do for employees.

It's important for organizations to ensure that performance appraisals are conducted fairly, objectively, and consistently. The process should be transparent, focusing on both strengths and areas for improvement, and provide opportunities for employees to express their views and provide input. Regular performance appraisals can contribute to employee growth, engagement, and overall organizational success.



**A STUDY ON PERFORMANCE APPRAISAL
IN ACETECH HEAVY FAB PRIVATE LIMITED**

A Project Report

submitted in partial fulfilment of the requirement for the degree of

MASTER OF BUSINESS ADMINISTRATION

of

ANNA UNIVERSITY

BY

S. DEBORAH DEVAKUMARI

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Under guidance of

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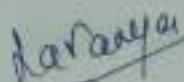
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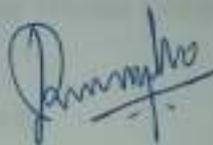
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Mrs. P. LAVANYA

Assistant Professor



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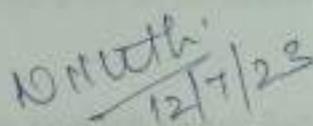
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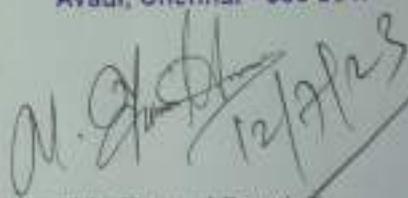
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Submitted for the Viva-Voce Examination held on 12/07/23



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Signature of the External Examiner

ABSTRACT

Performance Appraisal has been considered as the most significant and indispensable tool for an organization, for the information it provides is highly useful in making decisions regarding various personnel aspects such as promotion and merit increases. Performance measures also link information gathering and decision making processes which provide a basis for judging the effectiveness of personnel sub-divisions such as recruiting, selection, training and compensation.

This research will concentrate on examining the effect of the performance appraisal on an individual as well as on the organizations. The total Population of the Organisation is 207. The sample size of 83 has been chosen.

The data used for the study is primary data collected through the help of questionnaire filled by the samples. The data was evaluated with the help of statistical tools i.e., descriptive statistics, ANOVA, Percentage analysis and chi square test. The findings of the research show that there is a noticeable effect of the performance appraisal on the organization as well as on the Individual.

5.3 CONCLUSION

In conclusion a performance appraisal is one of the most important factors in any organization and also a great tool used to record productivity. Every organization has to have goals and objectives established and every employee has to be involved in the process. Also conducting a performance appraisal will improve productivity and also the morale of the employees. Appraisals are a positive way for a manager to let the employees know how well they are performing the duties that are assigned to them. Sometimes we get caught up in our job and do not realize what all the company strives to do for employees. Whether the reward is a lousy employee dinner and or a simple thank you card, your work is being recognized. Also, employees should be thankful for any job they may have, because the company did not have to hire on any means



**A STUDY ON IMPACT OF SALES MOTIVATION ON
ORGANIZATIONAL PERFORMANCE**

AT

Mentor Infocomm India Pvt Ltd.

Project Report submitted in partial fulfillment of the requirement for the
award of the degree of

MASTER OF BUSINESS ADMINISTRATION

of

ANNA UNIVERSITY

Submitted By

S. DHANALAKSHMI

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Under guidance of

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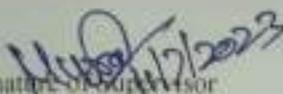
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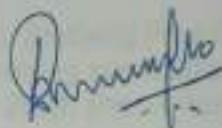
BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "IMPACT OF SALES MOTIVATION ON ORGANIZATIONAL PERFORMANCE AT MENTOR INFOCOMM INDIA PVT LTD" is the bonafide work of S.DHANALAKSHMI (REG No.112721631014) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.


Signature of Supervisor

Dr. R. MURALI

Associate Professor



Signature of the HOD

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Submitted for the Viva-Voce examination held on 12-07-2023


Signature of the Internal Examiner


Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in MENTOR INFOCOMM INDIA PVT LTD. Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

This topic, "The impacts of sales motivation on organizational performance", was conducted to investigate the extent of relationship between motivation and sales force performance specially in business enterprises with particular study of Mentor Infocomm India Pvt Ltd. However to achieve this goal of the study quasi-experimental research design was used, a known business enterprises where twenty five questioners was administered to respondents in order to obtain first time information. After a critical analysis of the data collected, The hypothesis were tested using chi-square and the following were. The findings, incentive in form of timely salary payment enhances sales force performance, Salary increase is used to stimulates better performance of salary men., your firm provides laptops to enhance sales force efficiency. Base on the finding, incentives should not be based on favoritism but on merit. Salaries should be paid as at when due. There should be more provisions of laptops to enhance sales force efficiency Any person who want to research further on the impact of sales force motivation is free to consult this work as a secondary data. 1.5

The study carried out was based on descriptive data type.

- Sample size of 87 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Chi – square, Anova and correlation analysis.
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the Impact Of Sales Motivation On Organizational Performance at MENTOR INFOCOMM INDIA PVT.LTD. This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

5.3 CONCLUSION

The impact of sales motivation on organizational performance can be significant and multifaceted. When employees are motivated to achieve sales targets and perform at their best, it can lead to numerous positive outcomes for the organization. Based on existing research and observations, the following conclusions can be drawn regarding the impact of sales motivation on organizational performance:

- **Increased Sales Performance:** Sales motivation plays a crucial role in driving sales performance. Motivated sales professionals are more likely to put in extra effort, take initiative, and persist in the face of challenges.
- **Enhanced Customer Satisfaction:** Motivated salespeople tend to provide better customer service, as they are driven to meet customer needs and expectations.
- **Improved Team Morale and Collaboration:** Sales motivation can have a positive ripple effect on team dynamics. When individuals are motivated, it can foster a positive and energetic work environment, boosting team morale and cohesion.
- **Higher Employee Engagement and Retention:** Motivated salespeople are generally more engaged in their work and feel a sense of ownership and purpose.
- **Continuous Learning and Development:** Sales motivation often goes hand in hand with a desire for personal and professional growth. Motivated sales professionals are more inclined to seek out training, acquire new skills, and stay updated with industry trends.
- **Positive Organizational Culture:** A culture that promotes and rewards sales motivation can have a broader impact on the organization.



**A STUDY ON EMPLOYEE PAYROLL
MANAGEMENT SYSTEM**

**AT
NIPPON PAINT INDIA PRIVATE LTD**

Project Report submitted in partial fulfillment of the requirement for the
award of the degree of

MASTER OF BUSINESS ADMINISTRATION

of

ANNA UNIVERSITY

Submitted By

S. DHAYALAN

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Under guidance of

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Department of Management Studies



ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY

AVADI, CHENNAI-600054,

JULY - 2023

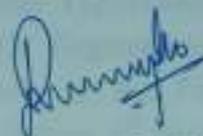
BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON EMPLOYEE PAYROLL MANAGEMENT SYSTEM AT NIPPON PAINT INDIA PVT LTD" is the bonafide work of S. DHAYALAN (REG No.112721631015) is a record of original work done by his. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.


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Dr. R. MURALI

Associate Professor



Signature of the HOD

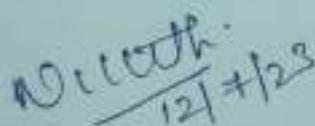
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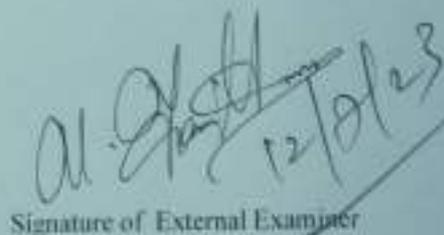
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Submitted for the Viva-Voce examination held on 12-07-2023


Signature of the Internal Examiner


Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in NIPPON PAINT INDIA PVT LTD. Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

"Payroll Management System" is designed to make the existing manual system automatic with the help of computerized equipment and full-edged computer software, fulfilling their requirements, so that their valuable data and information can be stored for a longer period with easy access and manipulation of the same. The required software is easily available and easy to work with. This web application can maintain and view computerized records without getting redundant entries. The project describes how to manage user data for good performance and provide better services for the client.

The study carried out was based on descriptive data type.

- Sample size of 83 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Chi – square, Anova and Run Test analysis.
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the Employee payroll Management system at NIPPON PAINT INDIA PVT.LTD. This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

5.2 CONCLUSION

The study had confirmed that the company is having a good interface level between account and H.R. department in the organization

From this study, it is found that majority of the workers were satisfied with Software Used in an organization.

To make the software system more efficient and excellent, the company should give importance to the employee's suggestion related to improvement of software used in pay roll system and thereby makes their software more effective and adequate.

To create awareness among employees and it shall consider some of the ways and means suggested by the employees like addition of parameters such as short cut for calculation PF, ESITAX etc.

Dependability and conducting regular training program on the software usage for the employees in an organization

H.R. department should be given more regulatory power to analyze the proper Functioning of the pay roll system and thereby widen up the interaction between finance and H.R. department.



**A STUDY ON PERFORMANCE APPRAISAL SYSTEM IN
CREDIT ACCESS GRAMEEN LIMITED**

Project Report submitted in partial fulfillment of the requirement
for the award of the degree of **MASTER OF BUSINESS ADMINISTRATION**

ANNA UNIVERSITY

Submitted By

J. DINESH

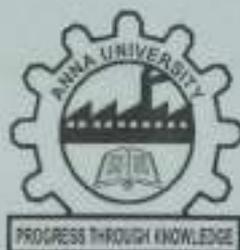
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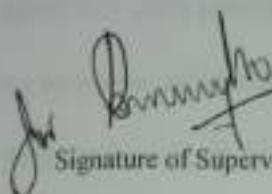


**ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY
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JULY - 2023

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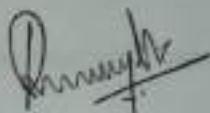
This is to certify that the Project report titled, "PERFORMANCE APPRAISAL AT CREDIT ACCESS GRAMEEN LIMITED" is the bonafide work of **J.DINESH (REG No.112721631016)** is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



Signature of Supervisor

Ms. P. LAVANYA

Assistant Professor



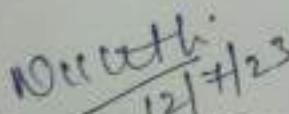
Signature of the HOD

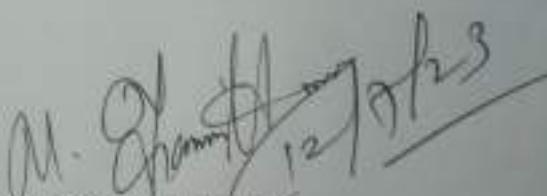
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Signature of External Examiner

ABSTRACT

Performance appraisal is a crucial aspect of talent management and organizational development, serving as a means to assess and improve employee performance. This abstract presents a comprehensive overview of key elements and emerging trends in performance appraisal, highlighting the importance of effective appraisal processes in driving individual and organizational success.

The abstract begins by discussing the fundamental objectives of performance appraisal, including identifying strengths and areas for improvement, setting performance goals, facilitating career development, and aligning individual and organizational objectives. It emphasizes the significance of accurate and fair evaluation methods to ensure employees feel motivated, engaged, and valued.

The abstract then explores the evolution of performance appraisal, acknowledging traditional methods such as rating scales and annual reviews, as well as the shift towards more continuous and feedback-driven approaches. It highlights the advantages of ongoing performance conversations, regular feedback loops, and the incorporation of multi-source feedback from peers, subordinates, and customers.

The abstract emphasizes the need for a performance appraisal culture that fosters open communication, trust, and employee development. It emphasizes the importance of manager-employee relationships, coaching and mentoring, and the alignment of performance appraisal with broader talent management initiatives.

5.2 CONCLUSION

In conclusion, a performance appraisal is one of the most important factors in any organization and also a great tool used to record productivity. Every organization has to have goals and objectives established and every employee has to be involved in the process. Also, conducting a performance appraisal will improve productivity and also the morale of the employees.

Appraisals are a positive way for a manager to let the employees know how well they are performing the duties that are assigned to them. Sometimes we get caught up in our job and do not realize what all the company strives to do for employees.

Whether the reward is a lousy employee dinner or a simple thank you card, your work is being recognized. Also, employees should be thankful for any job they may have, because the company does not have to hire on any means.



A STUDY ON RECRUITMENT PROCESS

AT

O2SAVER PRIVATE LIMITED

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

OF

ANNA UNIVERSITY

Submitted By

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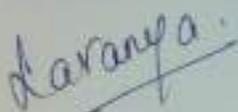
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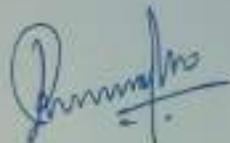
July 2023

BONAFIDE CERTIFICATE

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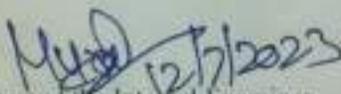
Signature of the Guide



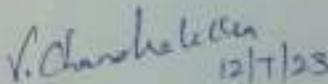
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Submitted for the Viva-Voce Examination held on 12/7/23



Signature of the Internal Examiner



Signature of the External Examiner

ABSTRACT

A Study towards the title of Recruitment with respect to E-Commerce healthcare industry. The objectives of Human Resource Department are Human Resource Planning, Recruitment and Selection, Training and Development, Career planning, Transfer and Promotion, Risk Management, Performance Appraisal and so on. Each objective needs special attention and proper planning and implementation. The Competition for talent is intensifying as there are fewer qualified applications available. This shortage of applicants makes it all the more important for organizations to be able to effectively attract, select and retain quality candidates. Recruitment are simultaneous process and are incomplete without each other and they are important components of the organization and are different from each other.

The Study carried out was based on descriptive data type.

- Sample size of 97 respondents were collected based on sampling method.
- The data's collected were further analysed by Statistical Tools based on chi-square and Anova
- Percentage Analysis is Illustrated with Charts and Inferences.

Since all the aspects need practical example and explanation this project includes Recruitment process in E-Commerce Healthcare Industry. It is also contains the feedback of the employees on the recruitment process they went through and suggestions to improve the recruitment process.

CONCLUSION

This study reveals that the recruitment and selection process is very important for the growth and success of every organisation. Suggestions made by the researcher were based on study. Findings will certainly improve the recruitment and selection process, if the people concerned, put them into action. Also, this study helps to learn about recruitment and selection process at HR department but it needs some improvements in areas such as employee training, development or usage of appropriate recruitment software and tools, quality of recruitment, time management etc., Finally, the organization has to find innovative ideas to improve their effectiveness of recruitment and selection process.

**A STUDY ON EMPLOYEE MOTIVATION AT
SHARDLOW INDIA LIMITED IN CHENNAI**

Project Report submitted in partial fulfillment of the requirement

for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

of

ANNA UNIVERSITY

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JULY 2023

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This is to certify that the Project report titled, "A STUDY ON EMPLOYEE MOTIVATION AT SHARDLOW INDIA LIMITED" is the bonafide work of S.EDWIN (REG No.112721631018) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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Submitted for the Viva - Voce examination held on 12-07-2023

Signature of the Internal Examiner

Signature of External Examiner

ABSTRACT

- Motivation is generally considered a core element in running a successful business. In the organizational setting the word "Motivation" is used to describe the drive that impels an individual to work. It is a well known fact that human beings have great potential but they do not use it fully, when motivation is absent. Motivation factors are those which make people give more than a fair day's work. Every manager should be releasing hundred percent of an individual's to maximize performance for achieving organizational goals and at the same to enable the individual to develop his potential and gain satisfaction. Thus every manager should have both interest and concern about how to enable people to perform tasks willingly and to the best of their ability.
- Motivating employees for improved performance includes these serious aspects: member of staff engagement, organizational vision and values, management acknowledgment and gratitude of effort done as per standard, and overall acceptability of leadership.
- Forging is a manufacturing process involving the shaping of a metal through hammering, pressing, or rolling. These compressive forces are delivered with a hammer or die. Forging is often categorized according to the temperature at which it is performed cold, warm, or hot forging. A wide range of metals can be forged. Typical metals used in forging include carbon steel, alloy steel, and stainless steel. Very soft metals such as aluminum, brass, and copper can also be forged. The forging process can produce parts with superb mechanical properties with minimum waste.

CONCLUSION:

- The project is mainly aimed to know the motivational factors among employees. The purpose of motivation is to encourage that people in efficient manner. So that, they can work co ordinally and effectively in the organisation.
- The motivational strategies enable to motivate the employees to work best. But the organisation can still concentrate on some areas which are evolved in study in order only if the employees are properly motivated.
- Employee motivation is crucial to your team success. when motivated, employees are more engaged ,productive, and committed to their work, leading to better performance and results.



**A STUDY ON THE EFFECTIVENESS OF RECRUITMENT AND
SELECTION PROCESS**

**AT
S.R. WATER COMPANY PRIVATE LIMITED**

Project Report submitted in partial fulfillment of the requirement for the
award of the degree of

MASTER OF BUSINESS ADMINISTRATION

of

ANNA UNIVERSITY

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P. ENERST PAUL

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Under the guidance

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Ms. P. LAVANYA, MBA

Assistant Professor

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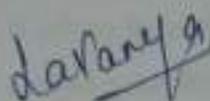


**ST. PETER'S COLLEGE OF ENGINEERING AND
TECHNOLOGY, AVADI, CHENNAI-600054.**

JULY - 2023

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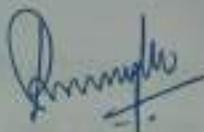
This is to certify that the Project report titled, "A STUDY ON THE EFFECTIVENESS OF RECRUITMENT AND SELECTION PROCESS AT S.R. WATER COMPANY PRIVATE LIMITED" is the bonafide work of P. ENERST PAUL (REG No.112721631019) is a partial fulfilment of the requirement for the award of master of business administration by Anna University during the academic year 2022 - 2023.



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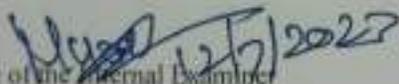


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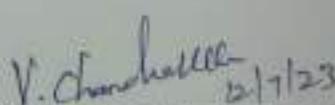
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Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in S.R.WATER COMPANY PRIVATE LIMITED, Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. The recruitment and selection process plays a vital role in the success and growth of organizations. It serves as the foundation for acquiring qualified and competent employees who can contribute to achieving organizational objectives. This abstract provides an overview of the effectiveness of the recruitment and selection process, exploring its impact on organizational performance, employee retention, and overall success.

Effective recruitment and selection processes involve several key elements, including job analysis, sourcing candidates, screening, interviewing, and decision-making. These processes aim to identify individuals with the right skills, qualifications, and cultural fit to fill vacant positions within the organization. An effective process not only attracts a pool of talented candidates but also ensures fair and unbiased selection procedures.

The study carried out was based on descriptive data type.

- Sample size of 83 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Chi - square, Anova and Run Test analysis.
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the effectiveness of recruitment and selection process . This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

3.3 Conclusion

In the present competitive business environment, the recruitment and selection process plays a vital role for getting better candidates into the firm. As any firm's success or failure depends on the human resources employed in the organization, greater focus should be given on the recruitment procedure.

So, I would like to conclude that S.R. Water Company (P) Ltd is having a better recruitment and selection procedure, and they should keep into consideration the changing scenario and can go for advanced recruitment and selection processes so that the organization will flourish with talented & skilled employees which will lead to better productivity.



**A STUDY ON THE VARIOUS INVESTMENT OPPORTUNITIES
AVAILABLE FOR SALARIED CLASS**

AT

SIEMENS PRIVATE LIMITED

Project Report submitted in partial fulfillment of the award of the degree

MASTER OF BUSINESS ADMINISTRATION OF

ANNA UNIVERSITY

Submitted by

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AVADI, CHENNAI-600054.

July 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON THE VARIOUS INVESTMENT OPPORTUNITIES AVAILABLE FOR SALARIED CLASS WITH RESPECT TO SIEMENS PRIVATE LIMITED" is the bonafide work of **GOMATHI. K (REG No.112721631020)** in partial fulfilment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2022 – 2023.



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Signature of the HOD

DR. C. EVANGELINE

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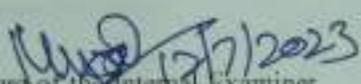
Head of the Dept.

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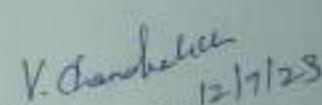
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Avadi, Chennai - 600 054.



Signature of the Internal Examiner

Examiner



Signature of the External

ABSTRACT

The major features of an investment are safety of the principal amount, liquidity, income stability, appreciation and easy transferability. A variety of investment avenues are available such as shares, bank, companies, gold and silver, real estate, life insurance, postal savings and so on. All the investors invest their surplus money in the above mentioned avenues based on their risk taking attitude.

The report provides an understanding of the employees preference towards investment in SIEMENS PVT LTD, ADAMPAKKAM.

The internship consisting of a period of three months from 01.02.2023 to 28.04.2023 has provided numerous investment alternatives available in the market and the main objective of this research paper is to know the preferences over the investment alternatives which are available in the market. Investment is an activity by which people earn money by investing their money in some Financial Asset and Physical Asset. As life is uncertain and the future can't be predicted, so in order to secure future a person has to invest. Investors are investing their money with different objectives in their mind such as Profit, Security, and Appreciation etc. As a young investor has a good risk appetite and a good time horizon and to get a good return on the investment till, he reaches the age of 40, he has a various number of options to invest in.

The financial and investment sectors have widened their scope. Various modes of investments are available for the investors of various categories. If the money is put in any mode with a proper planning and strategy, then an investor can generate wealth for his future. An individual contributes in the economic growth by his economic activity. The study covers that there are numerous variables that direct an investor's decision to invest. It also proposes the further studies which can be done to study the saving and investment behaviour of professional women of Indore. The outcomes of present study would be of great relevance to investors, financial planners, policy makers and wealth managers etc.

3.3 CONCLUSION:

- Investors/salaried employees are prefer to invest in their money into the Mutual fund and bank deposit.
- The data analysis of research show that the future safety and wellbeing is concerned as vital factor while doing investment.
- Investors are very well conscious about different investment options that are available.
- It is absolutely necessary and required to saving some proportion of amount what you earned, to have a plan for your own future and should invest wisely.



**A STUDY ON FACTORS DRIVING SUSTAINABILITY
OF A FIRM AN ANALYSIS OF HR STRATEGIES
IMPLEMENTED IN RK ENGINEERING WORKS**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

**OF
ANNA UNIVERSITY**

Submitted By

Mr. GOWTHAM C

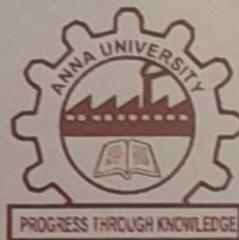
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June 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON FACTORS DRIVING SUSTAINABILITY OF A FIRM AN ANALYSIS OF HR STRATEGIES IMPLEMENTED IN RKENGINEERING WORKS" is the bonafide work of GOWTHAM C (REG NO.112721631021) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Signature of Supervisor
11/1/2023
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Professor

Signature of the HOD

DR.C.EVANGELINE

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Submitted for the Viva-Voce examination held on 12/07/2023

Signature of the Internal Examiner
12/7/2023

V. Chandhella
12/7/23
Signature of External Examiner

ABSTRACT

This is a research conducted on Strategic Human Resource Management (SHRM) that are followed at RK ENGINEERING WORKS which is basically a manufacturing company

In today's corporate world Environment of the employees, Health and Safety of the employees are very much important and it also benefits the company and increases the productivity. Factories Act 1948 gives detailed information with regard to Employees Health, Safety and Environmental measures that a Factory should follow.

For a company to be successful, employee's satisfaction towards SHRM are the key aspects. The satisfaction among employees depicts whether they are happy with the current policies followed by the company. The success of any manufacturing company will be based on the workers, employees will be considered as an asset to the organization. Any slight damage caused to the employee within the premises will lead to major effects.

This topic was chosen because, as it is a manufacturing company, the chances of accidents are more. Even a small negligence may lead to high impacts and dangerous consequences.

The study carried out was based on descriptive research. The Sampling Design conducted for my project is Simple Random sampling. The questionnaire was well structured in order to extract the required information from the respondents. The various statistical tools like Chi square, Anova, factor analysis and cluster were used in this study. The responses are collected from 81 respondents.

From this survey, it was understood that very few accidents are met in the company premises and almost all employees are aware of the SHRM that the company is following. As per the overall response of the employees, they are very much satisfied with the policies and practices followed by RK ENGINEERING WORK in order to protect their employees and safeguard them.

4.2 SUGGESTION

Organization goals, Organization structure -20-25years, 31-35 years, 36-40 years, 41 above – disagree
Quality circles- Female, organization seeks- Male and female, challenges- Male- disagree
Training- Post graduate- disagree
Training opportunities- 16-20 years- disagree, Behavior – 21-25 years – disagree
Policy strategy- 0-2,00,000 lakhs- disagree, Talent employee, Effective growth-4,00,001-6,00,000 lakhs- disagree, Talent employee- strongly disagree, Effective growth- disagree

4.3 CONCLUSION

From the study, Factors driving sustainability of a firm; An analysis of HR strategies implemented in Madras Scientific Research Foundation, Chennai have created an opportunity to know the various HR strategy is general attitude towards the job which varies between the individuals. From the findings and analysis, it is clear that the level of HR strategy on the job in the company is good. It shows that HR strategy strongly influences the productive efficiency of a company and increase effectiveness by making the employees more participative with the immediate superiors. The study on HR strategy level revealed that employees were satisfied on majority of the factors. Suitable suggestions are provided: the findings suggest that more attention should be given to rate and variety in work in order to improve the overall satisfaction. The findings and suggestions provided will help the company to increase the HR strategy level of workers and to motivate them in their job. This concept defines value, rarity, inimitability and organization as the dimensions which position a company ahead of its competitors. These results conclude that the role of regulation is to impose a framework of good practice, but its influence on a company's performance.



**A STUDY ON EMPLOYEE ENGAGEMENT AND
ORGANIZATIONAL CULTURE AT
RHINO FACILITY MANAGEMENT SERVICES**

**Project Report submitted in partial fulfillment of the requirement for the
award of the degree of MASTER OF BUSINESS ADMINISTRATION**

ANNA UNIVERSITY

Submitted By

D.GOWTHAM

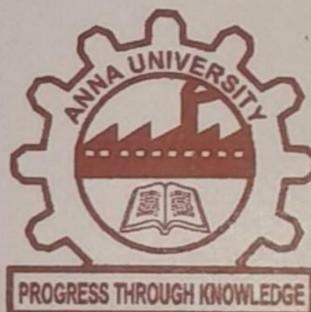
112721631022

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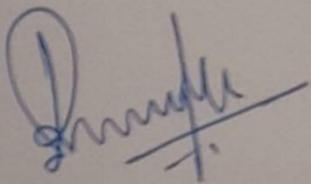


**ST. PETER'S COLLEGE OF ENGINEERING AND
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July 2023

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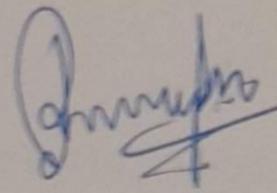
is is to certify that the Project report titled, "A STUDY ON EMPLOYEE ENGAGEMENT AND ORGANIZATIONAL CULTURE AT RHINO FACILITY MANAGEMENT SERVICES" is the bonafide work of D.GOWTHAM (REG No.112721631022) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



Signature of Supervisor

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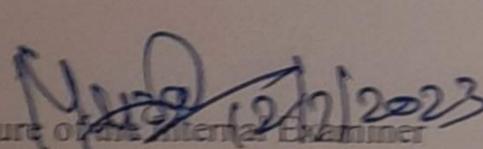
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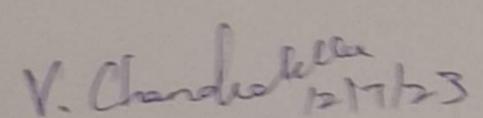
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Submitted for the Viva-Voce examination held on 12-07-23



Signature of the Internal Examiner



Signature of External Examiner

ACKNOWLEDGEMENT

A project of this magnitude and nature requires kind co-operation and support from many for successful completion. Therefore, I wish to express my sincere thanks to all who supported me in completing this project.

I am highly thankful to our Principal **DR.S. NANDAKUMAR, M.E., PhD**, for allowing me to pursue an MBA programme in this esteemed organization.

I thank **DR.C. EVANGELINE B.SC, MBA, M. PHIL, PH. D, UGC NET, Associate Professor, and Head, Department of Management Studies**, for his moral and academic support during the period of my project.

I extend my thanks to my internal guide **Mrs. P. LAVANYA, MBA Assistant Professor, Department of Management Studies**, for her support and valuable guidance.

I am thankful to **Mr.SATHISH KUMAR , HR Talent and Aquastion team Member of RHINO FACILITY MANAGEMENT SERVICES** allowing me to undertake the training program.

Finally, I thank my parents, family members, and friends who have provided moral support and encouraged me to complete the project successfully.

5.2 CONCLUSION

The study had confirmed that the company is having a good interface in the employee engagement plays a vital role in shaping a positive and thriving organizational culture.

When employees are engaged, they are more committed, productive, and satisfied in their work. By implementing the suggestions mentioned above, organizations can foster an environment where employees feel valued, supported, and motivated to give their best. Building open communication channels, recognizing achievements,

providing professional development opportunities, promoting work-life balance, fostering inclusivity, empowering employees, encouraging collaboration, facilitating social interaction, seeking feedback, and leading by example are all crucial components of a successful employee engagement strategy.

By prioritizing employee engagement, organizations can create a culture that attracts and retains top talent, drives innovation, and ultimately leads to long-term success.



**A STUDY ABOUT THE IMPACT OF PERFORMANCE BASED PAY IN
EMPLOYEES SATISFACTION AT HITSS ENGENHARIA PLASTICS**

A PROJECT REPORT

Submitted in partial fulfillment of the requirement for the award of the degree
of

MASTER OF BUSINESS ADMINISTRATION

OF

ANNA UNIVERSITY

Submitted By

HABEL HAMANTH G

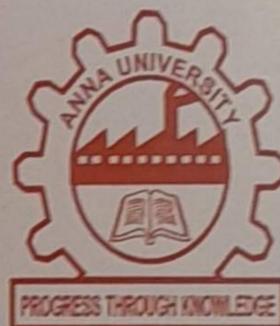
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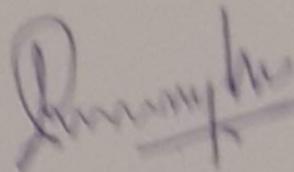
BONAFIDE CERTIFICATE

This is to certify that the Project report titled "A STUDY ABOUT THE IMPACT OF PERFORMANCE BASED PAY IN EMPLOYEES SATISFACTION AT HITSS ENGENHARIA PLASTICS is the bonafide work of HABEL HAMANTH G (REG no.112721631023) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.


Signature of Supervision 11/7/2023

Dr. R.MURALI

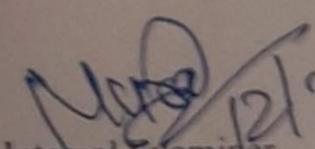
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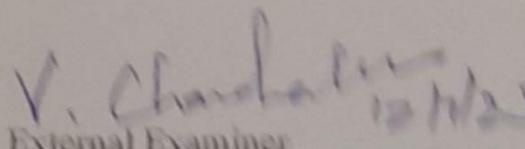

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Submitted to project and Viva Examinations held on 12/07/23


Internal Examiner 12/7/2023


External Examiner 12/7/23

ABSTRACT

This project entitled “**IMPACT OF PERFORMANCE BASED PAY IN EMPLOYEE SATISFACTION AT HITSS ENGENHARIA PLASTICS**” was carried out at Hitss engenharia plastics, Chennai is to evaluate how satisfied employees were with their new salary payment system after it was implemented. Due to the pandemic, Hitss engenharia plastics established performance-based pay because it was challenging for the organisation to gauge employee performance. Additionally, it makes no sense to pay employees' salary in full when their performance is subpar. To find out if employees are satisfied with performance-based pay, I conducted a study on the topic, collecting data and performing analyses such as percentage analysis, Chi square analysis, and One Way Anova. The study's main limitation is that performance-based pay is a novel idea that was introduced during the pandemic and has not yet been properly developed and channelled.

CONCLUSION

The study concludes that implementation of Performance based Pay strategies on HITTS performance especially through the individual and team performance are higher than its direct effect. Hence the company is advised to design the performance based pay strategy to enrich the individual and team performance initially. The company's performance will be automatically enriched. The implementation of performance based pay at the software company; significantly contribute the level of adequacy of pay, interactional justice, job satisfaction and firm's performance in the companies.



**A STUDY ON EMPLOYEE ENGAGEMENT IN
MAHINDRA RURAL HOME FINANCE
LIMITED**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

OF

ANNA UNIVERSITY

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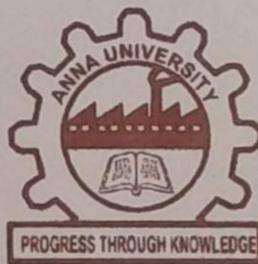
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Assistant Professor

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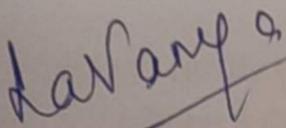
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JULY - 2023

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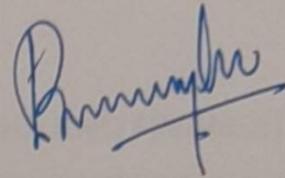
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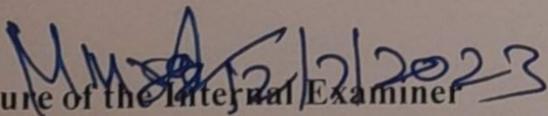
Signature of the HOD

Dr. C. EVANGELINE

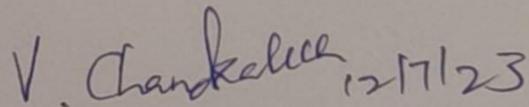
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Submitted for the Viva-Voce Examination held on 12-07-2023



Signature of the Internal Examiner



Signature of the External Examiner

ABSTRACT

The project work entitled Employee Engagement with special reference to MAHNDRA RURAL HOME FINANCE LIMITED is mainly conducted to know the clear ideas about the employee commitment towards their job and the factors governing their full involvement in doing their work. Management's basic job is the effective utilization of human resources for achievements of organizational objectives. So, a totally engaged employees shows that total job satisfaction and also helps in achieving the maximum output by the optimum utilization of the resources.

Employee engagement is the level of commitment and involvement an employee has towards their organization and its values. An engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the organization. It is a positive attitude held by the employees towards the organization and its values. The organization must work to develop and nurture engagement, which requires a two-way relationship between employer and employee.' Thus, Employee engagement is a barometer

that determines the association of a person with the organization. Engaged employees are not just committed. They are not just passionate or proud. They have a line-of-sight on their own future and on the organization's mission and goals. They are —enthused and —in gear using their talents and discretionary effort to make a difference in their employer's quest for sustainable business success. It is the modern version of job satisfaction in which the employees future of the company and are willing to invest the discretionary effort.

Engaged employees feel a strong emotional bond to the organization that Employee engagement in regards to one's feeling or state of mind regarding nature of their work. Job can be influenced by variety of factors like quality of one's relationship with their supervisor, quality of physical environment in which they work, degree of fulfillment in their work

5.3 CONCLUSION

Employee engagement is a critical factor in the success and productivity of any organization. Based on extensive research and observations, it can be concluded that a highly engaged workforce leads to numerous benefits for both employees and the company as a whole. Improved Performance: Engaged employees are more likely to go above and beyond their job requirements, leading to increased productivity and higher-quality work. They are motivated to achieve their goals and contribute to the overall success of the organization. Increased Retention: When employees feel engaged and connected to their work, they are less likely to seek opportunities elsewhere. Organizations that prioritize employee engagement often experience lower turnover rates, reducing recruitment and training costs.



**A STUDY ON EMPLOYEE PAYROLL
MANAGEMENT SYSTEM AT LEANSWIFT
SOLUTIONS PVT LTD IN CHENNAI.**

**Project Report submitted in partial fulfillment of the requirement for
the award of the degree of**

MASTER OF BUSINESS ADMINISTRATION

of

ANNA UNIVERSITY

Submitted By

G. HARI KRISHNAN

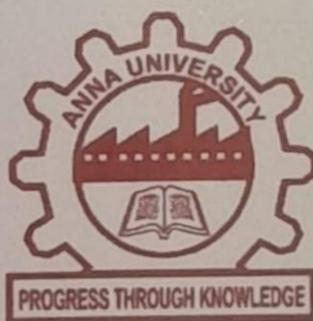
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**ST. PETER'S COLLEGE OF ENGINEERING
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JULY 2023

BONAFIDECERTIFICATE

This is to certify that the Project report titled, "Employee payroll Management System" is the Bonafide work of . HARI KRISHNAN (REG No.112721631025) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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Avadi, Chennai - 600 054.

Submitted for the Viva-Voce examination held on 12/07/2023

Signature of the Internal Examiner

Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in LEANSWIFT SOLUTIONS PVT LTD. Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

Payroll Management System” is designed to make the existing manual system automatic with the help of computerized equipment and full-edged computer software, fulfilling their requirements, so that their valuable data and information can be stored for a longer period with easy access and manipulation of the same. The required software is easily available and easy to work with. This web application can maintain and view computerized records without getting redundant entries. The project describes how to manage user data for good performance and provide better services for the client.

The study carried out was based on descriptive data type.

- Sample size of 95 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Chi – square, Anova and Run Test analysis.
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the Employee payroll Management system at LEANSWIFT SOLUTIONS PVT.LTD. This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

5.3 CONCLUSION

The study had confirmed that the company is having a good interface level between account and H.R. department in the organization

From this study, it is found that majority of the workers were satisfied with Software Used in an organization.

To make the software system more efficient and excellent, the company should give Importance to the employee's suggestion related to improvement of software used in pay roll system and thereby makes their software more effective and adequate.

To create awareness among employees and it shall consider some of the ways and means Suggested by the employees like addition of parameters such as short cut for calculation PF, ESI, TAX etc.

Dependability and conducting regular training program on the software usage for the employees in an organization

H.R. department should be given more regulatory power to analyze the proper Functioning of the pay roll system and thereby widen up the interaction between finance and H.R. department.



**A STUDY ON THE EFFECTIVENESS OF RECRUITMENT
AND SELECTION PROCESS
AT
ASHOK LEYLAND**

Project Report

**Submitted in partial fulfillment of the requirement for the award of the
degree of MASTER OF BUSINESS ADMINISTRATION**

Of

ANNA UNIVERSITY

Submitted By

D.HARINI SRI

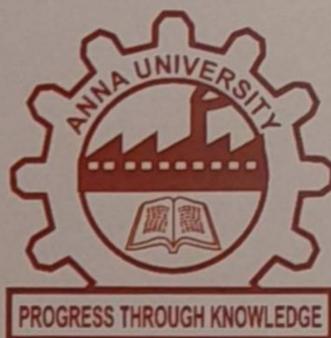
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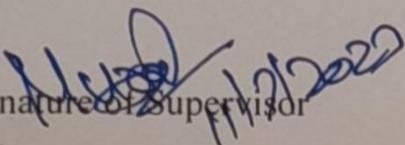


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JULY - 2023

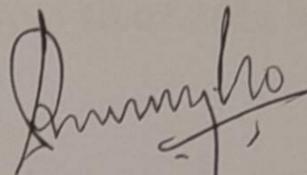
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This is to certify that the Project report titled, "A STUDY ON THE EFFECTIVENESS OF RECRUITMENT AND SELECTION PROCESS IN ASHOK LEYLAND" is the bonafide work of D. HARINI SRI (REG No.112721631026) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.


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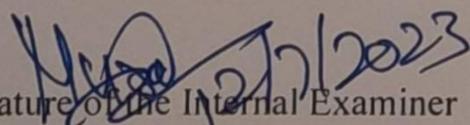

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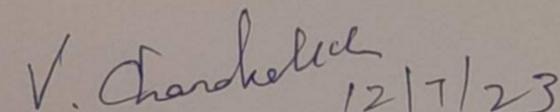
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Avadi, Chennai - 600 054.

Submitted for the Viva-Voce examination held on 12/07/2023


Signature of the Internal Examiner


Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in ASHOK LEYLAND, Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

This project report describes the Recruitment and Selection process in private organization. This project helped me to learn about the recruitment and selection process in private organization.

The motive of the project report to understand recruitment and selection process in Ashok leyland. For every organization it is important to have a right person on a right job. Recruitment and Selection plays a vital role in this situation. That report will be help to perceive how an organization recruit their employees and how they can select the right candidates for their organization in real situations.

The project covers introduction of Recruitment and Selection, Purpose and Importance of Recruitment, Sources of Recruitment, Steps in the Recruitment & Selection Process. It also comprises the challenges faced by HR in recruitment process. The study carried out was based on descriptive data type.

Sample size of 77 respondents were collected based on sampling method. The data's collected were further analyzed by Statistical Tools based One way anova and chi square.

Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the Effectiveness of recruitment and selection process at ASHOK LEYLAND. This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

5.3 CONCLUSION

In conclusion, the study provides valuable insights for companies looking to improve their recruitment and selection process. By implementing best HR practices, minimizing the time taken to fill vacancies, providing a positive candidate experience, and improving the effectiveness of the recruitment and selection process, companies can attract and retain high quality talent, improve employee satisfaction, and enhance workplace perception.



**A STUDY ON EMPLOYEE OPINION TOWARDS
LEADERSHIP ALIGNMENT IN OPERATIONS
DEPARTMENT WITH REFERENCE TO TI CYCLES**

A PROJECT REPORT

Submitted in partial fulfillment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

Of

ANNAUNIVERSITY

Submitted By

Mr.P.HARIPRASATH

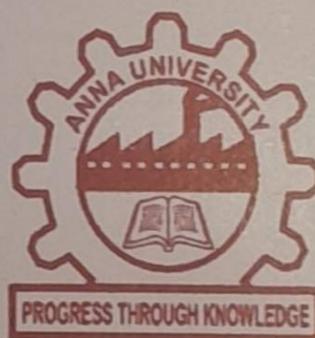
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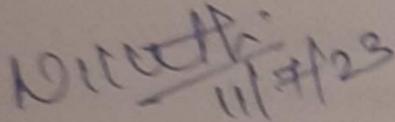
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JULY 2023

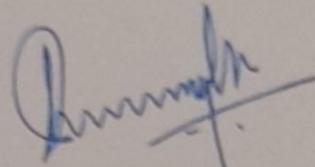
ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY
ANNA UNIVERSITY
DEPARTMENT OF MANAGEMENT STUDIES

BONAFIDE CERTIFICATE

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11/7/23

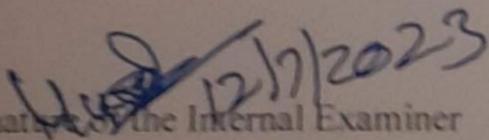
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Assistant Professor



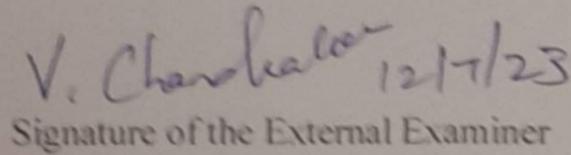
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Submitted for the Viva-Voce Examination held on 12-07-2023


12/7/2023

Signature of the Internal Examiner


12/7/23

Signature of the External Examiner

ABSTRACT

Research has confirmed that leader behavior influences group and organizational behavior, but we know less about how senior leaders ensure that group and organizational members implement their decisions. Most organizations have multiple layers of leaders, implying that any single leader does not lead in isolation. We focused on how the consistency of leadership effectiveness across hierarchical levels influenced the implementation of a strategic initiative in a large health care system. We found that it was only when leaders' effectiveness at different levels was considered in the aggregate that significant performance improvement occurred. We discuss the implications of these findings for leadership research, specifically, that leaders at various levels should be considered collectively to understand how leadership influences employee performance.

5.3: CONCLUSION

The study conducted in TI Cycles of India to understand the effect of leadership alignment on strategic execution. They have built a strong space in the confectionery market through various strategies. Implementation of strategy is very essential for organizations performance. The strategy is clearly articulated in this operation department. The strategy is clearly defined and delegated in the operation departments. The strategic execution is perfect due to clear leadership alignment. They accomplish their target which is delegated by their head of operation department.



**A STUDY ON EMOTIONAL INTELLIGENCE OF
INDIVIDUAL EMPLOYEES WITH REFERENCE TO
ORGANISATIONAL CLIMATE AT ST PETER'S
COLLEGE OF ENGINEERING AND TECHNOLOGY**

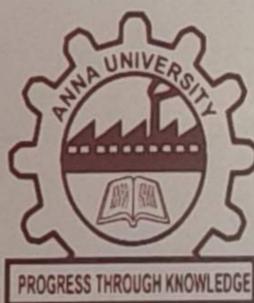
A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

**OF
ANNA UNIVERSITY**

Submitted By
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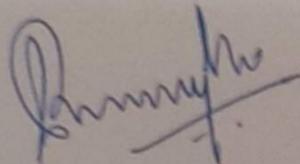


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AVADI, CHENNAI-600054.

July 2023

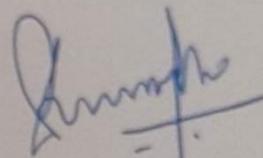
BONAFIDE CERTIFICATE

This to certify that the project work entitled "A STUDY ON EMOTIONAL INTELLIGENCE OF INDIVIDUAL EMPLOYEES WITH REFERENCE TO ORGANISATIONAL CLIMATE AT ST PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY" is a Bonafide work done by **HARITHA. H** [REGISTER NO: 112721631028] in partial fulfilment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2022 - 2023.



Signature of the Guide

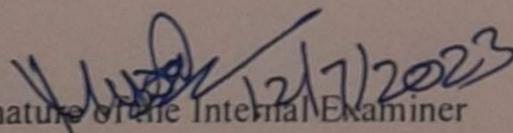
Dr. C . EVANGELINE
Associate professor & HOD



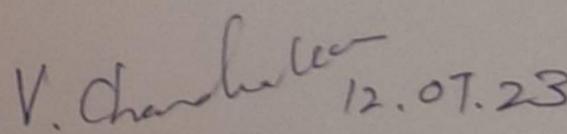
Signature of the HOD

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Submitted for the Viva-Voce Examination held on 12-07-2023



Signature of the Internal Examiner



Signature of the External Examiner

ABSTRACT

This study was designed to examine the emotional intelligence of employees with reference to the prevailing organisational climate at St Peter's College of Engineering and Technology. Emotional Intelligence is the ability to perceive, identify and manage emotions which provides the basis for the kind of social and emotional competencies that are important for success in almost any job. Emotional intelligence can be beneficial in many areas of life. The organisational climate is usually described as a class of valuable features of the working environment, which are directly or indirectly perceived by employees and which can influence their behaviour and motivate them. The climate itself affects job satisfaction and hence individual and group productivity and performance.

Analyzing organisational climate allows us to identify employees' opinions and perceptions of work settings that are often built on emotions. Thus, emotional intelligence within the organisation is extremely important in maintaining a positive organisational climate.

The study carried out was based on descriptive research. The Sampling Design chosen for the project is Simple Random sampling. Statistical tools like Chi square, Anova were used in this study. The responses were collected from 39 respondents.

From this survey, it is understood that the employees have high emotional intelligence with a supportive organisational climate.

5.3 CONCLUSION

The study has highlighted the crucial role emotional intelligence plays in shaping the overall work environment. The findings demonstrate a positive correlation between emotional intelligence and a supportive organizational climate, emphasizing the significance of developing and utilizing emotional intelligence skills within the workplace. Thus, the study concludes that the employees of St. Peter's College of Engineering and Technology have high emotional intelligence with a supportive organizational climate.



**A STUDY ON WORK LIFE BALANCE AS
A RETENTION STRATEGY OF EMPLOYEES
WITH REFERENCE TO
STANSON PLASTIC PRODUCTS**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

**OF
ANNA UNIVERSITY**

Submitted By

Ms. IMMACULATE BERNERDH. R

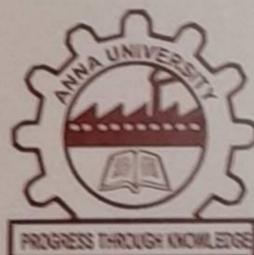
(Rg. No: 112721631029)

Under the guidance of

Mrs. M. Nishanthi,

Assistant Professor

Department of Management Studies



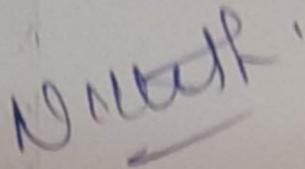
ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY

AVADI, CHENNAI-600054.

July, 2023

BONAFIDE CERTIFICATE

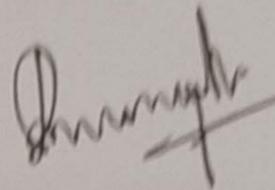
This to certify that the project work entitled "A STUDY ON WORK LIFE BALANCE AS A RETENTION STRATEGY OF EMPLOYEES WITH REFERENCE TO STANSON PLASTIC PRODUCTS" is a bonafide work done by **IMMACULATE BERNERDH R** [REGISTER NO: 112721631029] in partial fulfilment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2022- 2023



Signature of the Supervision

Mrs. M. NISHANTHI

Assistant Professor



Signature of the HOD

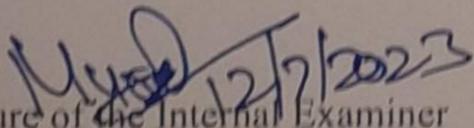
Dr. C. EVANGELINE

Associate Professor & HOD

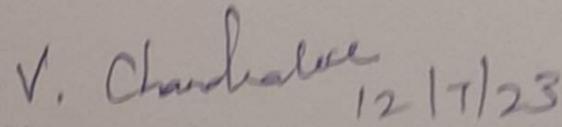
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Submitted for the Viva-Voce Examination held on 12/07/2023



Signature of the Internal Examiner



Signature of the External Examiner

ABSTRACT

The study highlights effectively managing the balance between paid work and other activities like spending time with family undertaken further of employees in STANSON PLASTIC PRODUCTS. The research title is "A STUDY ON WORK LIFE BALANCE AS A RETENTION STRATEGY OF EMPLOYEES". The work life balance is considered to be a key factor in terms of the success of employees. The goal of this study is to review theoretical literature on work-life balance as its impact on organisation work. The research work sought to examine extensively whether there is a relationship between labour flexibility and production efficiency, relationship between employer-employee and increased productivity, work climate and turnover rate and retention of employees.

The study therefore suggested that labour stability, employer-employee relationship, work atmosphere and job protection have a positive impact on improved production quality, increased efficiency, employee turnover rate, retention of employees. The results showed that when workers perceive a work-life imbalance, they respond negatively, and that management should implement work-life balance strategies to enhance employee performance. It has been inferred from the research results that the work-life balance is of considerable importance to modern work organisations.

Quantitative research methods were used for the study, and a sample population was chosen amongst participants who were single and in a relationship, female and male, with and without children, by using a convenient sampling method. The collected samples are 92. The study identified the existence of negative effects of poor WLB determined by high levels of work-family conflict and family-work conflict on family satisfaction.

This study also confirmed negative effects of poor WLB due to high levels of work-family conflict on work satisfaction and psychological health. Negative impacts of family-work conflict on work satisfaction and psychological health were not supported. This study also showed that the main causes of work family conflicts were excessive working hours and inflexibility of work schedule. It was recognised that employers can improve WLB by implementing family friendly initiatives such as flexi-time, time off in lieu, compressed working week, childcare support and eldercare support.

5.3 CONCLUSION

In this study I was learning the Work Life Balance is a very important issue in the Human Resource Management field and it has a vital impact on the productivity and growth of both the organization and the employee. Work life is all about a measure about controlling on when, where and how they work. In case the organization focus the employees work life balance the organization improve the future career, but the organization did not focus on that issue.

This study signifies the increasing importance of employee's retention in the organization. It highlights the reasons for the high turnover rate and the cost that this act adds up to the company. This study briefly covers the various areas where employee retention strategies are implemented namely work environment, work culture, salary negotiation, compensation management, rewards and recognition, leadership and relationship between employees and management.



A STUDY OF MANAGING
PAYROLL SYSTEM BY HUMAN
RESOURCES AT
TI METAL FORMING in chennai

Project Report submitted in partial fulfillment of the requirement for the
award of the degree of MASTER OF BUSINESS ADMINISTRATION

ANNA UNIVERSITY

By

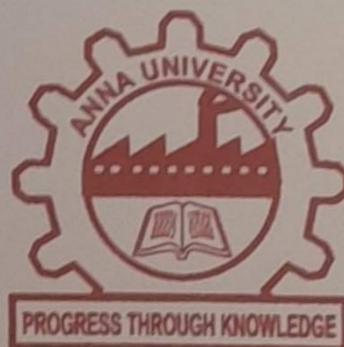
Ms. B. INDHUMATHI

112721631030

Under guidance of

Dr. R. MURALI, ph.D
Associate Professor

Department of Management Studies



ST.PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY
AVADI, CHENNAI-600054.

JULY -2023

BONAFIDE CERTIFICATE

This is to certify that the Report on Project undergone TI METAL FORMING, Pattabiram is the bonafide work of **B INDHUMATHI (REG no. 112721631030)** is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Signature of Supervisor

Dr. R. MURALI

Associate Professor

Signature of the HOD

DR. C. EVANGELINE

Associate Professor & HOD

Head of the Dept.
Department of mgmt. studies
St. Peter's College of Engg & Tech,
Avadi, Chennai - 600 096

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

This Project report provides “ A STUDY OF MANAGING THE PAYROLL SYSTEM BY HUMAN RESOURCES” departments at TI METAL FORMING, in chennai.

The Project consisting of a period of 90 days has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

The main objective is to know the payroll software's used in the organization and the roll of HR in payroll. The actual problem is to maintain different database for an organization whose main purpose is to issue pay-slips for their employees every month working in various departments of the organization, and maintain details of all the departments, employees with various grades, their designations and address details.

CONCLUSION

- The study had confirmed that the company is having a good interface level between account and H.R. department in the organization
- From this study, it is found that majority of the workers were satisfied with Software Used in an organization.
- To make the software system more efficient and excellent, the company should give Importance to the employee's suggestion related to improvement of software used in pay roll system and thereby makes their software more effective and adequate.
- To create awareness among employees and it shall consider some of the ways and means Suggested by the employees like addition of parameters such as short cut for calculation PF, ESI, TAX etc.
- Dependability and conducting regular training program on the software usage for the employees in an organization
- H.R. department should be given more regulatory power to analyze the proper Functioning of the pay roll system and thereby widen up the interaction between finance and H.R. department.
- I hope that the suggestion given in the report may be implemented in future course for the benefit of the employees and the company.



**A STUDY ON THE IMPACT OF THE
CONTRACT ADMINISTRATION OF
EMPLOYEES WITH REFERENCE TO AMBICA
CONSTRUCTION**

A PROJECT REPORT

**Submitted in partial fulfilment of the requirement for
the award of the degree of**

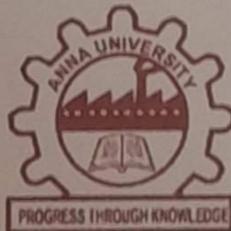
MASTER OF BUSINESS ADMINISTRATION

**OF
ANNA UNIVERSITY**

**Submitted By
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(Rg.no:
112721631031)**

**Under the guidance of
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Associate Professor &
HOD**

Department of Management Studies

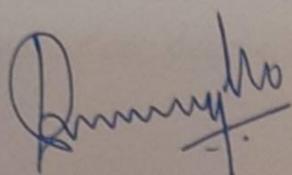


**ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY
AVADI, CHENNAI-600054.**

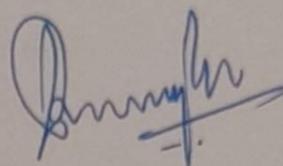
JULY - 2023

BONAFIDE CERTIFICATE

This to certify that the project work entitled "A STUDY ON THE IMPACT OF THE CONTRACT ADMINISTRATION OF EMPLOYEES WITH REFERENCE TO AMBICA CONSTRUCTION" is a Bonafide work done by ISHWARYA.M [REGISTER NO: 112721631031] in partial fulfilment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2021 – 2022



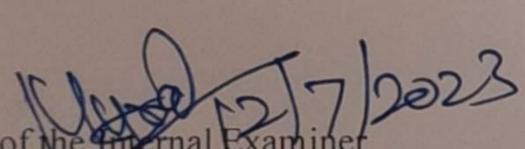
Signature of the Guide
Dr. C. EVANGELINE
Associate professor



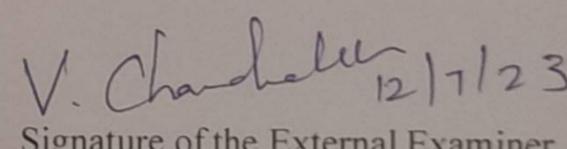
HEAD OF DEPARTMENT
Dr. C. EVANGELINE
Associate professor & HOD

Head of the Dept.
Department of mgmt. studies
St. Peter's College of Engg. & Tech.
Avadi, Chennai - 600 054.

Submitted for the Viva-Voce Examination held on 12 / 07 / 23



Signature of the Internal Examiner



Signature of the External Examiner

ABSTRACT

This study focuses on examining the impact of contract administration practices on organizational performance at Ambica Construction. It aims to fill the existing information gap and improve strategies for better performance. The study evaluates the influence of key practices in contract administration, including contractual compliance, resource allocation, stakeholder engagement, and risk management, on overall performance. The research design utilizes a quantitative approach with data collected through structured questionnaires and analyzed using statistical tools such as percentage analysis, descriptive statistics, ANOVA analysis, correlation analysis, and chi-square analysis. The study includes 107 employees selected through simple random sampling, representing a diverse range of demographic factors.

The findings from the analysis provide insights into various dimensions of contract administration, including demographic factors, key practices, compliance, resource allocation, stakeholder engagement, and risk management. While most demographic factors show no significant association with these dimensions, significant correlations are observed between gender and contract administration practices' impact on project completion rates, as well as between educational level and activities driving profitability. Based on the findings, recommendations are made to enhance contract administration practices, covering aspects such as efficiency, compliance, resource allocation, stakeholder engagement, risk management, and organizational performance. Overall, the study emphasizes the importance of effective contract administration in improving organizational effectiveness at Ambica Construction and suggests implementing the provided suggestions to optimize contract administration strategies and enhance overall performance.

5.3 CONCLUSION

In conclusion, this study examined various aspects of contract administration and their impact on organizational effectiveness at Ambica Construction. The findings provide valuable insights and recommendations for improving contract administration practices. The study identified demographic factors such as age, gender, job position, years of experience, and educational level, which can be considered when developing strategies for effective contract administration.

The study highlights the importance of robust enforcement mechanisms for contractual obligations, as they emerged as the most crucial practice for ensuring effective contract administration. Additionally, communication and collaboration were recognized as significant factors but were perceived to be of slightly lesser importance compared to other practices. Therefore, strategies should be implemented to enhance communication channels and foster collaboration among stakeholders.

The study also emphasized the need to address customer satisfaction levels and improve contract administration practices to meet customer expectations. Furthermore, the findings emphasized the positive impact of effective contract administration on winning and retaining projects, suggesting the need for continuous refinement and enhancement of contract administration strategies.



**A STUDY ON MANAGING EMPLOYEE BENEFITS AS A MOTIVATIONAL
TOOL, TO IMPROVE EMPLOYEE PERFORMANCE WITH REFERENCE
TO ,STAR HEAT TREATERS**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

OF

ANNA UNIVERSITY

Submitted By

Ms. KARTHIKA.K

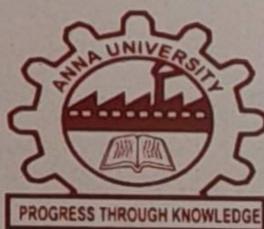
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Under the guidance of

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Assistant Professor

Department of Management Studies



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JUNE2023

ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY

ANNA UNIVERSITY

DEPARTMENT OF MANAGEMENT STUDIES

BONAFIDE CERTIFICATE

This to certify that the project work entitled "A STUDY MANAGING EMPLOYEE BENEFITS AS A MOTIVATIONAL TOOL TO IMPROVE EMPLOYEE PERFORMANCE WITH REFERENCE TO "STAR HEAT TREATMENT IN CHENNAI is a bonafide work done by KARTHIKA.K[REGISTER NO:[112721631032]in partial fulfilment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2021 -2023

M. Nishanthi

Signature of the Supervision

Mrs. M. NISHANTHI

Assistant Professor

Dr. C. Evangeline

Signature of the HOD

Dr. C. **EVANGELINE**

Associate Professor & HOD

Head of the Dept.
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Submitted for the Viva-Voce Examination held on 12/07/23

M. Nishanthi
12/7/23

Signature of the Internal Examiner

M. G. S. S. S.
12/7/23

Signature of the External Examiner

ABSTRACT

The aim of this research was to explore three vital issues in human resource management mainly: to ascertain whether rewards motivate employees, identify what kinds of rewards employees consider most beneficial and finally discuss some dilemmas and difficulties managers face in applying motivation theory to workplace setting. The research is informed by various literatures on the most effective and efficient ways of motivating employees to enhance high performance to **and to** achieve organizational goals. Most of the available literature on motivation shows that while motivated employees are essential for organizational goals, managers are often confronted with the challenge of coming up with the right mix of rewards which will motivate their employees for enhanced productivity.

In this research, the perceptions of rewards as motivation and the dilemmas managers face in motivating their employees were explored through an analysis of **twenty (20)** interviews with people in various positions and organizations in the Accra and Tema municipalities of the Greater Accra region of Ghana. The respondents were all employees who also had oversight responsibilities as managers or supervisors of between five to ten people.

The analysis of the **twenty (20)** interviews suggests that while the use of rewards is vital in motivating employees, there is the need for management and employers to have a clear understanding of the human nature and what actually motivates employees. **The research further suggests** that efficient motivation program stems from a mixture of extrinsic and intrinsic rewards instead of focusing on any one particular one. Additionally, most of the challenges managers face in motivating their employees can be eliminated or reduced when myths surrounding motivation are discarded and individual differences in terms of valence, preferences, and aspirations are incorporated. **Finally, enhanced motivation can be attained when managers do their best to design the work setting so they become motivators in themselves while at the same time eliminate demotivating factors at the work place.**

- Most of the respondents from the age group are neither satisfied nor dissatisfied towards travel allowances.
- 36-35 age category are satisfied, 25-35 age category are neither satisfied nor dissatisfied.
- Most of the respondents from the gender group are satisfied towards flexible & alternatives work arrangement.
- Most of the respondents from the gender group are satisfied towards awards like trophies, certificate.
- Most of the respondents from the gender group are neither satisfied nor dissatisfied towards office environment office like window, flexible hours
- Most of the respondents from the gender group are neither satisfied nor dissatisfied towards overall satisfaction.

2 SUGGESTION

36-45 age category of the respondents are neutral towards compensation on death, the company should updated compensation package on death with current economic conditions in order to lead comfortable life of deceased family members.

Most of the female respondents suggested That the company should take steps towards benefits on employment injuries.

The leave travelling allowances package can be improved to meet out the expenses of the employees.

The group insurance should design in accordance with the insurance companies in such a way to get benefits for the employees..

The marital status respondents should have impoverisation towards health insurance to gain confidence in their performance..

1.3 CONCLUSION

Now a days, employees are considered as a valuable asset to the company. The company should take care of employee benefit in order to increase productivity .So it is considered as motivational tool. The motivational tools like compensation, allowance, benefits that they provided for their performance. The importance of employee's performance must be understood by the management and sincere efforts must be put in that direction. The management must therefore be aware not only in the organization but also employees and their needs. Thus, this study will give more benefits to those company who want to manage the employee befits effectively.



**A STUDY ON IMPACT OF WORK LIFE BALANCE OF FRONTLINE EMPLOYEES
WITH REFERENCE TO PORTEA HEALTH VISTA PVT LTD**

A PROJECT REPORT

Report submitted in partial fulfilment of the requirement for the degree of
MASTER OF BUSINESS ADMINISTRATION

of

ANNA UNIVERSITY

BY

S. KEERTHANA

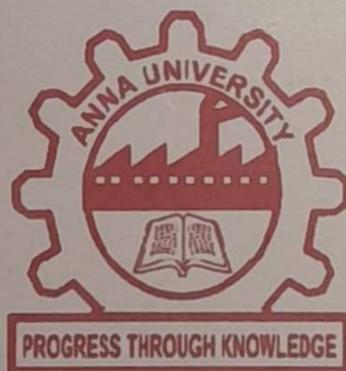
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Under guidance of

M. NISHANTHI B.COM., MBA

Assistant Professor

Department of Management Studies



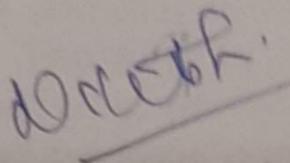
St. Peter's College of Engineering and Technology

Avadi, Chennai-600054.

July 2023

BONAFIDE CERTIFICATE

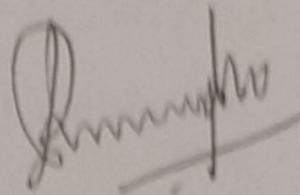
This is to certify that the Project Report titled at "A STUDY ON IMPACT OF WORK LIFE BALANCE OF FRONTLINE EMPLOYEES WITH REFERENCE TO PORTEA HEALTH VISTA PRIVATE LIMITED" is the bonafide work of S, KEERTHANA (REG NO.112721631033) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



Signature of Supervisor

Mrs. NISHANTHI M

Assistant Professor



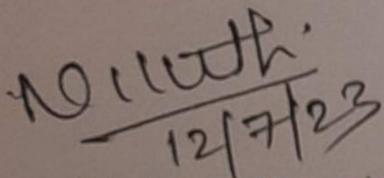
Signature of the HOD

DR.C. EVANGELINE

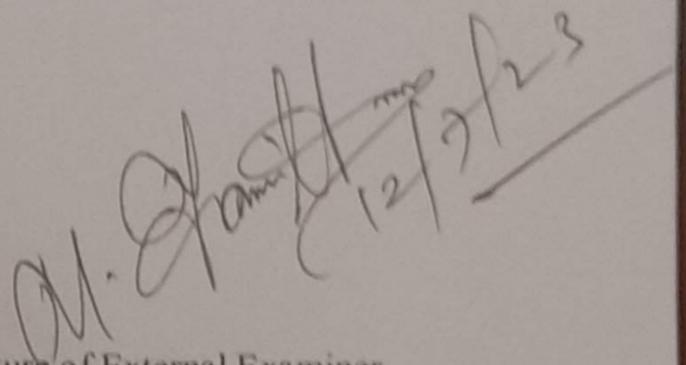
Associate Professor & HOD

Head of the Dept.
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Avadi, Chennai - 600 054.

Submitted for the Viva-Voce examination held on 12/07/2023



Signature of the Internal Examiner



Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in, **PORTEA HEALTH VISTA INDIA PRIVATE LIMITED** in Mount Road, Chennai.

The training consisting of a period of 3 months from **01.02.2023** to **31.05.2023** has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

This study is an outcome of the title named as "A STUDY ON IMPACT OF WORK LIFE BALANCE WITH RESPECT TO PORTEA HEALTH VISTA INDIA PRIVATE LIMITED". To find the effectiveness of the WORK LIFE BALANCE in PORTEA HEALTH VISTA INDIA PRIVATE LIMITED, questionnaire was well framed in order to collect the required information from the respondents in the IT sector. Convenience sampling is used in this study and the sample size of 81 is collected for the study Percentage tools which has been used are Chi square, Annova Analysis. The IT sector follows the employee's satisfaction. This is found from the respondents.

5.3 CONCLUSION

In this study I was learning the Work Life Balance is a very important issue in the Human Resource Management field and it has a vital impact on the productivity and growth of both the organization and the employee. Work life is all about a measure about controlling on when, where and how they work. In case the organization focus the employee's work life balance the organization improve the future career, but the organization did not focus on that issue.



**A STUDY ON EFFECTIVENESS OF TRAINING METHODS
WITH REFERENCE TO WHEELS INDIA LIMITED**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

OF
ANNA UNIVERSITY

Submitted By

Ms. KEERTHIKA K

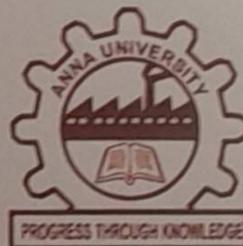
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AVADI, CHENNAI-600054.

July 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON EFFECTIVENESS OF TRAINING METHODS WITH REFERENCE TO WHEELS INDIA LIMITED" is the bonafide work of **K. KEERTHIKA** (REG NO.112721631034) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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Mrs. NISHANTHI M

Assistant Professor

Dr. C. Evangeline
Signature of the HOD

DR. C. EVANGELINE

Associate Professor & HOD

Head of the Department
Department of mgmt. sci.
St. Peter's College of Engg. & Tech.
Avadi, Chennai - 600 054.

Submitted for the Viva-Voce examination held on 12/7/23

Nishanthi
12/7/23
Signature of the Internal Examiner

M. S. Ramani
12/7/23
Signature of External Examiner

ABSTRACT

This study is an outcome of the title called 'A STUDY ON EFFECTIVENESS OF TRAINING METHODS WITH REFERENCE TO WHEELS INDIA LIMITED'. Employee training and development is a carefully designed program that is focused on preparing employees for their current or upcoming roles. Every day, there are new technologies, applications, and software being introduced as upgraded solutions for improvement and progress. This means that there is going to be a continuous skill gap that will need to be addressed. Employee training is an effective way of ensuring that. Through training, employees can upskill and improve their performance at work. There are two main types of training method i.e On the job training and Off the job training. The study adopts descriptive methods.

The major purpose of descriptive Research is descriptive of the state of affairs as it exists at present. The Sampling Design conducted for my project is Simple Random Sampling. The questionnaire was well structured in order to extract the required information from the respondents. The responses are collected from 102 respondents.

The various statistical tools like Chi square, Anova, Paired sample t test and Cluster analysis were used in this study. The finding of the study states the effectiveness of training, various methods used in the organization, duration of conduction of training programs. Thus the study concludes that all the training methods and development programs of company are highly effective and beneficial to the employees in giving their best contribution to their personal growth and development.

5.3 CONCLUSION

WHEELS INDIA LIMITED has been performing its functioning even in a competitive environment, this has been providing number of facilitates. So that increases the morale of the employees. We all know that training and development programs are important for an organization to develop the employee. Training aims at continued self – development of the employees. Employees are expected to develop themselves continuously in an organization This study was a learning experience for me and I came to know about the training methods in WHEELS INDIA LIMITED, was positive in response but still more training method is needed in WHEELS INDIA LIMITED so that the employees are motivated on time and should know their strength and weakness so that they can work on it and improve their knowledge and skills for the betterment of their organization.

In the last but not the least I conclude that all the training methods and development programs of company are highly effective and beneficial to the employees in giving their best contribution to their personal growth and development. When the employees in an organization are developed from time to time with all updated knowledge, then WHEELS INDIA LIMITED will definitely grow to a greater height as well meet their objective.



**A STUDY ON EMPLOYEE PAYROLL
MANAGEMENT SYSTEM
AT
ORRIL ENERGY SERVICES PRIVATE LIMITED**

**Project Report submitted in partial fulfillment of the requirement for the
award of the degree of MASTER OF BUSINESS ADMINISTRATION**

ANNA UNIVERSITY

Submitted By

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112721631035

Under guidance of

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Associate Professor

Department of Management Studies



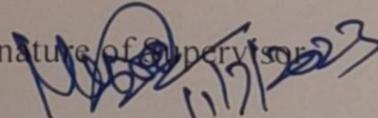
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JULY 2023

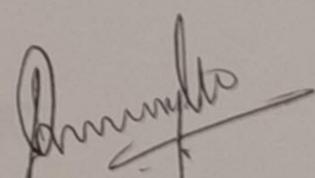
BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON EMPLOYEE PAYROLL MANAGEMENT SYSTEM AT ORRIL ENERGY SERVICES PRIVATE LIMITED" is the bonafide Work of P.KIRAN RAJ (REG No.112721631035) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Signature of Supervisor


Dr. R. MURALI

Associate Professor

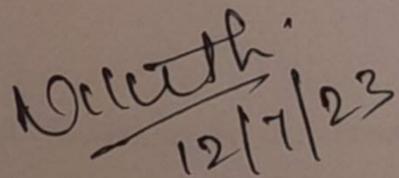

Signature of the HOD

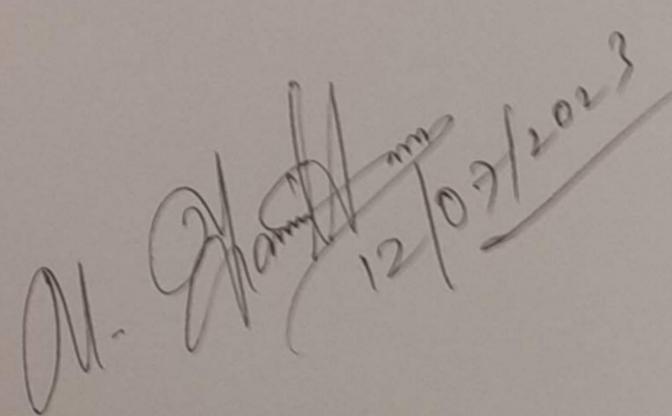
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Head of the Dept.
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Submitted for the Viva-Voice examination held on Center 12/07/2023


Signature of the Internal Examiner


Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in Orril Energy Services Private Limited, Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

Payroll Management System" is designed to make the existing manual system automatic with the help of computerized equipment and full-edged computer software, fulfilling their requirements, so that their valuable data and information can be stored for a longer period with easy access and manipulation of the same. The required software is easily available and easy to work with. This web application can maintain and view computerized records without getting redundant entries. The project describes how to manage user data for good performance and provide better services for the client.

The study carried out was based on descriptive data type.

- Sample size of 150 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Simple Average, chi-Square, and Run Test
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the Employee payroll Management **SYSTEM ORRIL ENERGY SERVICES PRIVATE LIMITED** This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

5.3 CONCLUSION

The study had confirmed that the company is having a good Software System.

From this study, it is found that majority of the workers were satisfied with Software used.

To make the software system more efficient and excellent, the company should give importance to the clients and create awareness among employees, and it shall consider some of the ways and means suggested by the employees like addition of parameters such as short cut for calculation PF, ESI, TAX, Etc. Dependability and conducting regular training programs on software usage.

I hope that the suggestions given in the report may be implemented in future course for the benefit of the employees and the company.

The company should conduct a similar type of research at regular intervals to know the changing software's and to know about the latest technology like Baan software etc.



**A STUDY ON IMPACT OF SHE POLICY ON SATISFACTION
OF EMPLOYEES WITH REFERENCE TO OHM ENERGY
MANAGEMENT SYSTEM PVT LTD**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

**OF
ANNA UNIVERSITY**

Submitted By

Ms. LAVANYA K

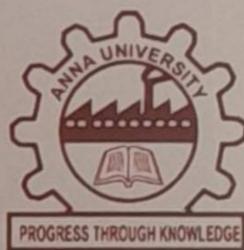
(Reg. No: 112721631036)

Under the guidance of

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July 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON IMPACT OF SHE POLICY ON SATISFACTION OF EMPLOYEES WITH REFERENCE TO OHM ENERGY MANAGEMENT SYSTEM PVT LTD" is the bonafide work of **K LAVANYA (REG NO.112721631036)** is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Nishanthi M
11/7/23

Signature of Supervisor

Mrs. NISHANTHI M

Assistant Professor

Dr. C. Evangeline

Signature of the HOD

DR.C.EVANGELINE

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Submitted for the Viva-Voce examination held on 12/07/2023

Nishanthi M
12/7/23

Signature of the Internal Examiner

N. S. Srinivasan
12/07/2023

Signature of External Examiner

ABSTRACT

This is a research conducted on SHE Policy (Safety, Health and Environment) that are followed at OHM ENERGY MANAGEMENT SYSTEM PVT LTD which is basically a manufacturing company

In today's corporate world Environment of the employees, Health and Safety of the employees are very much important and it also benefits the company and increases the productivity. Factories Act 1948 gives detailed information with regard to Employees Health, Safety and Environmental measures that a Factory should follow.

For a company to be successful, employee's satisfaction towards SHE are the key aspects. The satisfaction among employees depicts whether they are happy with the current policies followed by the company. The success of any manufacturing company will be based on the workers, employees will be considered as an asset to the organization. Any slight damage caused to the employee within the premises will lead to major effects.

This topic was chosen because, as it is a manufacturing company, the chances of accidents are more. Even a small negligence may lead to high impacts and dangerous consequences.

The study carried out was based on descriptive research. The Sampling Design conducted for my project is Simple Random sampling. The questionnaire was well structured in order to extract the required information from the respondents. The various statistical tools like Chi square, Anova, factor analysis and cluster were used in this study. The responses are collected from 81 respondents.

From this survey, it was understood that very few accidents are met in the company premises and almost all employees are aware of the SHE Policy that the company is following. As per the overall response of the employees, they are very much satisfied with the policies and practices followed by Ohm Energy Management System Pvt Ltd in order to protect their employees and safeguard them.

5.3 CONCLUSION

From the study, it is revealed that the safety, health and environmental policy adopted in OHM Energy Management System Pvt Ltd are provided to the workers according to the provision of the factories act. It reveals that the awareness of the workers about safety, health and environment in the workplace is adequate. Also repeated accidents like finger injuries, electric shocks are occurred in the workplace. Suitable ideas were suggested to avoid those accidents and to improve the safety, health and environment measures. The role of management in implementing the safety, health and environment in the organization is very effective. Most of the workers were satisfied with the SHE Policy adopted in the company. If the company implements effective disciplinary procedure; it will help the company to go with their policies and also to maintain SHE Policy in the organization.



**A STUDY ON EMPLOYEE ENGAGEMENT AND RECOGNITION AT
L&T CONSTRUCTION**

Project Report submitted in partial fulfillment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION of

ANNA UNIVERSITY

Submitted By

A.MADHUSUDHANAN

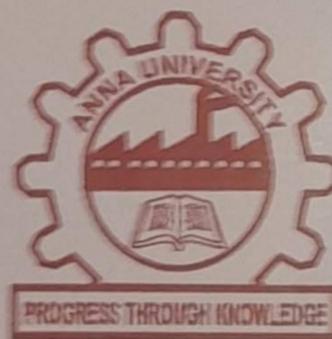
112721631038

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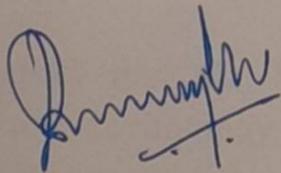


**ST. PETER'S COLLEGE OF ENGINEERING AND
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JULY - 2023

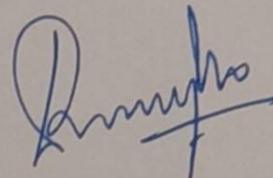
BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON EMPLOYEE ENGAGEMENT AND RECOGNITION AT L&T CONSTRUCTION" is the bonafide work of **A.MADHUSUDHANAN (REG No.112721631038)** is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



Signature of Supervisor

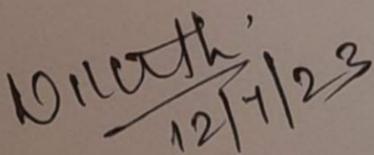
Dr.C. EVANGELINE



Signature of the HOD

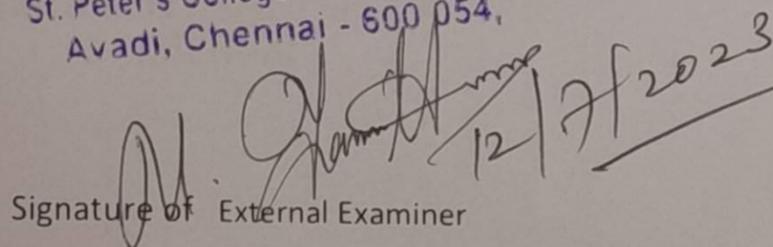
DR. C. EVANGELINE

Submitted for the Viva-Voce examination held on **12/7/2023**



Signature of the Internal Examiner

Head of the Dept.
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Avadi, Chennai - 600 054.



Signature of External Examiner

ABSTRACT

This study aims to investigate the relationship between employee engagement, recognition programs, and organizational performance. The research will explore various dimensions of employee engagement and the effectiveness of recognition initiatives in improving employee satisfaction, motivation, productivity, and overall organizational outcomes. A comparative analysis will be conducted to assess the impact of different types of recognition programs on employee engagement levels and their subsequent influence on key performance indicators. The findings of this study will provide valuable insights for organizations seeking to enhance employee engagement and optimize their recognition strategies to drive improved performance.

vels. Assess the impact of employee well-being initiatives, flexible work arrangements, and supportive policies on engagement and recognition outcomes.

CONCLUSION

The findings of the study confirm that employee engagement plays a crucial role in driving organizational success. Higher levels of engagement are associated with increased employee satisfaction, motivation, and productivity. Engaged employees are more likely to exhibit proactive behaviors, contribute innovative ideas, and go the extra mile to achieve organizational goals. Moreover, employee engagement has been found to positively influence important performance indicators such as reduced turnover rates, improved customer satisfaction, and enhanced overall organizational performance.

In conclusion, this study underscores the significance of employee engagement and recognition in driving organizational performance. It emphasizes the need for organizations to prioritize and invest in strategies that promote employee engagement and implement effective recognition programs. By doing so, organizations can cultivate a motivated and committed workforce, leading to enhanced productivity, employee satisfaction, and overall organizational success.



**A STUDY ON ORGANIZATIONAL CHANGES IN ACETECH HEAVY
FAB PRIVATE LIMITED**

A PROJECT REPORT

Submitted in partial fulfillment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

Of

ANNA UNIVERSITY

Submitted By

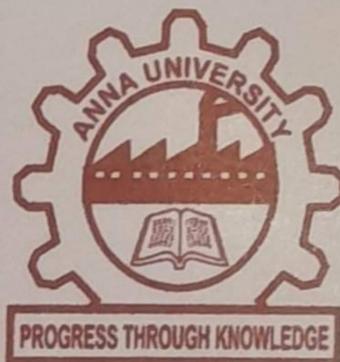
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112721631039

Under guidance of

Mrs. M. Nishanthi, Assistant Professor

Department of Management Studies



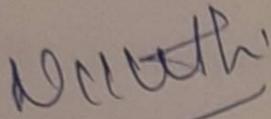
**ST.PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGYAVADI,
CHENNAI-600054.**

JULY 2023

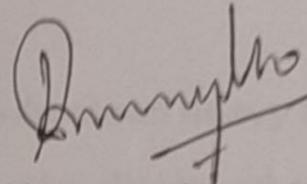
ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY
ANNA UNIVERSITY
DEPARTMENT OF MANAGEMENT STUDIES

BONAFIDE CERTIFICATE

This to certify that the project work entitled "A STUDY ON ORGANIZATIONAL CHANGES AND DEVELOPMENT IN ACETECH HEAVY FAB PRIVATE Limited a bonafide work done by MAHA LAKSHMI V [REGISTER NO:112721631039] in partial fulfillment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2022 -2023



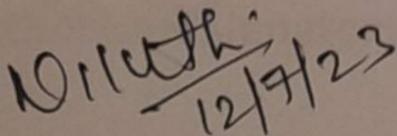
Signature of the Supervision
Mrs. M. NISHANTHI
Assistant Professor



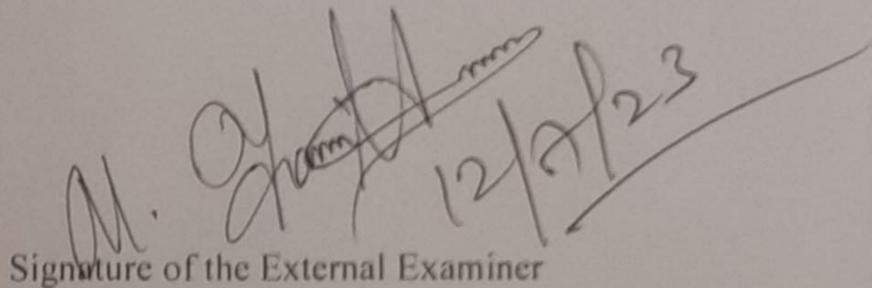
Signature of the HOD
Dr. C.EVANGELINE
Associate Professor & HOD

Head of the Dept. 
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Ayadi, Chennai - 600 054.

Submitted for the Viva-Voce Examination held on 12/7/23



Signature of the Internal Examiner



Signature of the External Examiner

ABSTRACT

Organizational change is an essential process that *organizations undergo to adapt, improve, and remain competitive in a dynamic and evolving business environment. This abstract provides an overview of the key concepts, drivers, challenges, and best practices associated with organizational changes.*

The abstract begins by defining *organizational change as the planned and structured alterations to an organization's structure, processes, culture, or strategies. It highlights the different types of organizational change, such as strategic, structural, process, technological, and cultural changes, each serving distinct purposes in driving organizational growth and success.*

The abstract further explores the drivers behind *organizational change, including external factors like market conditions, competition, and technological advancements, as well as internal factors such as inefficiencies, poor performance, or the need to support growth initiatives.*

Several well-known models and approaches to *managing organizational change are discussed, including Levin's Three-Step Model, Katter's Eight-Step Model, and the McKinsey 7-S Model. These models provide frameworks for understanding the change process and offer guidance on effective change management practices.*

The abstract highlights the importance of *change management in successful organizational change initiatives. It emphasizes the need for strategic planning, stakeholder engagement, effective communication, training and development, and addressing resistance to change. The impact of organizational change on employees, teams, and the overall organization is also acknowledged, as well as the common challenges that may arise during the change process.*

To navigate the complexities of *organizational change, best practices are recommended, such as creating a clear change vision, involving employees in the change process, providing adequate support and training, and continuously monitoring and evaluating the progress and impact of the changes.*

In conclusion, this abstract provides a *comprehensive overview of organizational changes, covering its definition, drivers, models, change management practices, and best practices. It serves as a foundation for further exploration of this crucial aspect of organizational development and adaptation in today's dynamic business landscape.*

5.3 CONCLUSION

At the end of summer internship training at Acetech heavy fab Private Limited company, I'm very satisfied that I have learnt a lot of things about the administration of the organization and I had also got a valuable speech from the experienced HR manager for career development. This internship in Portea Health Vista India Private Limited company is the stepping stone for my career development.



**A STUDY ON NON-PERFORMING ASSETS WITH
REFERENCE TO REPCO BANK REDHILLS
BRANCH**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

**OF
ANNA UNIVERSITY**

Submitted By

Ms. MALAVIKA S

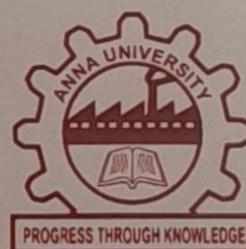
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Under the guidance of

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July 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON NON-PERFORMING ASSETS WITH REFERENCE TO REPCO BANK REDHILLS BRANCH" is the bonafide work of **S MALAVIKA (REG NO.112721631040)** is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Nishanthi
11/7/23

Signature of Supervisor

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Assistant Professor

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Signature of the HOD

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Head of the Dept.
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Submitted for the Viva-Voce examination held on 12/7/23

Nishanthi
12/7/23

Signature of the Internal Examiner

M. S. Ganesh
12/8/23

Signature of External Examiner

ABSTRACT

The Repatriates Cooperative Finance and Development Bank Ltd., (REPCO BANK) was registered on 19.11.1969 as a Cooperative Society under the relevant provisions of Madras Cooperative Societies Act, 1961 with Jurisdiction over the State of Tamilnadu, Andhra Pradesh, Karnataka, Kerala and Union Territory of Puducherry for the purpose of promoting the rehabilitation activities for repatriates from neighbouring countries mainly from Sri Lanka and Burma.

A study about the impact of Non-performing of assets where the study is conducted in Repco bank Redhills branch. Which has risen in its level of NPA over the years in the report the reason for the increase is observed and measured to control the NPA is given in the suggestion

NPA play important role in profitability of bank which is very necessary for the bank to understand the need and can control the level of NPA and also helps to know the needs to control it.

This study will give clear picture of NPA and discloses the needs objectives to study about NPA. NPA is studied by using bar diagram is used which helps to understand the degree and relation between the profits and gross NPA along with the levels of profits which helps to understand easily even for layman.

5.3 CONCLUSION:

Non-Performing Assets (NPAs) pose significant challenges for banks. The issue regarding nonperforming assets have been a major issue for banking sector in India. Managing NPAs is crucial for maintaining financial stability, profitability, and overall asset quality.

Over the range in the undertake usually NPA's have more impact in the evolution in the action of all monetary foundation effecting their benefits in the report, it finally affect their benefit's however, it can been seen in this Bank also it try-out its maximum to decline its NPA's and also taking a good precautions towards its reasons also.

Addressing NPAs requires a comprehensive and proactive approach that includes early detection, recovery efforts, risk mitigation, and continuous improvement in credit assessment and monitoring processes. By implementing appropriate strategies and best practices, banks can minimize the impact of NPAs, improve asset quality, and ensure the long-term sustainability of their operations.

I hereby conclude that the analysis of the facts and figures that the financial performance of the REPCO bank may be considered to be little satisfactory with the percentage based on the charts. If REPCO address NPAs efficiently, the bank can safeguard their financial health, maintain customer trust, and contribute to the overall stability and growth in the upcoming years.



**A STUDY ON CAPITAL BUDGETING AT TEXCEL
ENGINEERING PRIVATE LIMITED**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

Of

ANNA UNIVERSITY

Submitted By

Mr. S. MELVIN

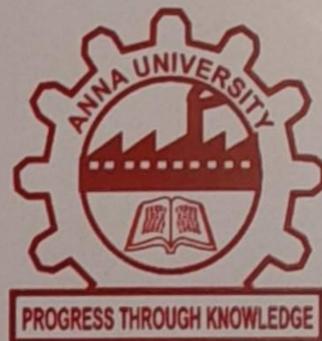
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Assistant Professor

Department of Management Studies



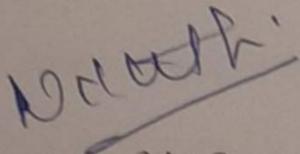
ST.PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY

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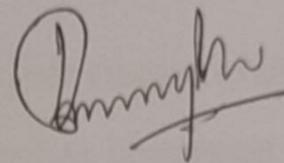
JULY 2023

BONAFIDE CERTIFICATE

This to certify that the project work entitled "A STUDY ON CAPITAL BUDGETING IN TEXCEL ENGINEERING PRIVATE LIMITED" is a bonafide work done by S.MELVIN [REGISTER NO: 112721631041] in partial fulfilment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2022 – 2023.



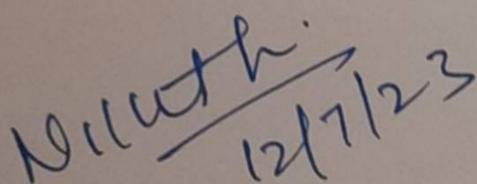
Signature of the Supervision
Mrs. M. NISHANTHI
Assistant Professor



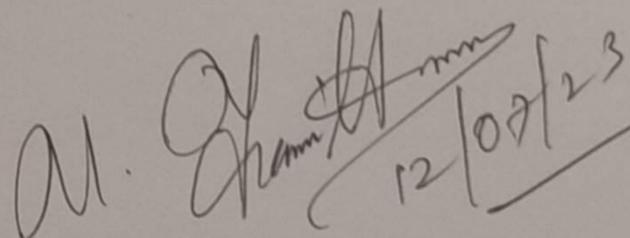
Signature of the HOD
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Head of the Department
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Avadi, Chennai - 600 054.

Submitted for the Viva-Voce Examination held on 12/7/23



Signature of the Internal Examiner



Signature of the External Examiner

ABSTRACT

The key function of the financial management is the selection of the most profitable assortment of capital investment and it is the most important area of decision making of the financial manger because any action taken by the manger in this area affects the working and the profitability of the firm for many years to come.

The objective of the research is to study on capital budgeting through which to stress the importance of capital budgeting in an organization and to analyze the capital budgeting process to be adopted by the company in order to take better investment decisions for various business projects.

Further, it caters information about cash inflows and outflows of various years. Thus the comparison provides clear idea about investments and return on the same which can be helpful for the years to come.

The analyses have been done by the data collected from income and expenditure statements and separate investment report. Capital budgeting techniques like Net Present Value method, Rate of Return method and Payback Period method are used to analyze the collected data.

5.3 CONCLUSION

Through this study it is very clear that capital budgeting essentially involves evaluation of the worth of capital investment proposals based on estimates of cash inflows and outflows. The study emphasizes that efficient allocation of capital is the most important finance function in the modern times. Thus, capital budgeting or investment decisions are of considerable importance to the firm, since they tend to determine its value by influencing its growth, profitability and risk. The analysis of payback period and Average Rate of Returns conclude that management should take efforts to perform the capital budget in efficient manner.

DIRECTION OF FUTURE ENHANCEMENTS

Though the study has analyzed the important methods like Payback period method, Net present value method and Rate of turn method the management should keep considering the technology changes and market conditions in order to ensure the effectiveness of accounts.



A STUDY ON EFFECTIVENESS OF RECRUITMENT

AT

ALLSET BUSINESS SOLUTIONS

Project Report submitted in partial fulfillment of the requirement for the
award of the degree of MASTER OF BUSINESS ADMINISTRATION of

ANNA UNIVERSITY

Submitted By

R. MOHAN

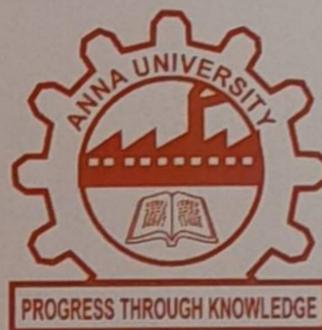
112721631042

Under guidance of

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Assistant Professor

Department of Management Studies

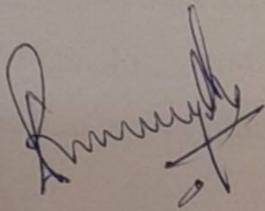


**ST. PETER'S COLLEGE OF ENGINEERING AND
TECHNOLOGYAVADI, CHENNAI-600054.**

JULY 2023

BONAFIDE CERTIFICATE

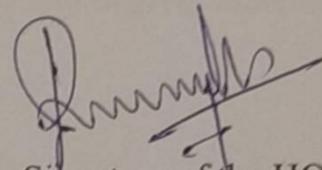
This is to certify that the Project report titled, "A STUDY EFFECTIVENESS OF RECRUITMENT AT ALLSET BUSINESS SOLUTIONS PVT LTD" is the bonafide work of **R. MOHAN (REG No.112721631042)** is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



Signature of Supervisor

Dr.C. EVANGELINE

Assistant Professor



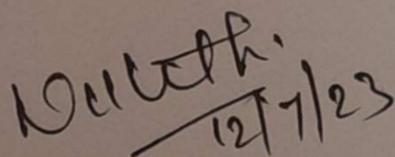
Signature of the HOD

Dr.C. EVANGELINE

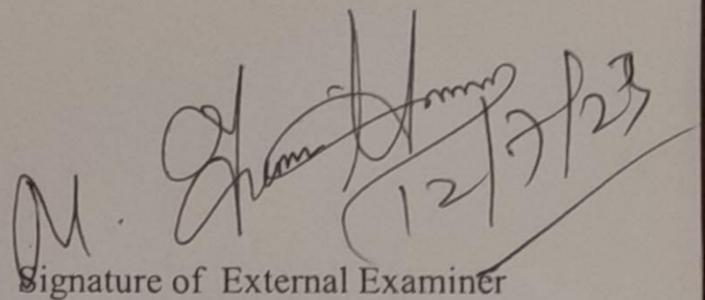
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Submitted for the Viva-Voce examination held on 12/07/2023



Signature of the Internal Examiner



Signature of External Examiner

ABSTRACT

The purpose of this study was to explore current techniques used by recruiters to source candidates for filling the vacancies. Qualitative method was used in this study. The grounded theory methodology employed an open-ended questionnaire to collect the data. In all, considerations in recruiting participants for qualitative research, strategies to facilitate recruitment, and suggest guidelines for reporting of recruitment efforts in qualitative research. I identify characteristics of the recruiter, institutional and community gate keeping, understanding participants, behaviors and difference's and determining the participant sample as four key considerations applicable to qualitative research and in conclusion, this project purposes how the different techniques of sourcing might help in designing improved research and better educational usage of the concepts.

KEYWORDS: Recruiter, recruitment, gate keeping, grounded theory, sourcing, qualitative.

CHAPTER-6

CONCLUSION

The study was based on the recruitment practices but there is a scope to study other HR practices and overall organizational study not only in ALL SET BUSINESS SOLUTION but also considering the remaining manufacturing and service industries. Researchers may also find the linkage between the different HR practices with the recruitment and selection practices like organization performance, employee satisfaction etc. Researchers' may also find the online recruitment sources followed in the organizations and also the online screening of employees.

The focus of recruitment and selection is to match the capabilities of prospective candidates against the demands and rewards inherent in a given job. For this reason, top performing companies devote considerable resources and energy to creating high quality selection systems. Recruitment and selection process are important practices for human resource management, and are crucial in affecting organizational success. The quality of new recruits depends upon an organization's recruitment practices, and that the relative effectiveness of the selection phase is inherently dependent upon the caliber of candidates attracted.

The study was conducted among the employees of The ALL SET BUSINESS SOLUTION covering 50 respondents. The data was collected by means of questionnaire and the data was classified and analyzed carefully by all means. From the analysis, it has been found that the most of the employees in the company were satisfied but changes are required according to the changing scenario of recruitment process that has a great impact on working of the company as a fresh blood, new idea enters in the company. Selection process is also good and the company's recruitment department is doing well in placing the candidates and filling the job vacancies for all levels of positions. Some of the suggestions were mentioned to enhance the organizational policies, strategies, procedures and process.



A STUDY ON TOOLS AND TECHNIQUES OF COST ACCOUNTING AND RATIO ANALYSIS IN TUBE PRODUCTS OF INDIA, THI, MURUGAPPA GROUPS, AVADI.

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

OF
ANNA UNIVERSITY

Submitted By

Mr. NAVEEN S
(Reg. No: 112721631044)

Under the guidance
Of

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Assistant Professor

Department of Management Studies



ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY

AVADI, CHENNAI-600054.

July, 2023

ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY

ANNA UNIVERSITY

DEPARTMENT OF MANAGEMENT STUDIES

BONAFIDE CERTIFICATE

This to certify that the project work entitled "A STUDY ON TOOLS AND TECHNIQUES OF COST ACCOUNTING AND RATIO ANALYSIS IN TUBE PRODUCTS OF INDIA, TII" is a bonafide work done by **NAVEEN S (REGISTER No: 112721631044)** in partial fulfilment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2022 – 2023


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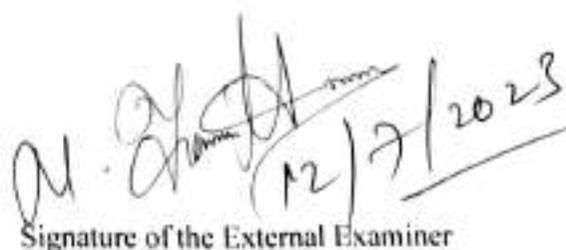
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Submitted for the Viva-Voce Examination held on 12-07-2023

Signature of the Internal Examiner


Signature of the External Examiner

ABSTRACT

Tools and techniques used in cost accounting include job costing, process costing, standard costing, activity-based costing (ABC), and marginal costing. Job costing involves tracking costs for individual jobs or projects, while process costing is used in industries with continuous production processes. Standard costing sets predetermined cost standards for products or services, which are then compared to actual costs. ABC assigns costs to activities based on their consumption by products or services, providing a more accurate cost allocation. Marginal costing focuses on the behavior of costs and helps in determining the contribution margin and break-even point.

Ratio analysis, on the other hand, is a technique used to evaluate a company's financial performance by examining relationships between different financial figures. It involves calculating and interpreting various financial ratios, such as profitability ratios, liquidity ratios, solvency ratios, and efficiency ratios. Profitability ratios, such as return on investment (ROI) and gross profit margin, assess the company's ability to generate profits. Liquidity ratios, like the current ratio and quick ratio, measure the company's short-term liquidity and ability to meet its obligations. Solvency ratios, such as the debt-to-equity ratio, evaluate the company's long-term financial stability. Efficiency ratios, such as inventory turnover and asset turnover, assess how effectively the company utilizes its assets.

CONCLUSION

Cost accounting and Ratio analysis used in TUBE PRODUCTS OF INDIA for the following purpose-work in progress, finished goods, inventories, and day to day cash requirements. The TUBE PRODUCTS keeps certain funds which is automatically available to finance the current assets requirement. The various information regarding "Ratio Analysis" and "Cost Accounting" such as classification, determinants, sources have been discussed relating to Tube Products and Tube Investments, Ratio analysis has been carried out using financial information for last five years accounting years i.e. from 2018 to 2022 Ratios like ratio analysis Current ratio, Quick ratio, Inventory Turnover ratio, Working capital ratio, Profitability ratio, solvency ratio, have also analyzed. A statement of changes in ratio analysis has also analyzed.



**A STUDY ON ORGANIZATIONAL CULTURE WITH
REFERENCE TO TEXCEL ENGINEERING PRIVATE
LIMITED**

A project report Submitted in partial fulfilment of the requirement for the award of the
degree of

MASTER OF BUSINESS ADMINISTRATION

Of

ANNA UNIVERSITY

Submitted By

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Department of Management Studies



**ST.PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY
AVADI, CHENNAI-600054.**

JULY 2023

BONAFIDE CERTIFICATE

This to certify that the project work entitled "A STUDY ON ORGANIZATIONAL CULTURE IN TEXCEL ENGINEERING PRIVATE LIMITED" is a bonafide work done by S.H. NAZREEN FATHIMA [REGISTER NO: 112721631045] in partial fulfilment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2022 - 2023.



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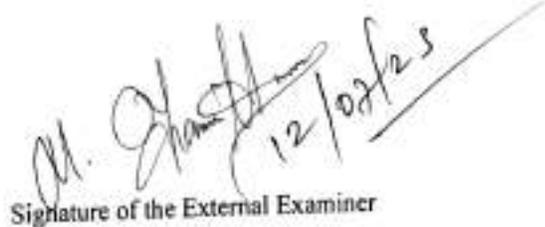
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Submitted for the Viva-Voce Examination held on 12-07-2023

W.H.uthi
12/7/23

Signature of the Internal Examiner



M. Shanmuga
12/07/23

Signature of the External Examiner

DECLARATION

I, S. H. NAZREEN FATHIMA, 11-year MBA student of ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY, Avadi, Chennai, hereby declare that the Project titled " A STUDY ON ORGANIZATIONAL CULTURE IN TEXCEL ENGINEERING PRIVATE LIMITED" in partial fulfilment of requirement of Anna University of Chennai for the award of the degree in Master of Business Administration is my original work and that is has formed the basis for the award of any degree, associate ship, fellowship or any other similar titles.

DATE: 05/07/2023

PLACE: CHENNAI

S.H. Nazreen. Fathima.
(S.H. NAZREEN FATHIMA)

5.3 CONCLUSION

The perceptions of the TEXCEL ENGINEERING PVT LTD about the organization culture at Chennai Tamil Nadu were assessed.

It appears that the organization has a single strong culture, which is perceived favorably by the TEXCEL ENGINEERING PVT LTD.

The attitudes of the TEXCEL ENGINEERING PVT LTD towards their jobs as well as towards the organization are also positive.

The respondents' attitudes towards their jobs are positive, with a majority of the respondents agreeing that there has been an improvement in their attitudes in the recent past.

Among the reasons for this positive improvement are the following: the work has become more interesting, their jobs/roles are now clearer than before, they now have the knowledge / skills to do their jobs properly, and they feel they are spending their time more usefully than before.

To a lesser degree, the fact that they now receive appreciation for their work has also helped to improve their positive attitude. With regard to the organization, a vast majority of the respondents have a strong sense of belonging, and they take pride in working for the organization. Most of them feel comfortable working here.



**A STUDY ON EMPLOYEE PERCEPTION TOWARDS WITH
REFERENCETO COMPENSATION WITH REFERENCE TO**

COROMANDEL ENGINEERING PVT LTD

A PROJECT REPORT

Submitted in partial fulfillment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

OF

ANNA UNIVERSITY

Submitted By

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Head of the Department

Department of Management Studies



ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY

AVADI, CHENNAI - 600054.

June 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON EMPLOYEE PERCEPTION TOWARDS WITH REFERENCE TO COMPENSATION TO COROMANDEL ENGINEERING PVT LTD" is the bonafide work of P.A.NUSRATH MUBEEN (REG NO.112721631046) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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D.R.C.EVANGELINE

Associate Professor



Signature of the HOD

D.R.C.EVANGELINE

Associate Professor & HOD

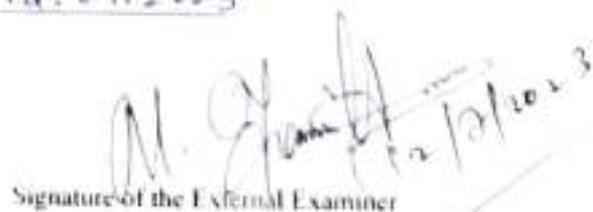
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Submitted for the Viva Voice Examination held On 12.07.2023



Signature of the Internal Examiner



Signature of the External Examiner

ABSTRACT

This is a research conducted on(A Study on Employee Perception towards with reference to compensation) that are followed at Coromandel Engineering Pvt Ltd which is basically a manufacturing company

In today's corporate world Environment of the employees, Health of the employees and Safety of the employees are very much important and it also benefits the company and increases the productivity. Factories Act 1948 gives detailed information with regard to Employees Health,Safety and Environmental measures that a Factory should follow.

For a company to be successful, employee's satisfaction towards Compensation are the key aspects. The satisfaction among employees depicts whether they are happy with the current policies followed by the company. The success of any manufacturing company will be based on the workers, employees will be considered as an asset to the organization. Any slight damage caused to the employee within the premises will lead to major effects.

This topic was chosen because, as it is a manufacturing company, the chances of accidents are more. Even a small negligence may lead to high impacts and dangerous consequences

The study carried out was based on descriptive research. The Sampling Design conducted for my project is Simple Random sampling. The questionnaire was well structured in order to extract the required information from the respondents. The various statistical tools like Chi square, Anova were used in this study. The responses are collected from 81 respondents.

From this survey, it was understood that very few accidents are met in the company premises and almost all employees are aware of the Compensation Policy that the company is following. As per the overall response of the employees, they are very much satisfied with policies and practices followed by Coromandel Engineering Pvt Ltd in order to protect their employees and safeguard them.

5.3 CONCLUSIONS

Many employees believe that the current compensation and benefit is not adequate and let them to cope with ongoing cost of life. The respondents claim that the compensation and benefit package should be reviewed and designed taking into account factors in the external environment including the market condition, nature of the jobs, other organizations, government regulations and the internal environments for the values of the job grades through job analysis. The current compensation and benefit packages are not periodically updated and evaluated for effectiveness. Furthermore, the existing benefits are not well communicated to employees.

To attain its objectives and motivate employees towards better performance, attract and retain competent employees the current compensation and benefit package of government higher education institutions should be revise and improved. The focus of revision should also include the benefit packages not only the base pay. Furthermore, Differential and negotiable pay for professions based on market demand. Separate treatment of regular and part time pay for tax purpose and better position and house allowance. The benefit package should also include insurance coverage particularly health insurance both for the staff and their family

The result of the study shows that employees perceive that the compensation and benefit packages being offered are not linked to organizational objectives. It is believed that the greatest deficiency of most compensation and benefit systems today is their lack of congruency with organizations strategic goals and objectives. Therefore, the institutions under study should link their compensation and benefits to their organizational goals and objectives. The objectives of compensation and benefit can be achieved if employees have clear understanding of employer's contribution they can exert better effort towards the achievement of the organization objectives



A STUDY ON UPWARD COMMUNICATION PROCEDURE

AMONG CONTRACT LABOUR

AT

TUBE PRODUCTS OF INDIA PVT LTD

Project Report submitted in partial fulfillment of the award of the degree

MASTER OF BUSINESS ADMINISTRATION OF

ANNA UNIVERSITY

Submitted by

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July 2023

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This is to certify that the Project report titled, "A STUDY ON UPWARD COMMUNICATION PROCEDURES AMONG CONTRACT LABOUR AT TUBE PRODUCTS OF INDIA PVT LTD" is the bonafide work of **PADMA PRIYA. E (REG No.112721631047)** in partial fulfilment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2022 – 2023.



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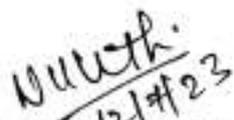
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Submitted for the Viva-Voce Examination held on 12-07-2023



Signature of the Internal Examiner



Signature of the External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in TUBE PRODUCTUS OF INDIA PVT LTD. Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the realtime problems happening in the company and the way to resolve the issue.

The Upward communication among contract labour had implementation of a multi-faceted approach that combines technological solutions, management practices, and organizational culture. The proposed strategies include the use of digital platforms for communication, fostering open dialogue through regular meetings or forums, promoting a supportive and inclusive work environment, and establishing transparent feedback mechanisms.

The study carried out was based on descriptive data type.

- Sample size of 130 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Chi – square and Anova.
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the Upward Communication Procedures Among Contract Labour At Tube Products Of India Pvt Ltd. This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

5.3 CONCLUSION

The study had confirmed that the company is having a good communication level towards contract labour. From this study, it is found that majority of the workers were satisfied with communication procedure in the organization.

To make the level of communication in more efficient and excellent, the company should give importance to the employee's suggestion related to the improvement in work-related matters.

The manager (or) supervisor should be conduct more regular training & development and meetings to contract labour for clarification their queiries and doubts this ways can leads the project or work in a proper way.



**A STUDY ON IMPACT OF 3R STRATEGIES
FOR EMPLOYEE RETENTION**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

OF

ANNA UNIVERSITY

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July, 2023

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M. Shanmuga
12/7/2023

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ABSTRACT

The Research is entitled the study deals with **A STUDY ON IMPACT OF 3R STRATEGIES FOR RETAINING EMPLOYEES**. The main objective of this study is to analyze and evaluate their effectiveness in retaining employees by using 3R strategies.

3R strategies are Recognition, Reward, Retention and respect. This research study had primary data collected from 103 employees of the organization through a purposive and simple random method using a Closed-ended, properly designed, and Self-administered survey questionnaire consisting of 27 questions on employees' demography, 3R strategies, and suggestions. The data collected was tabulated, and descriptive understanding was carried out. It was classified. Quantitative analysis was done using statistical software (SPSS) using, Percentage analysis, Chi-square test One way ANOVA, T-test, Correlation analysis to observe the relationship between 3R strategies and employee's response.

A thorough analysis has also been done on the responses given by the respondents based upon which conclusions have been drawn. The study reveals that the company should concentrate with the employee's career developments. Practical/Theoretical implications: This study will help the organization to understand the causes of employee and organization performance problems, assess the effectiveness of motivational practices, address the lack of growth opportunities and create a better retention for an employee. Ingenuity/Importance: To identifying 3R strategies for retaining employees is for maintain a productive and successful organization

5.5 CONCLUSION

From the overall study it is concluded that all the major retention strategies considered in the study viz., support strategies, compensation strategies, are adopted in the organization. But career growth and development should be provided to the employees because most of the respondents are dissatisfied with promotion opportunities and the company wants to improve the recognition program. Supervisors have to communicate at regular intervals (weekly once) for solving employee complaints, problems and to manage stress.



**A STUDY ON EMPLOYEE PAYROLL
MANAGEMENT SYSTEM
AT
KOTAK LIFE**

**Project Report submitted in partial fulfillment of the requirement for the
award of the degree of MASTER OF BUSINESS ADMINISTRATION**

ANNA UNIVERSITY

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JULY 2023

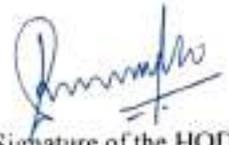
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This is to certify that the Project report titled, "A STUDY ON EMPLOYEE PAYROLL MANAGEMENT SYSTEM AT KOTAK LIFE" is the bonafied work of **M.PRAVEEN (REG No.112721631049)** is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.


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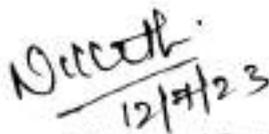
Associate Professor


Signature of the HOD

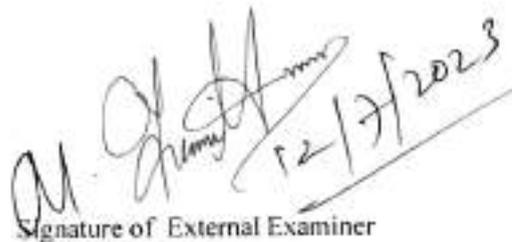
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Submitted for the Viva-Voice examination held on Center 12-07-2023


Signature of the Internal Examiner

Signature of the Internal Examiner


Signature of External Examiner

Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in KOTAK LIFE, Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

Payroll Management System is designed to make the existing manual system automatic with the help of computerized equipment and full-edged computer software, fulfilling their requirements, so that their valuable data and information can be stored for a longer period with easy access and manipulation of the same. The required software is easily available and easy to work with. This web application can maintain and view computerized records without getting redundant entries. The project describes how to manage user data for good performance and provide better services for the client.

The study carried out was based on descriptive data type.

- Sample size of 88 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Chi – square and Anova.
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the Employee payroll Management system at KOTAK LIFE. This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

5.3 CONCLUSION

The study had confirmed that the company is having a good interface level between account and H.R. department in the organization

From this study, it is found that majority of the workers were satisfied with Software Used in an organization.

To make the software system more efficient and excellent, the company should give Importance to the employee's suggestion related to improvement of software used in pay roll system and thereby makes their software more effective and adequate.

To create awareness among employees and it shall consider some of the ways and means Suggested by the employees like addition of parameters such as short cut for calculation PF, ESI, TAX etc.

Dependability and conducting regular training program on the software usage for the employees in an organization

H.R. department should be given more regulatory power to analyze the proper Functioning of the pay roll system and thereby widen up the interaction between finance and H.R. department.



**A STUDY ON RECRUITMENT AND SELECTION
PROCESS WITH REFERENCE TO KOTAK LIFE**

**Internship Report submitted in partial fulfillment of the requirement for the
award of the degree of MASTER OF BUSINESS ADMINISTRATION**

Of

ANNA UNIVERSITY

Submitted By

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Assistant Professor

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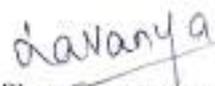


**ST.PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY
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JULY 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON HR RECRUITMENT AND SELECTION PROCESS AT KOTAK LIFE" is the bonafide work of S. RAMESH KUMAR (REG No.112720631051) is a record of original work done by his. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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Assistant Professor



Signature of the HOD

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Submitted for the Viva-Voice examination held on 12/07/2023



Signature of the Internal Examiner



Signature of External Examiner

ABSTRACT

The HR recruitment and selection process is a critical function within organizations that aims to attract, evaluate, and select the most suitable candidates for available job positions. This abstract provides an overview of the key aspects of the HR recruitment and selection process.

The importance of effective recruitment strategies and the use of diverse sourcing channels to attract a wide pool of qualified candidates. It emphasizes the significance of clear job descriptions and requirements in order to align candidate qualifications with organizational needs.

The highlights the various methods employed in the screening and evaluation process, such as resume reviews, interviews, and assessments. It discusses the value of structured interviews and behavioral-based questions in assessing candidates' skills, experiences, and cultural fit. Furthermore, the abstract stresses the importance of assessing candidates' cultural fit with the organization, ensuring alignment with values, mission, and work environment. It also emphasizes the significance of providing a positive candidate experience through clear communication, timely updates, and respectful treatment.

Finally, the concludes by emphasizing the need for continuous improvement in the recruitment and selection process, including the adoption of new technologies, data analytics, and best practices to enhance its effectiveness and efficiency. Overall, the HR recruitment and selection process is a vital function that contributes to the success of organizations by ensuring the acquisition of talented and compatible individuals who can drive organizational growth and excellence.

5.3 CONCLUSION

A company's recruitment and selection process is the best way to achieve success in the business world. Sales managers should decide on the requirements of the job and the type of person who should be able to fulfill them. If a supplementary selection aid is to be used, there should be a guidance of a psychologist if they will use the psychology test. Implementing more effective processes to recruit candidates and select the best and the brightest; will improve one's ability to meet one's organization's human resource needs. The recruitment and selection process in HR is a critical aspect of building a strong and capable workforce for any organization. It serves as the foundation for attracting, evaluating, and ultimately hiring the most suitable candidates for various positions within the company. Here are some key conclusions about the HR recruitment and selection process:



**A STUDY ON EXTERNAL CUSTOMERS SATISFACTION AND OPINION
TOWARDS PERFORMANCE AND DEVELOPMENT**

**ST. PETER'S COLLEGE OF ENGINEERING AND
TECHNOLOGY, AVADI**

**Project Report submitted in partial fulfillment of the
requirement for the award of the degree of**

MASTER OF BUSINESS ADMINISTRATION

ANNA UNIVERSITY

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JULY 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON EXTERNAL CUSTOMERS SATISFACTION AND OPINION TOWARDS PERFORMANCE AND DEVELOPMENT OF ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY "is the bonafide work of **M.A.SALMAN AFROOZ (REG No.112721631052)** is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



Signature of Supervisor

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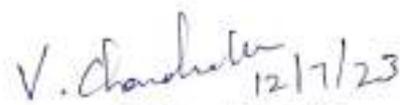
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Submitted for the Viva - Voce examination held on 12/07/23



Signature of the Internal Examiner



Signature of External Examiner

ABSTRACT

Development and performance are two crucial concepts that impact individuals, organizations, and society as a whole. They are integral to personal growth, professional success, and organizational effectiveness. Understanding the dynamics and interplay between development and performance is essential for individuals and organizations striving for continuous improvement, innovation, and achievement.

Performance refers to the execution and achievement of tasks, goals, or objectives. It reflects how effectively and efficiently individuals, teams, or organizations accomplish their intended outcomes. Performance is measured based on predetermined criteria, such as meeting targets, delivering quality work, meeting customer expectations, or achieving desired results.

St. Peter's College of Engineering and Technology was established in 2008 with a mission to emerge as an institution of excellence in the field of Technical education and to contribute to the economic prosperity of India.

PRIMARY OBJECTIVES

- A study on internal customers satisfaction and opinion towards performance and development of st. Peter's college of engineering and technology.

SECONDARY OBJECTIVES

- To identify the factors affecting St. Peter's college performance and development.
- To rectify the problems which are faced by the faculties who works in St. Peter's College.
- To compete with other leading engineering colleges
- To maintain and enhance the environment of the College.

In conclusion, the study on external customers' opinions towards the performance and development of an educational institution has provided valuable insights. Upgrade and maintain college facilities such as classrooms, libraries, laboratories, and dormitories. Ensure they are well-equipped with the latest technology, comfortable furniture, and conducive learning environments.

5.3 CONCLUSION

In conclusion, the study on external customers' opinions towards the performance and development of an educational institution has provided valuable insights. The findings from the study indicate the following key points:

Importance of External Customers:

The study highlights the significance of external customers, such as students, parents, employers, and community members, in shaping the perception of an educational institution's performance and development. Their opinions play a crucial role in determining the institution's reputation and success.

Positive Feedback:

Overall, the study reveals a positive perception of the educational institution among external customers. Many respondents expressed satisfaction with the institution's performance in areas such as quality of education, curriculum, teaching methods, and student support services. This positive feedback indicates that the institution is meeting the expectations and needs of its external customers.

Room for Improvement:

Despite the generally positive feedback, the study also identifies areas where the educational institution can improve its performance and development. Some external customers provided constructive criticism regarding aspects such as communication, infrastructure, responsiveness to feedback, and alignment with industry trends. These areas present opportunities for the institution to enhance its offerings and better meet the evolving needs of its external customers.

Importance of Continuous Development:

The study underscores the significance of continuous development for an educational institution. It emphasizes that institutions must adapt and evolve in response to changing market dynamics, technological advancements, and societal demands. This adaptive approach ensures that the institution remains relevant and competitive in the long run.

Stakeholder Engagement:

The study highlights the importance of engaging external customers as stakeholders in the educational institution's decision-making processes. By actively involving them in various initiatives, such as curriculum development, feedback mechanisms, and partnerships, the institution can foster a sense of ownership and collaboration among its external customers.

1. Enhance Communication Channels:

Improve communication channels between the institution and its external customers to ensure timely and transparent information flow. This can be achieved through regular newsletters, online portals, social media platforms, and dedicated helplines.

2. Upgrade Infrastructure:

Invest in infrastructure development to provide state-of-the-art facilities and create an optimal learning environment for students. This may include upgrading classrooms, libraries, laboratories, and recreational areas.

3. Embrace Feedback:

Establish a robust feedback mechanism to actively collect and address feedback from external customers. This can be done through surveys, suggestion boxes, focus groups, and regular meetings. Use this feedback to drive continuous improvement initiatives.

4. Stay Current with Industry Trends:

Continuously monitor and align the institution's programs and offerings with industry trends and emerging technologies. This ensures that students are equipped with relevant skills and knowledge required in the job market.

5. Foster Partnerships:

Foster partnerships with employers, industry associations, and community organizations to enhance opportunities for students' practical exposure, internships, and employment prospects. Collaborative initiatives can also help identify emerging needs and shape the institution's programs accordingly.



**A STUDY ON CONSUMERISM WITH REFERENCE TO
ROYAL ENFIELD CHENNAI**

ROYAL ENFIELD INDIA PVT LTD

**Project Report submitted in partial fulfillment of the requirement for the
award of the degree of MASTER OF BUSINESS ADMINISTRATION**

of

ANNA UNIVERSITY

Submitted By

S. SAM JEBA KUMAR

112721631053

Under guidance of

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ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY

AVADI , CHENNAI-600054.

JULY - 2023

BONAFIDE CERTIFICATE

is to certify that the Project report titled, "CONSUMERISM WITH REFERENCE TO ROYAL ENFIELD ENNAI" is the bonafide work of S.SAM JEBA KUMAR (REG No.112721631053) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or other candidate.



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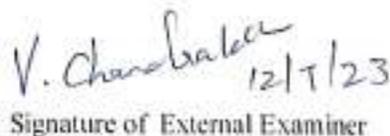
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Signature of the Internal Examiner



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Signature of External Examiner

ABSTRACT

This is a research conducted on CONSUMERISM WITH REFERENCE TO ROYAL ENFIELD, Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

Consumerism is a complex socio-economic phenomenon that has gained immense significance in contemporary society. This abstract provides an overview of consumerism, its underlying factors, impacts on individuals and society, and its potential implications for the future. Consumerism can be defined as a prevailing ideology that emphasizes the acquisition and consumption of goods and services as a means of achieving happiness, status, and fulfillment. It has evolved alongside the rapid growth of global capitalism and has become deeply embedded in the fabric of modern life. Factors such as advertising, mass production, globalization, and technological advancements have contributed to the expansion and perpetuation of consumerist culture.

The study carried out was based on descriptive research. The Sampling Design conducted for my project is Simple Random sampling. The questionnaire was well structured in order to extract the required information from the respondents. The various statistical tools like Chi square, Anova, and correlation Analysis were used in this study. The responses are collected from 154 respondents.

From This research overviews the Impact of Sales Motivation on Organizational Performance at ROYAL ENFIELD. This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

5.3 CONCLUSION

- The study has helped Royal Enfield dealers to understand whether the consumers are satisfied or not. If not, what are main reasons for dissatisfaction of customer and what are the ways of improving the perception level of customer.
- Conclude that younger generation are more interested in Royal Enfield, the buying behavior is governed predominantly by the need for Power and respect for the iconic Brand and users are mostly Males.
- Customers are easily affording the price of Royal Enfield bikes and customers are very loyal towards the brand Royal Enfield.
- Royal Enfield should concentrate on its advertising campaign to reach the customers, mileage of the Royal Enfield bikes is very economical and most of them prefer to buy their bike brand new from showroom with the spare parts available in market easily.
- Royal Enfield has an excellent perception level within the consumer for its power, pick up, comfort, safety. It is clear that Royal Enfield checks at the complaints registered by their customers on regular basis to maintain its brand value and entire Royal Enfield owner are passionate Royal Enfield fans.
- In last conclude that majority of respondents said that they are satisfied with the bike's performance, but company should focus on the reduction of the price of the bikes and investigate the improvement in mileage of bikes. The fuel consumption is also high as per some respondent's point of view. Finally, we can say that consumers in local market are not fully satisfied with the Royal Enfield bike.



**A STUDY ON INTERNAL CUSTOMERS SATISFACTION AND
OPINION TOWARDS PERFORMANCE AND DEVELOPMENT
OF ST. PETER'S COLLEGE OF ENGINEERING AND
TECHNOLOGY**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

OF

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ABSTRACT

This study aims to investigate the relationship between performance and development and explore the impact of various developmental strategies on individual and organizational outcomes. A comprehensive literature review was conducted to establish a theoretical framework for the study. The research design involved a mixed-method approach, combining quantitative surveys and qualitative interviews. A sample of participants was selected from different industries and organizational levels.

The findings of the study reveal a strong positive correlation between performance and development, indicating that individuals who actively engage in personal and professional growth initiatives exhibit higher levels of performance. Furthermore, the study identifies several key developmental strategies that contribute significantly to performance enhancement. These strategies include continuous learning opportunities, targeted skill-building programs, and supportive mentoring relationships.

The implications of this study are substantial for individuals and organizations alike. It emphasizes the significance of prioritizing and investing in developmental activities to foster high performance. Moreover, the study underscores the need for organizations to create a culture that encourages and supports employee growth and development. By implementing effective developmental strategies, organizations can enhance performance outcomes, promote employee engagement, and achieve sustainable success.

Overall, this study contributes to the existing body of knowledge on performance and development, providing valuable insights and practical implications for individuals, managers, and organizations seeking to optimize performance and foster growth in the workplace.

5.3 CONCLUSIONS

In conclusion, this study on performance and development has yielded remarkably positive results, shedding light on the crucial relationship between the two and offering valuable implications for individuals and organizations. The findings clearly demonstrate that focused efforts on personal and professional growth significantly enhance performance outcomes. Moreover, the study highlights the effectiveness of various development strategies, such as continuous learning, skill-building initiatives, and mentoring programs, in fostering both individual and organizational success. These insights provide a solid foundation for designing evidence-based interventions and strategies to optimize performance and maximize potential. Ultimately, this study contributes to the growing body of knowledge in the field of performance and development and paves the way for further advancements in this vital area.



**A STUDY OF PORTFOLIO MANAGEMENT IN MOTILAL
OSWAL FINANCE SERVICE PRIVATE LIMITED**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

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DEPARTMENT OF MANAGEMENT STUDIES

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12/7/2023

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V. Charokel
12/7/23

Signature of the External Examiner

ABSTRACT

Investing in equities requires time, knowledge and constant monitoring of the market. For those who need an expert to help to manage their investments, portfolio management service (PMS) comes as an answer.

Portfolio management services help investors to make a wise choice between alternate investments without a post trading shares. This service renders optimum returns to the investors by proper selection and continuous Shifting of portfolio from one scheme to another scheme or from one plan to other plan within the same scheme.

The project aims to study the concept "Portfolio Management". It also aims to study the investors risk and return on their funds. The objective of this study is to help notice and united investors with the expertise of professionals in Portfolio Management.

The study is based on secondary data, for analyzing the data statistical tools like Standard Deviation, Co-Variance. Correlation Coefficient and Average returns are applied on historical data for a period of five years from 2018-2023.

According to Markowitz theory we can get the advantage of diversification when (Where Std.is the security having low securities out of Two securities) Hence, it has been proved as securities having a negative Correlation is providing the maximum return and securities having lower standard deviation.

CONCLUSIONS

TCS and WIPRO:

The combination of TCS and WIPRO gives the proportion of Investment is 69.69 and 11.67 TCS and WIPRO, based on the standard deviation the standard deviation for TCS is 22.90 and for Wipro is 30.23

Hence the investor should invest their funds more in TCS when Compared to WIPRO as the risk involved in TCS is less than Wipro.

Standard deviation of WIPRO is less than that of TCS.

WELLS FARGO and INFOSYS:

The combination of WELLS FARGO and INFOSYS gives the proportion of Investment is 0.6114 and 31.788 WELLS FARGO and INFOSYS, based on the standard deviation the standard deviation for WELLS FARGO is 33.228 and for INFOSYS is 24.67

Hence the investor should invest their funds more in INFOSYS when Compared to WELLS FARGO as the risk involved in WELLSFARGO is less than INFOSYS.

Standard deviation of WELLSFARGO is less than that of INFOSYS.

MICROSOFT and INFOSYS:

The combination of MICROSOFT and INFOSYS gives the proportion of Investment is 31.788 and 37.885 MICROSOFT and INFOSYS, based on the standard deviation the standard deviation for MICROSOFT is 7.48 and for INFOSYS is 24.67

Hence the investor should invest their funds more in INFOSYS when Compared to MICROSOFT as the risk involved in INFOSYS is less than MICROSOFT.

Standard deviation of MICROSOFT is less than that of INFOSYS.



**A STUDY ON THE EMPLOYEE INVOLVEMENT
AT
COVENANT CONSULTANTS**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

OF
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July, 2023

ST. PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY
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This to certify that the project work entitled "A STUDY ON EMPLOYEE INVOLVEMANT" is a Bonafide work done by **SHARON EVANGELIN H [REGISTER NO:112721631056]** in partial fulfilment of the requirement for the award of Master of Business Administration by Anna University during the academic year 2021 – 2023



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12/7/23



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V. Chandhokee 12/7/23

Signature of the External Examiner

ABSTARCT

Employee Involvement activities is one of the major criterions to know about the success of any organization whether it is a small or big one. This project speaks about the Employee's level of commitment and involvement towards the organization to achieve the organizational goals. Employee Involvement is to involve all employees to find out how they feel about working for organization effectiveness and make improvements together for the overall success of our people and company. It is a positive attitude held by the employees towards the organization and its values.

It will be appropriate to appraise to the reader that the cardinal objective of my project is to carry out an extensive survey which will not only reinforce and magnify the awareness level of "EMPLOYEE INVOLVEMENT" in COVENANT CONSULTANTS but also help the Company to improve its overall efficacy of business. From the day on which Covenant's witnessed my presence, till date I ceaselessly yet relentlessly kept on imbibing and garnering the basics of employee Involvement etc. I as a survey person spent my considerable time in knowing about the Covenant's Employee Involvement survey previously conducted by the company and company policies, vision etc.

After being reasonably conversant with the employee's name and departments, I slowly started the task of setting the ball of employee interaction rolling. Employees' interaction was in the shape of Schedule format. I distributed the questionnaire to the different department staffs used to explain them about employee Involvement and why the survey is being conducted and the purpose behind it and started collecting them spontaneously. For the purpose of the study, 90 people have been chosen as a sample size. Data collected was tabulated & SPSS software will be used to derive conclusion.

5.3 CONCLUSION

Employee Involvement plays a pivotal role for any organization's success. It is a positive attitude held by the employees towards the organization and its values. It is rapidly gaining popularity, use and importance in the workplace and impacts organizations in many ways. COVENANT CONSULTANTS is working on all fronts right from increasing job experience by providing challenging and growing work culture, to the basic amenities and services required. Employees know what they have to do and they get excellent support from their seniors. Employees are actively involved and are ready to serve organization further. It clearly indicates that employees share a relationship of trust with the organization.



**A STUDY ON HR CLIMATE AND ITS IMPACT OF JOB
SATISFACTION OF EMPLOYEES WITH REFERENCE TO**

NIRMITI PRECISION PVT LTD

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of

MASTER OF BUSINESS ADMINISTRATION

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July 2023

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Submitted for the Viva-Voce Examination held on

12/7/23



Signature of the Internal Examiner


Signature of the External Examiner



**A STUDY ON SERVICE QUALITY IN
E-COMMERCE LOGISTICS SERVICES
AT
MC2 ELECTRONICS**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

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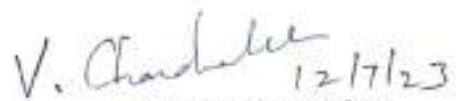
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ABSTARCT

The conventional incandescent and fluorescent lights used in Nigeria today are inefficient in power consumption and maintenance cost, while also environmentally unfriendly. This work investigated the viability of high brightness Light Emitting Diodes (LEDs) as an alternative in indoor and outdoor lighting applications, with its performance and maintenance x-rayed, to find economically sustainable methods of switching from the predominantly used fluorescent and incandescent bulbs to LEDs. The LED lighting fittings used were assembled from locally sourced materials in combination with imported but cheap discrete electronic components including LED chips. The average unit cost of locally assembling the LED lighting fittings was found to be relatively cheaper than the unit cost of the imported ready-made equivalents, all with the same performance comparatively in terms of illumination, longevity and durability

Thus the study of **A STUDY ON SERVICE QUALITY IN E-COMMERCE LOGISTICS SERVICES** was performed in **MC2 Electronics** as the manufactured led bulbs are been distributed in different types of logistics as per needs. Since the company use 3rd party logistics service to transport their products to different places through different e websites.

A structured questionnaire was issued to the general public who purchase products from online shopping and explained about the purpose and benefits of this study. The researcher employed survey techniques to collect the data. The researcher considered 85 as a sample size. The data collected from the source is exported as excel (.csv file) and interpreted in the systematic manner through Statistical Package for the Social Science (SPSS 23.0) for the statistical analysis.

5.3 CONCLUSION:

The study was conducted to understand the perception of the customer's satisfaction towards service quality of e-commerce logistics services. The reason why there were failures in the services was narrowed down influencing customer satisfaction and quality factor such as communication factor, delivery factor, packing factor, employee factor. To know the customer's perception, a questionnaire was built and circulated among the general public and a sample of 85 was obtained. It was found that, the main concerns of the customers were the packing of product, product delivery speed and quality of the product. And these factors contribute to the majority of the reason why there have been services failures in the logistics service occur. The analysis revealed that packing factor does play a very important role in the customer satisfaction.



**A STUDY ON RECRUITMENT AND SELECTION PROCESS
AT MADRAS ENGINEERING INDUSTRIES (P) LTD
A PROJECT REPORT**

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

Of

ANNA UNIVERSITY

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JULY - 2023

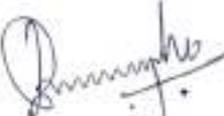
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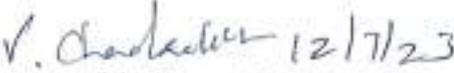
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5.3 CONCLUSION

The conclusion is drawn from the study and survey of the company regarding the Recruitment and Selection process carried out there. A study on the Recruitment and Selection Process conducted in Madras engineering industries pvt ltd has brought out various information about the company's recruitment and selection procedure. Using this survey the researcher could identify the recruiting modules conducted in the organization, various factors considered for the recruitment and selection process and the satisfaction level of the employee towards the Recruiting.

Most of the employees were satisfied but changes are required according to the changing scenario as recruitment process has a great impact on the working of the company as a fresh blood, new idea enters in the company.

Selection process is good but it should also be modified according to the requirements and should job profile so that main objective of selecting the candidate could be achieved. Further from this survey I hope the organization will be benefited and with the help of the suggestions given the organization can improve its functioning and the overall Recruitment and Selection Process in the organization and its performance will increase.



**A STUDY ON RECRUITMENT AND
SELECTION PROCESS IN THE
ORGANIZATION**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of

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ABSTRACT

Recruitment and selection are an important operation in HR, designed to maximize employee strength to meet the employer's strategic goal and objectives. In short, Recruitment and selection is the process of sourcing, screening, shortlisting and selection the right candidates for the filling the required vacant positions.

Toshiba Corporation is one of Japan's oldest and largest producers of consumer and industrial electric and electronic products. In addition to its position as the world's leading maker of notebook personal computers, Toshiba is among the global leaders in semiconductors and LCDs. More than 60 percent of the company's net sales are derived domestically, with about 16 percent from North America, 11 percent from Asia (not including Japan), and 10 percent from Europe.

Importance of Effective Recruitment and Selection: This section highlights the significance of effective recruitment and selection processes in organizations. It discusses the impact of hiring the right candidates on organizational performance, productivity, employee engagement, and retention. The review emphasizes the alignment of recruitment and selection strategies with organizational goals and values.

Research Design: The research design for studying the recruitment and selection process in organizations is typically based on a mixed-methods approach. This involves combining qualitative and quantitative methods to gather in-depth insights and statistical data. The research design may include a combination of surveys, interviews, observations, and document analysis.

Primary objective: To review the recruitment and selection process in Toshiba.

Secondary Objectives: To review relevant literature on recruitment and selection process, employee satisfaction, job performance, and retention. To identify the best practices and strategies for effective recruitment and selection process in companies. To compare the recruitment and selection processes of different companies in various industries. To analyze the impact of the recruitment and selection process on the overall organizational performance of companies. To contribute to the existing knowledge on the recruitment and selection process by providing empirical evidence from an employee perspective.

Based on the project on HRM in logistics, it can be concluded that effective human resource management plays a critical role in the success of logistics operations. The project highlighted various HRM strategies and practices that can be implemented in logistics organizations to enhance employee performance, motivation, and job satisfaction.

5.3 CONCLUSION

Based on the project on HRM in logistics, it can be concluded that effective human resource management plays a critical role in the success of logistics operations. The project highlighted various HRM strategies and practices that can be implemented in logistics organizations to enhance employee performance, motivation, and job satisfaction.

These strategies include the recruitment and selection of the right talent, employee training and development programs, performance management, compensation and benefits, and employee engagement initiatives. The project also emphasized the importance of effective communication, teamwork, and leadership in promoting a positive work culture in logistics organizations.

Overall, the project demonstrated that a well-designed HRM system can help logistics companies to attract and retain top talent, reduce turnover rates, and enhance productivity and efficiency. By investing in their human capital, logistics organizations can achieve a competitive advantage and ensure their long-term success in an increasingly competitive marketplace.

CONCLUDING REMARKS

Recruiting and Selection the resource of an organization is very critical in any organization. This assumes greater significance in a Logistics firm. HR faces a challenging task of addressing this issue. The various measures mentioned above will go a long way in motivating and retaining the employees. As it is said, motivated and satisfied employees reflect an organization's wealth than a positive balance sheet.



**A STUDY ON EMPLOYEE RETENTION AT
RANE BRAKE LINING LIMITED**

**Project Report submitted in partial fulfillment of the requirement for the
award of the degree**

MASTER OF BUSINESS ADMINISTRATION

ANNA UNIVERSITY

Submitted By

THAMIZH ROJA B

112721631061

Under the guidance of

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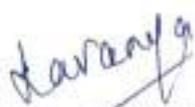


**ST. PETER'S COLLEGE OF ENGINEERING AND
TECHNOLOGYAVADI, CHENNAI-600054.**

JULY 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON EMPLOYEE RETENTION AT RANE BRAKE MANUFACTURING LIMITED" is the bonafide work of THAMIZH ROJA B (REG No.112721631061) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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Assistant Professor



Signature of the HOD

Dr. C. EVANGELINE

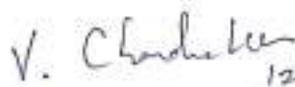
Associate Professor & HOD

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Submitted for the Viva-Voce examination held on 12/07/23



Signature of the Internal Examiner


12/7/23

Signature of External

ABSTRACT

The project is done on the topic "A study on employee retention at Rane Brake Lining Limited." In this project broad research has been provided on how well the organization is handling the employee retention. The Employee Retention is a challenging concern of the organization. To retain skilled and committed employees in the organization, management should take care of employee satisfaction. Find out the reasons of employee turnover and overcome this. The purpose of this study is to prove how employee retention is essential in this day and age, and if the organizations are not awake to the situation and immediate actions are not taken to that effect, What repercussions lay ahead and how they would affect the organization and the industry.

CONCLUSION

Employee retention is an important concept that has receiving considerable attention from academicians, researchers and practicing HR managers. In its essence, Retention comprises important elements such as the need or content, search and choice of strategies, goal-directed behaviour, social comparison of rewards reinforcement, and performance-satisfaction.

The increasing attention paid towards Retention is justified because of several reasons. Motivated employees come out with new ways of doing jobs. They are quality oriented. They are more productive. Any technology needs motivated employees to adopt it successfully. Several approaches to Retention are available. Early theories are too simplistic in their approach towards Retention. For example, advocates of scientific management believe that money is the motivating factor. The Human Relations Movement posits that social contacts will motivate workers. Mere knowledge about the theories of Retention will not help manage their subordinates.

They need to have certain techniques that help them change the behaviour of employees. One such technique is reward. Rewards, particularly money, is a motivator according to need-based and process theories of Retention. For the behavioural scientists, however, money is not important as a motivator. Job enrichment is considered to be a powerful motivator. An enriched job has added responsibilities. This makes the job interesting and rewarding. Job enlargement refers to adding a few more task elements horizontally. Task variety helps motivate job holders. Job rotation involves shifting an incumbent from one job to another.



**A STUDY ON TRAINING AND DEVELOPMENT
FOR YATHRA AUTOMOTIVE INDUSTRIES EMPLOYEE'S**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

OF

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JULY- 2023

BONAFIDE CERTIFICATE

This is to certify that the project report titled, "A STUDY ON TRAINING AND DEVELOPMENT FOR YATHRA AUTOMOTIVE INDUSTRIES EMPLOYEE'S" is the bonafide work of A.THATCHINAMOORTHY (REG No.112721631062) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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Signature of the HOD

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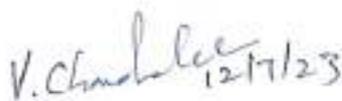
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Submitted for the Viva-Voce examination held on 12/7/23



Signature of the Internal Examiner
Examiner



Signature of External

ABSTRACT

This report provides an understanding of the organizational culture of various departments in YATHRA AUTOMOTIVE INDUSTRIES IN KAKALUR . The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

Effective training and development initiatives play a vital role in enhancing employee productivity, engagement, and job satisfaction. By providing employees with opportunities to acquire new skills, expand their knowledge base, and stay updated with industry trends, organizations can empower their workforce to tackle challenges head-on and contribute to the company's growth.

Furthermore, training and development programs contribute to talent retention and succession planning. Employees who feel valued and invested in are more likely to stay committed to their organization, leading to reduced turnover rates and increased employee loyalty. Such programs also enable the identification and development of high-potential individuals, nurturing future leaders within the company.

This abstract also delves into various methods and techniques employed in training and development. Traditional classroom-style training has evolved into a blended approach that combines instructor-led sessions, online modules, immersive simulations, and on-the-job training. Leveraging technology, organizations can now provide personalized learning experiences tailored to individual employee needs and learning styles.

The study carried out was based on descriptive data type.

- ❖ Sample size of 98 respondents were collected based on sampling method.
- ❖ The data's collected were further analyzed by Statistical Tools based on Chi – square and Anova analysis.
- ❖ Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the TRAINING AND DEVELOPMENT OF EMPLOYEES AT YATHRA AUTOMOTIVE INDUSTRIES. This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

CONCLUSION

- The organization spends more on training, in order to bring some change which must result in the development of the organization, training also develops the workers. Training in any place, if it is presented based on the needs of the organization to the level of understanding of the trainees, it will be more effective: Training helps in handling critical situations and builds up the confidence in their work environment. Training helps in reducing attrition level by increasing job satisfaction, job security and job safety by reducing the accidents. The employees/workers are able to do his/her regular work and they are interested to learn more new techniques in their work through training.
- The management accepts that the training program help in the development of the organization. The proper identification of training needs at a right time and right place will help in the development of the organization as well as the employee workers to improve their capacity.



**A STUDY ON EMPLOYEE EXECUTIVE
CUSTOMER SUPPORT FOR
RETENTION TEAM CALLING PROCESS IN
THINKSYNQ SOLUTIONS PVT LTD IN CHENNAI**

**Project Report submitted in partial fulfillment of the requirement for the
award of the degree of MASTER OF BUSINESS ADMINISTRATION of**

ANNA UNIVERSITY

Submitted By

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Under guidance of

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JULY 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON EMPLOYEE EXECUTIVE CUSTOMER SUPPORT MANAGEMENT AT THINKSYNQ SOLUTIONS PVT LTD" is the bonafide work of **R. VIGNESHWARAN (REG No.112721631063)** is a record of original work done by him. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.


Signature of Supervisor

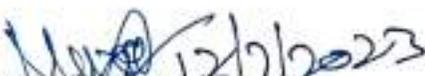
Assistant Professor

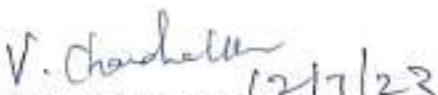

Signature of the HOD

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Submitted for the Viva-Voce examination held on 12.07.2023


Signature of the Internal Examiner


Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in THINKSYNQ SOLUTIONS PVT LTD, Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

"Executive customer support" is basically designed upon them can speak with them customer for the purpose of call given only to engaging about whatever doubt can ask to client of the customer we can solve the queries and problems on this way I can be sincerely worked with 3 months for Thinksynq solutions pvt ltd for Retention team calling process it will be allocated for many data's for financial type of claim the insurance policies and procedures when the calls can moving automatically to the system about the policies and procedures for client of the customer we can attend them to call to speak with them for given to explain policy benefit details to the customer whatever doubts can ask regarding the policies and procedure we can solve the queries and problem so that their valuable data and information can be stored for a longer period with easy access and manipulation of the same. The required software is easily available and easy to work wit. The project data information can be analysis through collected with my knowledge based itself.

The study carried out was based on descriptive data type.

- Sample size of 60 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Chi – square, Anova and Run Test analysis.
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews Employee Executive customer support at THINKSYNQ SOLUTIONS PVT.LTD. This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

CONCLUSION

This project review I also shared the information required to knowledge study to learn all the process everything from Retention team calling process that's only I can shared the information review of literature, research methodology, and Questionnaire which are related to my topic and company.



A STUDY ON EMPLOYEE ENGAGEMENT OF EMPLOYEES

AT

ETA STAR PROPERTY DEVELOPERS LTD

A Project Report

Submitted in partial fulfilment of the requirement for the award of
the degree of **MASTER OF BUSINESS ADMINISTRATION**

Of

ANNA UNIVERSITY

Submitted By

R. VINOTHINI

112721631065

Under the guidance of

Mrs. M. NISHANTHI B.COM, MBA

Assistant Professor

Department of Management Studies



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JULY - 2023

BONAFIDECERTIFICATE

This is to certify that the Project report titled, "A STUDY ON THE EMPLOYEE ENGAGEMENT OF EMPLOYEES ON ETA STAR PROPERTY DEVELOPERS LTD, CHENNAI." is the bonafide work of **R. VINOTHINI (REG No.112721631065)** is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Nishanthi
11/7/23

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Submitted for the Viva-Voce examination held on 12/7/2023

M. Nishanthi
12/7/2023

Signature of the Internal Examiner

V. Chanchalou
12/7/23

Signature of External Examiner

ABSTRACT

This report provides an understanding of the organizational culture of various departments in ETA STAR PROPERTY DEVELOPERS LTD. Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

Employee engagement is mainly conducted to know the clear ideas about the employee commitment towards their job and the factors governing their full involvement in doing their work. Management's basic job is the effective utilization of human resources for achievements of organizational objectives. So a totally engaged employees shows that total job satisfaction and also helps in achieving the maximum output by the optimum utilization of the resources. Employee engagement is the level of commitment and involvement an employee has towards their organization and its values. An engaged employee is aware of business context, and works with colleagues to improve performance within the job for the benefit of the organization. It is a positive attitude held by the employees towards the organization and its values. The organization must work to develop and nurture engagement, which requires a two-way relationship between employer and employee.' Thus Employee engagement is a barometer that determines the association of a person with the organization. The study carried out was based on descriptive data type.

- Sample size of 82 respondents were collected based on sampling method.
- The data's collected were further analysed by Statistical Tools based on
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the Employee engagement at ETA STAR PROPERTY DEVELOPERS.LTD.

This research focuses on finding the problems, root cause of the problems and suggesting solutions to the problems found.

5.3 CONCLUSION

CONCLUSION:

This study gives an answer that employees who demonstrate higher levels of engagement would much contribute to their organizations with organizational citizenship behavior level higher. Employee engagement is positively related to organizational citizenship behavior. From these results it can be concluded that when employees are empowered, they will show organizational citizenship behavior is the same as when employees have supportive leadership. They will engage in organizational citizenship behavior, even empowerment and support are the two main factors that involve employees in fidelity.

Technical and functional training and motivation should be provided before job commissioning and rewards must be given for good performance.

At **ETA property and developers Chennai**, all the employees were engaged with their job for the best output of results in the company.

From the study it is concluded that level of performance of the employees should have considerably increased by their superior and head. So, employee engagement has to be same continued and suggestions given can be adopted for better performance.



**A STUDY ON EMPLOYEE RETENTION WITH REFERENCE
TO MANUFACTURING AND SERVICE DIVISION IN
WHEELS INDIA LIMITED IN CHENNAI**

A PROJECT REPORT

Submitted in partial fulfilment of the requirement for the award of the degree of
MASTER OF BUSINESS ADMINISTRATION

OF
ANNA UNIVERSITY

Submitted By

Mr. VISHNU R

(Reg.No:112720631066)

Under the guidance of

Dr. MURALI R, BA, MBA, PH. D

Associate Professor

Department of Management Studies



ST.PETER'S COLLEGE OF ENGINEERING AND TECHNOLOGY
AVADI, CHENNAI-600054.

July, 2023

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON EMPLOYEE RETENTION WITH REFERENCE TO MANUFACTURING AND SERVICE DIVISION IN WHEELS INDIA LIMITED IN CHENNAI" is the bonafide work of R VISHNU (REG NO.112721631066) is a record of original work done by him. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.


Signature of Supervisor

DR. R. MURALI

Assistant Professor



Signature of the HOD

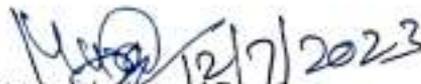
DR. C. EVANGELINE

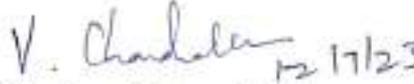
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Submitted for the Viva-Voce examination held on 12/07/2023


Signature of the Internal Examiner


Signature of External Examiner

ABSTRACT

The research titled on 'A Study on Employee Retention With Reference To Manufacturing And Service Division In Wheels India Limited' in Chennai was conducted.

Employee retention is the conscious and deliberate effort to retain quality individuals on the company. Stated otherwise, it is the proactive methods utilized by successful organizations to stop the drain of company profits caused by excessive employee turnover. In today's world the power of intrinsic motivators cannot be undervalued. Employees are constantly exploring various avenues to develop their skills so that they can be promote table and employable in the fast changing times. Organizations need to consider individuals learning needs and address them suitably by creating learning opportunities for them.

The aim of this project is to have an understanding of the employee retention strategies adopted at Wheels India Limited and to study the issues related to it. The objective of this study is to examine the necessary condition to retain the employees and also to find the satisfaction level of employees towards the employee retention in the organization

The study has done through descriptive research method and the collection of primary data has done through simple random sampling method under probability sampling method.

Questionnaire is used to collected primary data and conceptual review is used for secondary data collection through books, websites, journals. The data is to be analyzed with percentage analysis, chi square, one way anova and factor analysis and interpretation will be followed.

From the study, the findings shows that the employees are satisfied with compensation benefits and working environment, the employees feel that their work load is average.

5.3 CONCLUSION

'A study on Employee Retention With Reference To Manufacturing And Service Division In Wheels India Limited' from the duration of 3 months and by analyzing the result, the conclusion arrived is that the majority of the respondents have satisfied with health and safety measures. Human resources are complex and not easy to understand. Retaining the employees will help in the long-term growth of an organization and will also add to their goodwill. Employee retention is a method of holding back the employees who depart from organization by implementing various retention strategies. There are several factors leading to the employee turnover so, the best practices like recruitment socialization, training and development, employee engagement, compensation and rewards are adopted by the organization to increase the rate of employee retention. The study shows that Wheels India Limited should plan and implement new retention policies for improving the future growth of the organization.



**A STUDY ON WORK-LIFE BALANCE OF
EMPLOYEES AT
VIRTUSA CONSULTING SERVICES PVT LTD**

**Project Report submitted in partial fulfillment of the requirement for the
award of the degree of**

MASTER OF BUSINESS ADMINISTRATION

of

ANNA UNIVERSITY

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AVADI, CHENNAI-600054.

JULY 2023

ABSTRACT

This report provides an understanding of the organizational culture of various departments in VIRTUSA CONSULTING SERVICES PVT LTD. Chennai. The Training consisting of a period of 3 months has provided with an overview of the skills needed to develop personality. It has also provided with an opportunity to get exposed to the real time problems happening in the company and the way to resolve the issue.

The concept of work-life balance encompasses the extent to which individuals can effectively reconcile their professional and personal lives, ensuring adequate time and energy for both domains. It has gained substantial attention due to its impact on employee well-being, job satisfaction, productivity, and organizational outcomes.

This abstract examines the multifaceted nature of employee perceptions, shedding light on how individuals perceive and evaluate their work-life balance within their unique contexts.

The study carried out was based on descriptive data type.

- Sample size of 86 respondents were collected based on sampling method.
- The data's collected were further analyzed by Statistical Tools based on Chi – square and Anova analysis.
- Percentage Analysis is Illustrated with Charts and Inferences.

This research overviews the work life balance of employees at VIRTUSA CONSULTING SERVICES PVT LTD. The abstract concludes by emphasizing the importance of fostering a supportive work environment that acknowledges and addresses work-life balance of employees. It underscores the need for organizations to adopt flexible policies, promote a culture of work-life balance, and provide resources that facilitate employees' ability to integrate work and personal life effectively. By doing so, organizations can promote employee well-being, job satisfaction, and productivity, ultimately leading to a positive impact on organizational performance.

CONCLUSION

From this study, it is found that majority 76% of the employees were satisfied with their work-life balance. The work-life balance, it is concluded that maintaining a healthy equilibrium between one's professional and personal life is important for overall well-being and satisfaction. Achieving work-life balance involves allocating appropriate time and energy to work-related responsibilities as well as personal activities, relationships, and self-care.

Work-life balance also promotes increased productivity and efficiency in the workplace. When individuals have time to recharge and engage in activities outside of work, they often return to their professional responsibilities with renewed energy and focus. This can lead to improved job satisfaction, creativity, and problem-solving abilities.

Work life balance is an essential aspects of fulfilling and healthy life. It involves creating a harmonious integration between work and personal life, allowing individuals to thrive in both domains and experience greater overall satisfaction and well-being.

BONAFIDE CERTIFICATE

This is to certify that the Project report titled, "A STUDY ON WORK-LIFE BALANCE OF EMPLOYEES AT VIRTUSA CONSULTING SERVICES PVT LTD" is the bonafide work of S. YUVASREE (REG No.112721631067) is a record of original work done by her. Certified further, that to the best of my knowledge the work reported here in does not form part of any other report on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.



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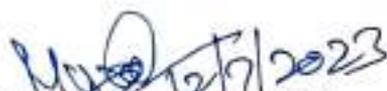


Signature of the HOD

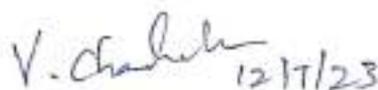
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Submitted for the Viva-Voce examination held on 12/07/2023



Signature of the Internal Examiner



Signature of External

MATERIAL ANALYSIS OF STARLITE INSULATOR FOR GLOVES

A PROJECT REPORT

Submitted by

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RANISH R

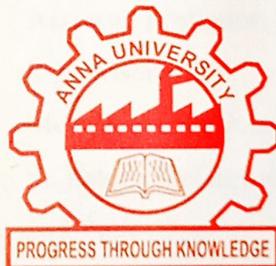
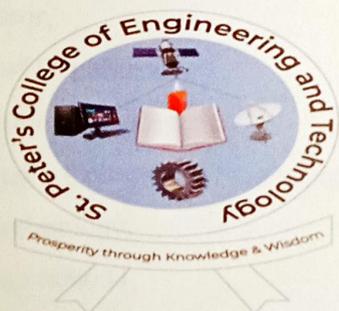
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112719114301

In partial fulfillment for the award of the degree of

**BACHELOR OF ENGINEERING
IN
MECHANICAL ENGINEERING**



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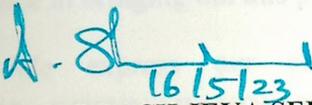
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MAY-JUNE 2023

ANNA UNIVERSITY: CHENNAI 600 025

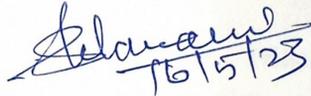
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Dr. A. SHADRACH JEYA SEKARAN M.E., Ph.D,

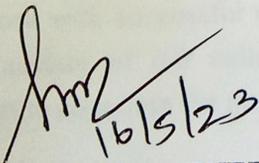
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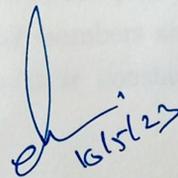
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This Project work is submitted for project viva voce examination held on 16/05/23



INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

In the foundry area, working can be challenging and demanding, and the handling of hot iron material brings limitations to work efficiency. It might even bring very much difficulty to workers, such as burns, fire hazards, and heat stress on our hands. To combat all these limitations and hazards, we have designed a Starlite-integrated glove. Starlite is a type of insulation material that was developed in the 1990 by British amateur chemist Maurice Ward.

The Starlite Integrated Glove is a revolutionary product that we have designed to provide superior protection to the hands of workers in high-risk environments. The glove is made from a unique composite material that is both lightweight and extremely durable, and it is designed to fit the hand like a second skin.

The present experimental study aims to determine the thermal insulation properties of starlite composite material. A sample of starlite is created with different composite materials, such as corn starch and glue, corn starch and super glue, corn starch and epoxy, and another composite of starlite with ash instead of corn starch, created using the compress mould method. After the material is fabricated and an experiment is performed, the thermal properties of the starlite are identified. Then the fabricated starlite material is integrated onto the foundry glove as experimentation towards one of many applications.

5. CONCLUSION

In conclusion, the development of a heat-insulating glove that can withstand high temperatures is an important step in ensuring the safety of workers in industries where exposure to extreme heat is a frequent occurrence. The use of Starlite as a material for creating this glove has proven to be effective due to its ability to resist high temperatures while also being reusable and durable.

The results of the experiments conducted on the Starlite heat-insulating gloves have shown that the gloves can withstand temperatures of up to [1000°C], which is a remarkable achievement. Additionally, the gloves have also proven to be comfortable and practical for use in various work settings.

Thus, Starlite integrated glove was produced successfully, and it also possesses several potential benefits, such as:

Heat resistance: Starlite is known for its exceptional heat resistance, which could make it a valuable material for gloves that need to protect the wearer's hands from high temperatures.

Lightweight: Starlite is also lightweight, which could make it easier and more comfortable for users to wear for extended periods of time.

Overall, the development of Starlite heat-insulating gloves is a significant advancement in the field of industrial safety, and it has the potential to improve the working conditions of many people in various industries. Further research and development in this area could lead to the creation of even more effective and efficient heat-insulating materials and gloves.

STUDY ON THE MECHANICAL PROPERTIES OF BAMBOO

FIBRE AND IT'S APPLICATIONS

A PROJECT REPORT

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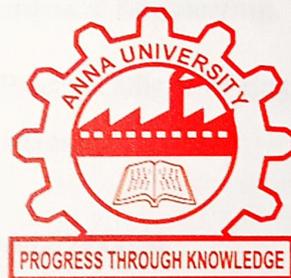
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BACHELOR OF ENGINEERING

IN

MECHANICAL ENGINEERING



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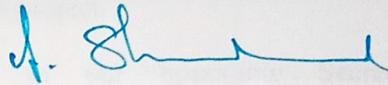
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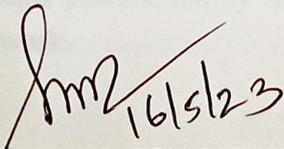
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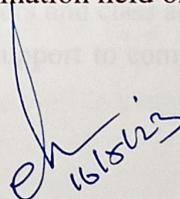
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Researchers are developing policies for producing polymeric reinforced composites at low-cost utilizing completely biodegradable natural fibers in order to reduce hazardous ecosystem degradation. These regulations had produced secure environmental protection methods. In recent years, there has been a high-tech revolution in the use of bamboo fibers as reinforcement in composite materials as a response to the growing need for creating biodegradable, sustainable, and recyclable materials. The combination of the matrix and natural fibers results in a composite material with the best qualities of each component. Different matrices in use today are flexible and soft in compared to natural fibers; when combined, they create composite materials with high strength-to-weight ratios.

The simplicity with which consumers can make an appropriate decision and express their own desirable tastes is a result of the industry's rapid technological improvement. By incorporating the use of raw materials like bamboo fiber, which is stronger and can be used to produce high end, sustainable industrial products, researchers have increased their competence in product design. As a result, this article provides a critical analysis of the most recent advancements in bamboo fiber-based reinforced composites as well as a summary of the key findings that have been reported in the literature.

7. CONCLUSION

The project aimed to investigate the feasibility of using bamboo fibers as a reinforcing material in composite materials. The results of the study have shown that bamboo fibers can indeed be used as a reinforcing material in composite materials.

The physical and mechanical properties of the bamboo fiber composite were tested and compared with those of traditional composites. The results showed that the bamboo fiber composite had comparable or even superior properties in some cases, such as in terms of flexural strength and modulus.

The study also investigated the effect of different processing techniques on the properties of the composite material. The results showed that the processing technique had a significant impact on the properties of the composite material, with some techniques leading to improved properties and others leading to reduced properties.

Overall, the study has demonstrated that bamboo fibers have the potential to be used as a sustainable and eco-friendly alternative to traditional reinforcing materials in composite materials. Further research is needed to optimize the processing techniques and to investigate the long-term durability of the composite material.

In conclusion, the use of bamboo fibers in composite materials has the potential to contribute to the development of more sustainable and environmentally friendly materials. The results of this study provide a basis for further research and development in this area.

DESIGN AND FABRICATION OF 3D PRINTING MACHINE

A PROJECT REPORT

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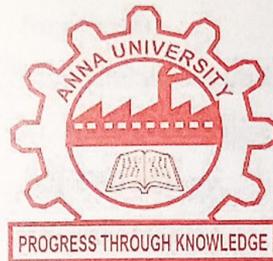
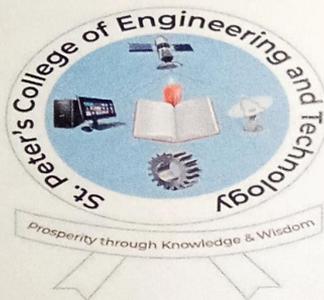
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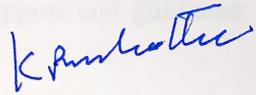
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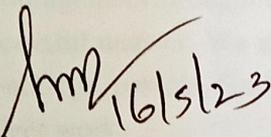
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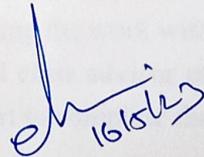
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Added substance producing, regularly alluded to as 3D printing, can possibly incomprehensibly quicken advancement, pack supply chains, limit materials and vitality use, and diminish squander. Initially created at the Massachusetts Institute of Technology in 1993. 3D printing innovation frames the premise of Corporation's prototyping procedure. 3DP innovation makes 3D physical models by cementing layers of saved powder utilizing a fluid fastener. By definition 3DP is a very adaptable and fast procedure pleasing geometry of fluctuating multifaceted nature in several distinct applications, and supporting numerous sorts of materials. Z Corp. spearheaded the business utilization of 3DP innovation, creating 3D printers that driving makers use to deliver early idea models and item models. Using 3DP innovation, Z Corp. has created 3D printers that work at uncommon paces, amazingly low expenses, and inside a wide scope of uses. This paper depicts the center innovation and its related applications.

Added substance fabricating, frequently alluded to as 3D printing, is another method for making items and parts from a computerized model. Like an office printer that puts 2D computerized records on a bit of paper, a 3D printer makes parts by storing slim layers of material in a steady progression, just where required, utilizing an advanced outline until the definite segment has been made. Enthusiasm for added substance methods is developing quickly as applications have advanced from fast prototyping to the creation of end-use items. Added

substance hardware would now be able to utilize metals, polymers, composites, or different powders to "print" a scope of utilitarian segments, layer by layer, including complex structures that can't be made by different methods. By taking out generation steps and utilizing considerably less material, 'added substance' procedures might lessen waste and spare over half of vitality contrasted with the present 'subtractive' fabricating forms, and diminish material

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6.CONCLUSION

The design and fabrication of 3D printing machines have brought about a transformative shift in the manufacturing industry. These machines have revolutionized the way we create objects, offering unprecedented levels of customization, speed, and precision. In conclusion, this article has provided an overview of the key aspects involved in the design and fabrication of 3D printing machines. We explored the fundamental principles of 3D printing, where digital models are sliced into layers and material is deposited or fused layer by layer to form a physical object. We discussed various 3D printing technologies such as FDM, SLA, SLS, and DLP, each with its unique mechanisms and materials, catering to diverse applications and requirements.

Furthermore, we examined the critical components of a 3D printing machine, including the frame, print bed, extruder, and control systems. These components work together to ensure accuracy, precision, and repeatability in the printing process. We also highlighted advancements in

the field, such as dual extrusion systems, automated bed leveling, and smart features, which continue to expand the possibilities and applications of 3D printing. Lastly, it is important to note that the design and fabrication of 3D printing machines involve a multidisciplinary approach, combining engineering, materials science, computer programming, and manufacturing principles. As technology advances, the cost of building 3D printers is becoming more accessible, allowing individuals and businesses to harness the power of this technology. The potential for innovation and creativity in manufacturing through 3D printing is immense. From rapid prototyping and small-scale production to custom manufacturing and medical applications, 3D printing has the capacity to reshape industries and create new opportunities. The design and fabrication of 3D printing machines play a crucial role in unlocking these possibilities, and as this technology continues to evolve, we can anticipate even more exciting developments on the horizon.

DESIGN AND FABRICATION OF SOLAR GRASS CUTTER

A PROJECT REPORT

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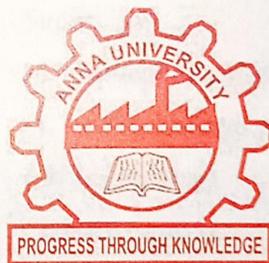
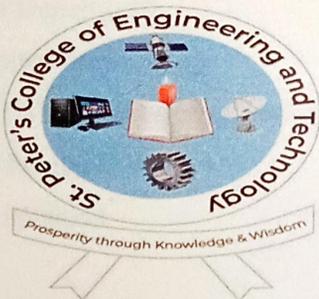
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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The Solar Grass Cutter is an innovative and eco-friendly device designed to revolutionize lawn maintenance practices. This abstract provides an overview of the concept, functionality, and benefits of the Solar Grass Cutter.

Lawns and green spaces require regular maintenance to ensure their aesthetic appeal and functionality. Conventional grass-cutting methods involve gasoline-powered lawn mowers, which contribute to air and noise pollution, as well as dependence on fossil fuels. To address these environmental concerns, the Solar Grass Cutter integrates solar energy and advanced cutting technology to offer a sustainable alternative.

The device harnesses solar power through photovoltaic panels installed on its surface. The device is equipped with sensors and intelligent control systems to ensure efficient grass cutting while avoiding obstacles. Key benefits of the Solar Grass Cutter include reduced carbon emissions, minimized noise pollution, and elimination of fuel costs.

In conclusion, the Solar maintenance. By harnessing solar energy and employing advanced cutting technology, it offers an eco-conscious alternative to traditional grass-cutting methods. With its numerous advantages and sustainable design, the Solar Grass Cutter has the potential to transform the landscaping industry, promoting a greener and cleaner future.

8. CONCLUSION

In conclusion, solar grass cutters offer a promising and sustainable solution for maintaining lawns and green spaces. With their reliance on solar energy, these autonomous mowers reduce carbon emissions, energy consumption, and noise pollution compared to traditional lawnmowers. They provide several benefits, including time and labor savings, convenience, and improved safety.

While solar grass cutters have their limitations and initial costs, the future scope for this technology is vast. Advancements in efficiency, artificial intelligence, navigation, remote monitoring, and multi-purpose functionality are expected. Integration with smart home systems and cloud-based analytics can further enhance their effectiveness and user experience. The future of solar grass cutters holds the potential for more intelligent, efficient, and sustainable lawn maintenance practices. As technology evolves, they are likely to become more affordable, accessible, and versatile, catering to both residential and commercial applications. With their ability to harness clean energy and operate autonomously, solar grass cutters are poised to play a significant role in the future of landscaping and contribute to greener and more eco-friendly environments.

**INVESTIGATION OF THE MECHANICAL CHARACTERISTICS
OF KANCHIPURAM SILK REINFORCED-EPOXY COMPOSITE**

A PROJECT REPORT

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KISHORE.S

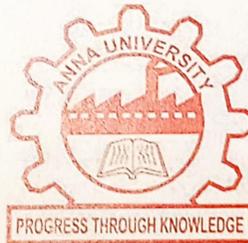
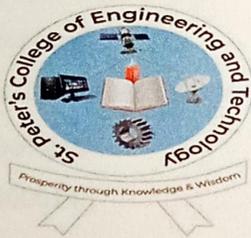
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In partial fulfillment for the award of the degree of

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MAY- JUNE 2023

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Increasing demand for lightweight material has moved the industries to switchover to the polymer-based composite materials. The polymer composite materials mainly use synthetic fibers like carbon fibers and glass fibers, which generally show better mechanical properties. The integration of these composites has increased drastically from aerospace to automobile industries. Further, the drawback of non-biodegradability is always associated with the synthetic fiber-reinforced polymer composites. Natural fibers, on the other hand, are cheap, readily available, and biodegradable, which is thought to be a better alternative to synthetic fibers. Among the natural fibers, silk fiber is one of the most durable fibers and has excellent mechanical properties like stiffness, strength, and ductility, etc. Nowadays, silk fiber is being used extensively for the engineering and medical applications due to its several attractive properties in which environment-friendliness is hugely alluring for the researchers.

8. CONCLUSION

The tensile strength would indicate the maximum tensile stress or load that the silk could withstand before breaking. The elongation or strain at the point of failure would indicate how much the silk could stretch before breaking. The modulus of elasticity would be a measure of the silk's stiffness and would indicate how much the silk would stretch under a given load.

The flexural strength would indicate the maximum bending stress that the silk could withstand before fracturing or breaking. The modulus of elasticity would be a measure of the silk's stiffness and would indicate how much the silk would deflect under a given load.

Due to high NH & OH chemical composition we observe the changes in strength of three types of silk fabric by FTIR Test. Of all three types of silk comparatively Type two silk has more strength than other two types of silks. Overall, the study demonstrated the potential of Kanchipuram silk fibers as a viable reinforcing material for epoxy composites in various engineering applications.

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Certified that this project report “ **FABRICATION OF LUFFA CYLINDRICA REINFORCED VINYL ESTER AND EPOXY COMPOSITE**” is the bonafide work of **PAVUN KUMAR D (112719114010)** , **PRAVEEN A(112719114013)**, **SATHISH K (112719114016)**, **SHYAM DHINAKARAN Y (112719114017)** who carried out the project work under my supervision.

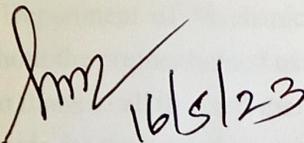


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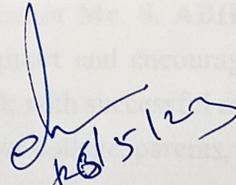


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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Environmental awareness today motivates the researchers, worldwide on the studies of natural fibre reinforced polymer composite and cost-effective option to synthetic fibre reinforced composites. The availability of natural fibres and ease of manufacturing have tempted researchers to try locally available inexpensive fibre and to study their feasibility of reinforcement purposes and to what extent they satisfy the required specifications of good reinforced polymer composite for different applications. With low cost and high specific mechanical properties, natural fibre represents a good renewable and biodegradable alternative to the most common synthetic reinforcement, i.e., glass fibre.

There are many potential natural resources, which India has in abundance. Most of it comes from the forest and agriculture. *Luffa cylindrica* (L.) synonym *L.cylindrica* Mill, a forest product commonly called sponge gourd, loofa, vegetable sponge, bath sponge or dish cloth gourd, is a member of cucurbitaceous family.

The work presented in this dissertation involves investigation of three distinct problems of natural fibre composites:

- A study of favorable mechanical properties of luffa cylindrica fibre in thermosetting matrix composite
- An experimental investigation of mechanical properties of luffa cylindrica reinforced vinyl ester and epoxy composite.

Usual hand-lay-up technique has been adopted for manufacturing the composite. All these tests have been carried out as per ASTM standard. The tensile strength, flexural strength and hardness of the *Luffa cylindrica* composite were studied as per ASTM standard.

7. CONCLUSION

The conclusions drawn from the present investigations are as follows:

- a. The luffa cylindrica can successfully be used as reinforced to fabricate composite by suitably bonding with resin of vinyl ester and epoxy
- b. Samples prepared as per ASTM standard for various testing.
- c. The mechanical properties of luffa cylindrica fibres composite are for tensile (value) in epoxy and (value) in vinyl ester, for flexural and impact.
- d. The decrease in strength is composite due to poor fibre matrix adhesion of fibre with the matrix.
- e. During the curing of the fibre the air trapped between the fibres will subsequently decrease the strength on testing.

**EXPERIMENTAL INVESTIGATION FOR NOVEL BRAKE PAD USING
FLY ASH WITH MIXTURE OF EGG SHELL**

A PROJECT REPORT

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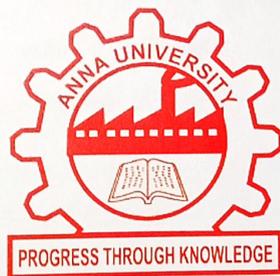
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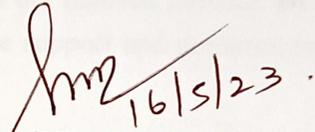
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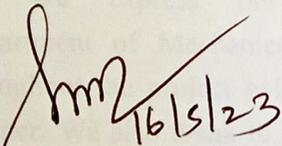
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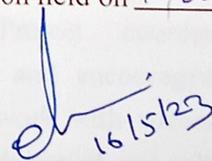
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Experimental investigation for novel break pad using fly ash with mixture of egg shell and design of break pad by using solid works. After the design of bicycle break pad injection moulding process will be done with fly ash along with help of graphite and Resin (sodium silicate). After injection moulding process the break pad was tested for wear and friction using (pin on disc) apparatus. Then bicycle break pad analysed by using ANSYS software.

In the recent years, the dominant cementitious materials have been industrial by products such as fly ash. This present data describes some of the cementitious products that are attracting attention in the global research community and the properties and characteristics of these materials that affect their performance such durability, mechanically properties and reduction of carbon dioxide (CO_2). The present investigation deals with the chemical synthesis of cementitious material using fly ash of eggs shell rich in calcium (Ca) and sand dune (southern west of Algeria) rich in silica (SiO_2). The composition of geopolymers synthesized are the most compressive resistant with a maximum stress of 49.71 MPa, the most flexible ($E = 2.63$ GPa) and the most ductile ($\epsilon_r = 65.42\%$). The characteristic properties of the chemically synthesized cementitious materials were analyzed by the chemical composition analysis XRF, XRD and SEM analyses.

Eggshell were added to a mixture that was then reinforced with glass fibres and epoxy resin, and the resulting material was studied for its effect. The samples were created utilizing the hand Lay-up method, chopped glass fibre (6 wt%), and powdered marble dust as the matrix material (2, 4, 6, and 8 wt%).

5. CONCLUSION

Fly ash is waste residue that is released from coal combustion process in electric power station and it can cause air, water and soil pollution if not treated will properly method and procedure.

Fly ash is produced by coal-fired electric and steam generating plants. Typically, coal is pulverized and blown with air into the boiler's combustion chamber where it immediately ignites, generating heat and producing a molten mineral residue.

The outcomes showed that low calcium fly ash content increases brake compressive strength of hardened brake for a period ranging between 4 to 5 months the brake rheological properties when the substitution percentage is not too high.

Fly ash comes from one of the biggest sources of air pollution and carbon dioxide emissions on Earth, and yet it's considered to be a green material. What's the deal? The main reason that fly ash is considered to be eco-friendly when used in construction is because it's a recycled material.

Fly ash is produced by coal-fired electric and steam generating plants. Typically, coal is pulverized and blown with air into the boiler's combustion chamber where it immediately ignites, generating heat and producing a molten mineral residue.

DESIGN AND FABRICATION OF HAND TILLER MACHINE

A DESIGN FABRICATION PROJECT REPORT

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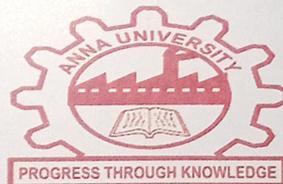
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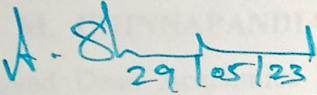
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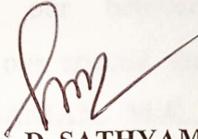
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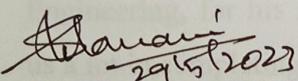
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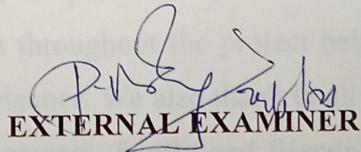
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

The hand tiller is a compact and lightweight device designed to be operated manually by gardeners and farmers. It consists of a long handle, typically made of sturdy materials like wood or metal, attached to a set of rotating blades or tines. These blades are strategically positioned to penetrate the soil and break it up, promoting aeration, water absorption, and nutrient distribution.

The primary purpose of a hand tiller is to prepare the soil for planting by loosening compacted earth, removing weeds, and incorporating organic matter or fertilizers. The rotating blades of the tiller efficiently break up clumps of soil and help create a loose, friable surface, conducive to optimal plant growth.

The hand tiller offers several advantages over other gardening tools and techniques. Firstly, it provides an environmentally friendly alternative to motorized tillers, reducing noise pollution and carbon emissions. Its manual operation allows for greater precision and control, especially in tight or delicate areas where larger machines may not be suitable.

Moreover, the hand tiller is a cost-effective solution, requiring minimal maintenance and no fuel or electricity consumption. Its lightweight and portable design make it easy to maneuver in various garden sizes and terrains. Additionally, the tiller's ergonomic handle and efficient blade configuration minimize strain and fatigue on the user, enabling prolonged use without discomfort.

6. CONCLUSION

In conclusion, Hand Mini Tiller Machines provide a compact, affordable, and versatile solution for gardening and landscaping tasks. These machines offer several advantages, including their compact size, lightweight design, and ease of use. They are environmentally friendly, emitting no fumes or contributing to noise pollution.

Hand Mini Tiller Machines are suitable for small to medium-sized gardening areas and provide effective soil preparation, weed control, and soil improvement. They promote soil aeration, root growth, and nutrient absorption, contributing to healthier plant growth. Additionally, they offer the convenience of physical exercise while tilling the soil.

Overall, Hand Mini Tiller Machines are valuable tools that offer convenience, effectiveness, and affordability in maintaining and enhancing your garden or landscape.

DESIGN AND FABRICATION OF PAPER PLATE MAKING

MACHINE USING FLYWHEEL PRESS

A DESIGN FABRICATION PROJECT REPORT

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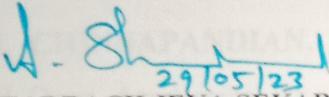
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MAY-JUNE 2023

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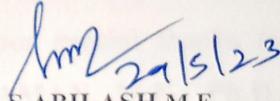
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Certified that this project report "DESIGN AND FABRICATION OF PAPER PLATE MACHINE USING FLYWHEEL PRESS" is the bonafide work of CHEERANJEEVI.M (112720114302) , MUGUNDHAN.M (112720114307) , POOBALAN.M (112720114308) , SIVARAMAN.S (112720114311) who carried out the project work under my supervision.



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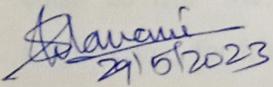
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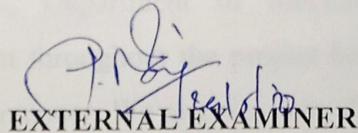
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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Disposable food service products were initially developed to enhance public health by improving practices in the food service industry. This requirement when combined with the environmental threat faced by us at the turn of the 20th Century and need of strong efforts in order to conserve the environment gave birth to the concept of PAPER CUPS and PAPER PLATES. There are several inherent advantages in using Paper Cups and Paper Plates as compared to Cups and Plates of other materials. These Paper Cups and Paper Plates are gaining popularity all across the globe as a beautiful and stylish way of minimizing exposure to food borne infections .

Paper Cups and Paper Plates have numerous advantages like; they are manufactured in a very simple process using Food Grade Raw Materials with least waste and are easiest to recycle. They are ideal for individual servings at all kinds

of parties, functions, picnic occasions, marriages, chat, tea & food joints, etc, nontoxic in nature, the shapes and surface designs on these paper plates are attractive and present an inviting look. These paper plates can also be custom printed with an outlet's logo, brand punch line or advertising message.

Available in a wide variety of designs, textures, colours and sizes, disposable paper plates are gorgeous, stylish and eloquent. Adding premium aura wherever used, these plates are made with utmost care to detail and are a unique addition to any table setting.

Hence, the future of the proposed unit for manufacturing paper plates is very vibrant and will be a gesture towards supporting the usage of Eco-friendly products

6. CONCLUSION

In conclusion, a paper plate making machine that utilizes a manual flywheel press machine can be an effective tool for producing paper plates. The machine's efficiency depends on its design, materials used, and operator skill. While it may not match the production rate of automated machines, it can still provide a reasonable output.

The machine should consistently produce paper plates with the desired shape, size, and uniformity. Proper compression and accurate molding are essential for achieving high-quality plates. Manual operation requires physical effort from the operator. Therefore, the ergonomics of the machine should be considered to minimize operator fatigue and discomfort during prolonged operation.

The machine should be built with durable components to withstand the forces involved in plate formation. Regular maintenance and lubrication are necessary to ensure smooth operation and longevity. The cost-effectiveness of the machine depends on factors such as initial investment, operating costs, maintenance expenses, and market demand for paper plates.

DESIGN AND FABRICATION OF FOOT DUST CLEANING MACHINE

A DESIGN FABRICATION PROJECT REPORT

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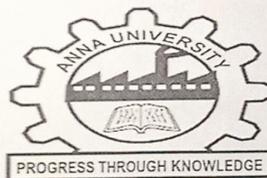
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MAY 2023

ABSTRACT

This project deals with the fabrication of FOOT DUST CLEANING MACHINE.

The aim of this project work is to develop and modernized process for cleaning the foot dust automatically on/off the machine.

It is very useful for cleaning the foot dust .It can be widely used in houses, hospitals, auditorium, shaps, computer centers, etc. In modern days interior decorations are becoming an important role in our life. Cleaning of foot dust is a very important one for our health and reduces the man power requirement.

Every day children are playing games in the ground and their dress, foot, body having dust. They are clean all the dust containing before entering into the room or home. In our project foot dust are cleaned automatically by putting the step in the machine. Hence our project is very useful in our day to day life.

1.6 Functionality	02
1.7 Safety	02
1.8 Ergonomics	02
1.9 Appearance	02
1.10 Fundamentals of Fabrication	03
1.11 Cleanliness	04
1.12 Foot dust cleaning machine	04
1.13 Types of Dust cleaner	05
1.13.1 Vacuum Cleaner	05
1.13.2 Air Filter	

5. CONCLUSION

Here we conclude the words about our project, "**DESIGN AND FABRICATION OF FOOT DUST CLEANING MACHINE**". We made a model of cleaning machine and also included the procedure for fabrications and its various applications.

By doing this project we learnt a variety of cleaning techniques and its fabrications. Now we are fairly experienced with the bearing types and its application in cleanliness.

We hope that you understood our idea upon the applications of cleaning process and dust impacts. Not only apply math and science to our project, but also we learned about the importance of shop safety and working together with our team mates. Each team mates had a job to do. Engineers were in charges of the final design and oversight of building for gear transmissions. Finally project guide were in charge of our team's public affairs and overall completion or our project.

**DESIGN AND FABRICATION OF IC ENGINE
POWERED CAR.**

A DESIGN FABRICATION PROJECT REPORT

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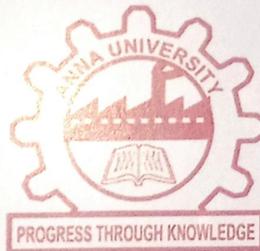
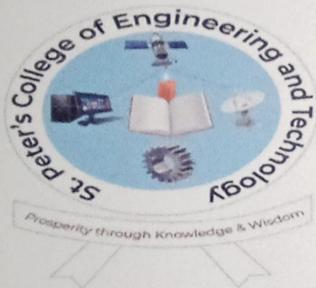
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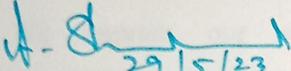
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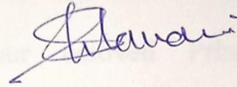
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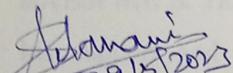

29/5/23

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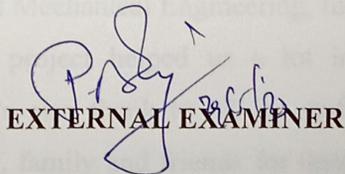


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INTERNAL EXAMINER



EXTERNAL EXAMINER

ABSTRACT

Internal Combustion Engine (ICE) powered cars have dominated the automotive industry for over a century, but advancements in technology and increasing concerns about environmental impact have led to a growing interest in alternative powertrain technologies. This study aims to provide a comprehensive analysis of ICE powered cars, focusing on their performance, efficiency, and environmental impacts. To achieve this, a systematic review of existing literature on ICE cars was conducted, covering topics such as engine design, fuel types, combustion processes, and emission control systems. The performance aspects of ICE cars, including acceleration, top speed, and power output, were evaluated to understand their capabilities compared to alternative powertrain technologies.

Furthermore, the fuel efficiency of ICE cars, measured by fuel consumption and energy efficiency, was analyzed to assess their economic viability and environmental implications. The study also considered the emissions produced by ICE cars, including carbon dioxide (CO₂), nitrogen oxides (NO_x), and particulate matter (PM), and discussed the associated environmental impacts. The findings of this study suggest that ICE powered cars offer several advantages, such as high power output and well-established refueling infrastructure. However, they also exhibit limitations in terms of fuel efficiency and emissions, contributing to air pollution and climate change. The study highlights the importance of continued research and development in improving ICE technology to enhance efficiency and reduce environmental impacts.

5 CONCLUSION

In conclusion, the design and fabrication of an IC engine-powered car project require a systematic and comprehensive approach. The process involves several stages, starting from the initial design and planning phase to the final assembly and testing. Here are some key points to consider:

The design phase is critical for conceptualizing the car, determining its specifications, and creating detailed drawings or utilizing CAD software to visualize the vehicle. Factors such as size, shape, weight, and functionality need to be carefully considered during this stage.

Fabrication involves constructing the various components of the car, such as the chassis, suspension, powertrain, electrical system, body, and interior. It entails using appropriate materials, employing fabrication techniques like welding or bolting, and ensuring proper alignment and integration of the components.

Rigorous testing and quality control measures are essential to ensure that the car meets safety standards, performs as expected, and adheres to regulatory requirements. Testing should encompass various aspects, including engine performance, braking, steering, electrical systems, and overall vehicle dynamics.

The design and fabrication process should encourage continuous improvement. Lessons learned from testing and user feedback can inform future iterations or future projects to enhance the performance, efficiency, and reliability of the IC engine-powered car.

DESIGN AND FABRICATION OF E-RICKSHAW

A DESIGN FABRICATION PROJECT REPORT

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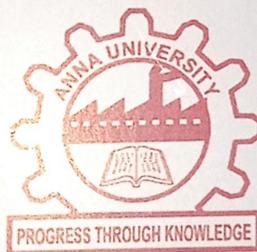
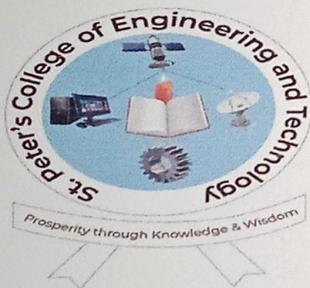
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IN
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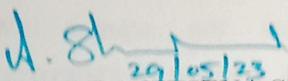
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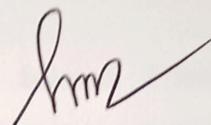
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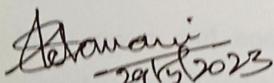
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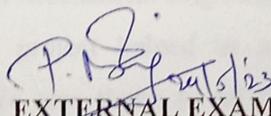
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29/5/2023

INTERNAL EXAMINER


29/5/23

EXTERNAL EXAMINER

ABSTRACT

E-rickshaws, also known as electric rickshaws, are a rapidly emerging form of eco-friendly transportation in urban areas. This abstract provides an overview of e-rickshaws, highlighting their significance, design features and economic implications. E-rickshaws are battery-powered four-wheeled vehicles designed to carry passengers or cargo over short distances. They typically feature an electric motor, rechargeable batteries, and a sturdy frame.

These vehicles offer a viable alternative to traditional rickshaws, providing a sustainable and efficient mode of transportation. Moreover, maneuverability enables them to navigate through narrow lanes and congested traffic, further reducing traffic congestion and improving overall traffic flow.

This affordability makes e-rickshaws an attractive option for drivers and operators, contributing to increased employment opportunities and income generation in the transportation sector. Furthermore, the maintenance and upkeep of e-rickshaws are generally simpler and less costly than traditional vehicles, thanks to their electric drivetrain, which has fewer moving parts and lower maintenance requirements. In recent years, many governments and local authorities have recognized the potential of e-rickshaws as a sustainable transportation solution

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5 CONCLUSION

After this model, it can be said that being a potential bearing mode of transport of present and future e-rickshaw is the best contender and it has started making its mark in the Indian transport system .So with the analysis of e-rickshaws past present and future with benefits some issues like its slow speed, disposal of lead –acid battery and its less seating capacity come in light.

Thus considering the drawbacks some improvements that can be done are like use of photovoltaic panels or wind energy to charge battery adding to increase in driving range. Using lithium-ion battery instead of lead –acid battery and by suitably positioning all weight contributing components optimization of weight can be done. Using carbon fibre for its body can be the best utilization of its high tensile strength, high stiffness and most important low weight. In conclusion, the E Rickshaws project has demonstrated significant potential in addressing various transportation and environmental challenges. The project aimed to introduce electric rickshaws as a sustainable and efficient mode of transportation in urban areas.

While the E Rickshaws project has shown promising results, ongoing efforts are needed to address challenges such as charging infrastructure development, battery longevity, and overall market acceptance. Continued support from various stakeholders, including governments, manufacturers, and the public, will be crucial in realizing the full potential of E Rickshaws and achieving a greener and more sustainable urban transportation system.