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INSTITUTE OF ENGINEERING AND MANAGEMENT

Jeypore, Odisha

INDEX

ABOUT THE INSTITUTE

Institute of Engineering and Management (IEM), Jeypore was established in the year 1993 and is run by IEM Society founded by Late Gopal Krishna Nahak along with a devoted group of eminent professionals having a long and outstanding experience in educational system with a vision of inclusiveness among every stakeholder. IEM is well known for setting high education standards, making institution goals measuring performances for enhancing the potential of individual, enriching human values, upholding the Indian value system acting as a vehicle of growth at the National Level with a view to create competent manpower for 21st century. The institute is set up in a rural and tribal area, which helps the rural and tribal people to get quality education and cope up with the future technological advancements.

IEM is a prestigious engineering college offering six Diploma Engineering programs Chemical Engineering, Civil Engineering, Computer Science and Engineering, Electrical Engineering, Electronics and Communication Engineering, Mechanical Engineering with 31 years of rich standing in the educational sphere. The institute is approved by AICTE, New Delhi; recognized by Govt. of Odisha; affiliated to SCTE&VT, Odisha.

IEM has a home away from home with the best amenities for the students to provide them a comfortable lifestyle within the campus. The institute provides separate hostels for boys and girls, made to grow as places to support learning not only academics but also life skills in a multi-cultural and multi-lingual environment.

Students are encouraged to participate as actively in sports and other extracurricular activities as in academics. The institute maintains a separate unoccupied open area for the play fields in any time fit condition. Apart from this, the institute also has several sports rooms where students can play and revive their energies and be mentally and physically fit.

IEM also enjoys geographical advantage, as it is well connected by air, rail and road. The college campus is situated 8 Km away from Jeypore, and 7 Km away from Jeypore railway station and from Jeypore Airport, in a lush green and pollution free environment.

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VISION, MISSION, POs & QUALITY OBJECTIVES

VISION

"Committed to imparting holistic technical education, the school not strives to sharpen the individual's intellectual curiosity but also ensures that the students become aware of their responsibility to the society and the nation".

MISSION

- Challenging the world with technology
- To provide quality education and technological skill.
- To encourage student with professional competencies for meeting global changes.
- To habit for continual learning.
- To provide the qualities of leadership, entrepreneurship, innovation.

PROGRAM OUTCOMES (POs)

1. **Basic and Discipline specific knowledge**: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

2. **Problem analysis**: Identify and analyse well-defined engineering problems using codified standard methods.

3. **Design/ development of solutions**: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

4. **Engineering Tools**, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.

5. **Engineering practices for society, sustainability and environment**: Apply appropriate technology in context of society, sustainability, environment and ethical practices.

6. **Project Management**: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

7. **Life-long learning**: Ability to analyse individual needs and engage in updating in the context of technological changes.

QUALITY OBJECTIVES

1) Competency based Education & Training to the students

- ❖ Investment in modern equipment to develop new Curriculum based on the needs of Industry.
- ❖ Ensure students getting employment through campus interview & off campus.

2) Continual Improvement

- ❖ Problem Solving.
- ❖ Ragging free.
- ❖ Periodical revision of curriculum.
- ❖ Increase in the number of extra classes.
- ❖ Continuous supervise the classes & Practical.

3) Team work and total involvement of faculty and support staff

- ❖ Increase in the number of study materials.
- ❖ Developing the industrial attachment programmes.
- ❖ Developing in continuing education and training programme for industry.
- ❖ Improvement in laboratory maintenance and increase of experiments.
- ❖ Introduced in extracurricular activities.

4) Continual up-gradation of knowledge, skills and attitudes of Faculty and supporting staff

- ❖ Maximum industry oriented projects.
- ❖ Imparting leading technology courses.
- ❖ Improving teaching methodology and enhanced education, training and competence of faculty & Increase in the number of personality training.
- ❖ More involvement in the Institutions developmental programmes.
- ❖ Faculty Development Programmes

5) Total Involvement of Students

- ❖ Participation of the Environment of the campus and nearby surrounding. .
- ❖ Disciplined behavior in the College & Society.
- ❖ Improvement in communication ability.
- ❖ Providing objective feedback for improved academic curricular activities in teaching learning process of the college

6) Optimum utilization of resources and interaction with industry

- ❖ Students use Equipment / resources with industries at the time of industrial visit.
- ❖ Programme offered to industries.
- ❖ Programme offered to society.
- ❖ Shared resources / equipment among the departments

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MESSAGES

PRESIDENT

Dream and dare, “For those who dare to dream, there is a whole world to win” but dear success can never be your cup of tea. Whatever you planned will never turn up as you wish, and this unpredictability of life it truly fascinating. To ward off these momentary hiccups, you have to have a strategy of your life to fulfill your long cherished dream. If you are aiming for high profile career then choice… that matters as destiny is all about waking a choice. There is no point getting a degree from one of the mushrooming technical institutes, which are nothing but commercial ventures. The need for an institutional effort towards grooming corporate personality rather than merely providing notes to pass the examination is obviously calls for a different learning culture where one becomes “a leader than a follower, a constructive person than a critic” and we promise you will made to live a splendid life. May god bless you to achieve greater heights to serve the nation ever better.

Shri Gupta Prasad Das

President

SECRETARY & DIRECTOR

I feel the real technology is one, which is very useful for upgrading standard of living of human being with peace, harmony and most importantly eco-friendly. So, here in IEM, we inculcate technical skill along with social values in our staff & students to serve the society better. *If you believe in what you are doing, then let nothing hold you up in your work. Whatever has to be done, it's always your choice.*

Karpura Nahak

Secretary & Director

PRINCIPAL

We at INSTITUTE OF ENGINEERING AND MANAGEMENT (IEM) provide ample opportunities to all our students and faculty to explore their talents. The real objective of any educational institution is to make an individual confident to build his/her career and serve the society. For this, one has to be sensitive to the society. IEM helps the students and faculty to build their overall personality. It is a challenge for both the students and faculty to have a fulfilling and experiential learning environment in the college. It is very essential that the students should involve and participate in co-curricular activities, sports and life skills along with academics. For this purpose, at IEM, we have created various activity clubs which will help the students and faculty to build their skills and confidence.

YANTRI is our annual magazine which showcases important activities of the departments, our staffs and our students. I also compliment the editorial team for their excellent contributions.

Er. Nibedita Patra

Principal

TECHNICAL SECTION

ARTIFICIAL INTELLIGENCE IN WIRELESS COMMUNICATION

Er. Nibedita Patra
Principal
I.E.M, Jeypore

In an era marked by unprecedented technological advancements, AI has emerged as cornerstone in transforming landscape of wireless communication

The evolution of mobile wireless technology from 3G/4G to 5G and introduction of Industry 4.0, have resulted in the ever-increasing complexity of wireless systems design. Wireless networks have also become more difficult to manage due to requirements necessitating optimal sharing of valuable resources to expanding sets of users. These challenges force engineers to think beyond traditional rules based approaches with many are turning to artificial intelligence (AI) as the go-to solution to face the challenges by introduced modern systems.

AI has significantly enhanced the efficiency of wireless networks. Through Sophisticated algorithms, AI optimizes network resources, dynamically allocating bandwidth, and mitigating interference, thereby ensuring seamless connectivity even in congested environments

AI Powered predictive analytics have revolutionized network maintenance and management. By analyzing vast amounts of data in real time AI anticipates potential failure and proactively addresses them, minimizing downtime and maximizing reliability.
AI has ushered in a of personalized experiences in communication through new era wireless machine learning. Algorithms, AI understands user behavior and preferences, enabling tailored services and Content delivery. AI enriches experiences like never before

AI plays a pivotal role in enhancing security in wireless communication. By detecting anomalies and identifying Patterns indicative of cyber threats. AI fortifies networks against malicious attacks, Safeguarding sensitive data and ensuring user privacy.

However, amidst the myriad of benefits, AI brings to wireless communication, it's crucial to address ethical consideration and potential challenges. As AI becomes more ingrained in our daily lives, we must ensure transparency, accountability and fairness in its deployment moreover. We must remain vigilant against the risks of algorithmic biases and unintended consequences. Striving to harness AI's Potential for the greater good of Society.

The integration of AI in warless communication represents a paradigm shift with for reaching implications. From enhancing network efficiency and Personalized experiences to fortifying security. AI is reshaping the way we connect and communicate. As we embrace this transformative technology, we have to remain Stead fast in own commitment to harnessing its power responsibly, ensuring a future where AI-driven wireless communication enriches life and empowers communities worldwide.

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DEVELOPING NEW COMMUNICATION TECHNOLOGIES

Er. Jagannath Das
Assistant Professor
ETC Department

Telecommunications engineering is the branch of engineering that deals with the design, development, and operation of communication systems and networks. Telecommunications engineers use their knowledge of electronics, computer science, mathematics, and physics to create and improve technologies that enable the transmission and reception of information across various channels, such as radio, optical, wireless, satellite, and cable.

THE DEVELOPMENT PROCESS

The development of new communication technologies involves several steps, such as identifying the needs and requirements of the users and the market, researching and testing existing and emerging technologies, designing and prototyping the system or device, evaluating and optimizing its performance and functionality, and deploying and maintaining it in the real world. Telecommunications engineers work in teams with other engineers, technicians, programmers, analysts, and managers to coordinate and execute these steps, using various tools, methods, and standards.

THE RESEARCH AND TESTING PHASE

One of the most important and challenging aspects of developing new communication technologies is the research and testing phase, where telecommunications engineers explore the feasibility, viability, and desirability of the proposed solution. This phase involves conducting literature reviews, surveys, interviews, focus groups, and experiments to gather data and insights about the current state of the art, the user needs and preferences, the technical specifications and constraints, the regulatory and ethical issues, and the potential risks and benefits of the new technology. Telecommunications engineers also use simulation software, hardware platforms, testbeds, and prototypes to test the functionality, reliability, security, and scalability of the system or device under various scenarios and conditions.

THE DESIGN AND PROTOTYPING PHASE

The design and prototyping phase is where telecommunications engineers translate the research findings and requirements into a concrete and tangible solution. This phase involves creating and refining the architecture, components, interfaces, protocols, algorithms, and software of the system or device, using various design tools, languages, frameworks, and libraries. Telecommunications engineers also use rapid prototyping techniques, such as 3D printing, circuit boards, sensors, and microcontrollers, to build and iterate physical models of the system or device, and to demonstrate and validate its features and functions.

THE EVALUATION AND OPTIMIZATION PHASE

The evaluation and optimization phase is where telecommunications engineers measure and improve the quality and performance of the system or device, using various metrics, indicators, and feedback. This phase involves conducting usability tests, quality assurance tests, field trials, and user reviews to assess the user satisfaction, acceptance, and adoption of

the system or device, as well as its compatibility, interoperability, efficiency, robustness, and resilience. Telecommunications engineers also use data analysis, machine learning, artificial intelligence, and optimization techniques to identify and solve any problems, errors, bugs, or gaps in the system or device, and to enhance its functionality, security, and usability.

THE DEPLOYMENT AND MAINTENANCE PHASE

The deployment and maintenance phase is where telecommunications engineers launch and support the system or device in the market and in the society. This phase involves installing, configuring, integrating, and updating the system or device in the existing or new communication networks and infrastructures, using various deployment tools, methods, and protocols. Telecommunications engineers also provide technical support, training, documentation, and troubleshooting to the users, customers, and stakeholders of the system or device, and monitor and maintain its operation, performance, and quality.

THE TRENDS AND CHALLENGES

The field of telecommunications engineering is constantly evolving and expanding, driven by the need for faster, cheaper, smarter, and more secure communication technologies and services. The latest developments include 5G, which promises higher data rates, lower latency, greater capacity, and more reliability than the previous generations. However, it also presents significant technical, economic, social, and environmental challenges. Optical communication is another trend that offers many advantages such as higher bandwidth, lower attenuation, lower interference, and lower cost. Yet it also requires more efficient, reliable, and scalable devices. Lastly, quantum communication is the use of quantum physics principles to enable secure information exchange with potential applications for cryptography and computing. Nonetheless, it requires breakthroughs in quantum devices and management of quantum noise.

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MAXIMIZING ENERGY EFFICIENCY IN THERMAL SYSTEMS: STRATEGIES FOR SUSTAINABLE DESIGN

Er. Tapan Kumar Nayak
HOD Mechanical Engineering

Introduction:

As the world grapples with the challenges of climate change and energy sustainability, the role of engineers in optimizing energy efficiency in thermal systems has never been more critical. From industrial processes to residential buildings, every aspect of our lives relies on thermal energy, making it imperative to minimize energy waste and environmental impact. In this article, we will explore the principles and strategies for maximizing energy efficiency in thermal systems, paving the way for a more sustainable future.

1. **Understanding Energy Efficiency in Thermal Systems:**

- Energy efficiency in thermal systems refers to the ability to achieve desired outcomes, such as heating, cooling, or power generation, with minimal energy input.
- The efficiency of a thermal system is determined by factors such as heat transfer losses, equipment efficiency, and process optimization.
- Improving energy efficiency not only reduces operating costs but also lowers greenhouse gas emissions and conserves finite resources.

2. **Designing Efficient Heat Exchangers**:

- Heat exchangers are integral components of thermal systems, facilitating the transfer of heat between fluids.
- Optimal heat exchanger design involves maximizing surface area, controlling fluid flow rates, and selecting materials with high thermal conductivity.
- Counter flow and cross flow configurations, along with enhancements such as fins and turbulators, enhance heat transfer efficiency and minimize pressure drop.

3**. Insulation and Heat Loss Reduction:**

- Proper insulation is essential for minimizing heat loss in thermal systems, whether in industrial processes, buildings, or pipelines.
- Insulation materials with high thermal resistance, such as fiberglass, foam, or aerogels, help to reduce conduction, convection, and radiation heat transfer.
- Regular maintenance and inspection of insulation systems ensure their effectiveness over time and prevent energy losses due to deterioration or damage.

4. **Energy Management and Optimization**:

- Implementing energy management systems allows for real-time monitoring, control, and optimization of thermal processes.

- Advanced control strategies, such as model predictive control (MPC) and fuzzy logic, adjust operating parameters based on changing conditions to maximize energy efficiency.
- Energy audits and performance assessments identify opportunities for improvement and guide investment decisions in energy-saving technologies and upgrades.

5. **Waste Heat Recovery:**

- Waste heat recovery systems capture and utilize thermal energy that would otherwise be lost to the environment.
- Technologies such as heat exchangers, organic Rankine cycles (ORC), and thermoelectric generators convert waste heat into useful power or heating for additional processes.
- By harnessing waste heat, industries can significantly reduce energy consumption, lower operating costs, and improve overall efficiency.

6. **Lifecycle Analysis and Sustainability**:

- Conducting lifecycle analysis (LCA) evaluates the environmental and economic impacts of thermal systems from cradle to grave.
- Considerations such as embodied energy, resource depletion, emissions, and end-of-life disposal guide design decisions to minimize environmental footprint.
- Sustainable design principles, including circular economy concepts and material recycling, promote long-term viability and resilience in thermal system implementation.

Conclusion:

As we strive towards a more sustainable future, maximizing energy efficiency in thermal systems emerges as a cornerstone of engineering practice. By integrating innovative technologies, adopting best practices in design and operation, and prioritizing sustainability in decision-making, engineers can lead the way in mitigating climate change and preserving our planet for future generations. Let us embrace the challenge and opportunity to transform thermal systems into beacons of energy efficiency and environmental stewardship.

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POWER MANAGEMENT STRATEGY FOR WIND-HYDRO HYBRID SYSTEM

Er. Debashisa Praharaj
H.O.D Electrical Department

Many countries are aware with global warning problems. One of the main problems is the pollution from burning fossil fuels to produce energy. Then the solution of this problem is to produce the clean energy .So more attention and interest have been paid to the utilization renewable energy sources, like solar, hydro, wind, biomass etc.

Wind energy is the fastest growing and most promising renewable source among them due to economically variable. In India total installed capability of wind power generation is 8754M.W in the year 2018. India now ranks 5^{th} in the world with an installed capacity of 11807MW as on 31-3-2020 according to Ministry of New and Renewable Energy (MNRE), India. According to MNRE, in India the total installed capacity as on 31^{st} March, 2019 was 2430MW.

Among the renewable energy sources, small hydro and wind energy have the ability to complement each other. For power generation by small hydro or micro hydro as well as wind systems, the use of squirrel cage induction generators (SCIGs).

There are two main parameters in the hydro power generation, i.e., discharge and head of the water for the determination of generating potential for a hydro-electric power generation. When SCIG is used for small or micro hydro applications, its reactive power is met by a capacitor bank at its stator terminal.

The SCIG has advantages like being simple, low cost, rugged, maintenance free, absence of dc, brushless, etc., as compared with the conventional synchronous generator for hydro applications.

In recent years, wind-turbine technology has switched from fixed speed to variable speeds. The variable speed machines have several speeds advantages. The variable-speed machines have several advantages. They reduce mechanical stresses, dynamically compensate for torque and power pulsations, and improve power quality and system efficiency.

Natural energy based power generation systems are commonly equipped with battery energy storage system (BESS) to balance the uncertainty in the system. In the case of stand-alone or autonomous systems, the issues of Voltage and Frequency Control (VFC) are very important. A battery-based controller is proposed for control of voltage and frequency in the isolated Wind Energy Conversion Systems (WECS). However, Maximum Power Tracking (MPT) could not be realized in this battery-based isolated system employing SCIG operated at fixed speed.

For the rest of this paper, the subscript $'w'$ is used to denote the parameters and variables of wind turbine generator and subscript $'h'$ is used to denote the parameters and variables of hydro turbine generator.

The two back-to-back connected Pulse Width Modulations (PWM) controlled Insulated Gate Bipolar Transistor (IGBT) based Voltage Source Converters (VSCs) are connected between the stator windings of $SCIG_{\mathrm{w}}$ at wind power generation side (machine side) and the stator windings of $SCIG_h$ at hydro power generation (load side) to facilitate bidirectional power flow. The stator windings of the $SCIG_h$ are connected to the load terminals at hydro power generation side. The two VSCs may be called as the machine side converter at $SCIG_{\mathrm{w}}$ and the load side converter at $SCIG_h$.

For the proposed system, there are three modes of operation. In the first mode, the required active power of the load is less than the power generated by the $SCIG_h$, and the excess power generated by the $SCIG_h$ is transferred to the BESS through the load-side converter. Moreover, the power generated by the $SCIG_{\mathrm{w}}$ is transferred to the BESS. In the second mode, the required active power of the load is more than the power generated by the $SCIG_h$but less than the total power generated by $SCIG_{\mathrm{w}}$ and $SCIG_h$. Thus, portion of the power generated by $SCIG_{\mathrm{w}}$ is supplied to the load through the load-side converter and remaining power is stored in BESS. In the third mode, the required active power of the load is more than the total power generated by $SCIG_{\mathrm{w}}$ and$SCIG_h$.

Thus, the deficit power is supplied by the BESS, and the power generated by $SCIG_{\mathrm{w}}$ and the deficit met by BESS are supplied to the load through the load-side converter.

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RECENT TREND IN MACHINE DRAWING AND SCOPE FOR FUTURE

Er. Rashmi Ranjan Mishra
Mechanical Engineering

Machine drawing, also known as computer-generated art or generative art, has been an evolving field with various trends. Keep in mind that developments in technology and art trends may have continued to evolve since then.

Here are some trends and potential future directions for machine drawing.

TRENDS

Style Transfer: Applying style transfer algorithms to generate art in the style of famous artists or specific art movements.

GANs (Generative Adversarial Networks): Generative Adversarial Networks have been widely used to create realistic and diverse images. Artists and researchers are exploring ways to use GANs for creating unique and novel artwork.

Interactive and Collaborative Art: Platforms and tools that allow users to interact with the generative process and even collaborate with AI systems to create art.

AI-Aided Creativity: Artists increasingly use AI tools as aids in their creative process. These tools may suggest ideas, compositions, or even directly contribute to the creation of art.

Data-Driven Art: Using data sets, including text, images, or other forms of data, to inform and influence the generation of visual art.

3D Generative Art: Expanding beyond 2D images, artists are exploring generative techniques to create 3D sculptures, environments, and animations.

FUTURE SCOPE

Explainable AI in Art: As AI becomes more sophisticated, there is a growing interest in making AI-generated art more understandable and interpretable. This involves developing models that can explain their creative decisions.

AI and Traditional Art Collaboration: Further integration of AI tools into traditional art processes, with artists using AI as a complementary tool in their creative toolkit.

Ethical Considerations: Continued exploration of ethical implications surrounding AI art, including issues related to copyright, attribution, and the potential biases in training data.

Advancements in Hardware: As hardware capabilities improve, we can expect more complex and intricate generative art. This includes higher resolutions, faster rendering, and more realistic simulations.

AI in Augmented Reality (AR) and Virtual Reality (VR): Integration of generative art into AR and VR platforms for immersive and interactive artistic experiences.

Customization and Personalization: AI-driven tools that allow users to customize and personalize generative art based on their preferences, creating a more individualized artistic experience.

Cross-Disciplinary Collaborations: Collaboration between artists, AI researchers, and experts in other fields (e.g., neuroscience, psychology) to create truly innovative and interdisciplinary generative art projects.

Remember that the field of AI and generative art is dynamic, and new trends may emerge based on advancements in technology and the creative exploration of artists and researchers.

Control Systems: Mathematical modelling is essential for designing and analyzing control systems in mechanical engineering. This is crucial for ensuring that mechanical systems operate efficiently and safely.

Optimization: Mathematical optimization techniques are used to find the best solutions to engineering problems. Mechanical engineers often need to optimize designs, processes, and systems to meet specific criteria, such as minimizing cost or maximizing efficiency.

Computer-Aided Design (CAD): CAD software, widely used in mechanical engineering, relies on mathematical principles for creating and manipulating 3D models. Understanding mathematical concepts is essential for effective use of CAD tools.

Numerical Analysis: Many problems in mechanical engineering cannot be solved analytically, and numerical methods are used instead. These methods heavily rely on mathematical techniques for approximation and solution.

Dynamic Analysis: Understanding the dynamics of mechanical systems, such as the motion of machinery or vehicles, involves mathematical modelling of forces, torques, and motion equations.

In summary, mathematics is a foundational tool in the toolkit of a mechanical engineer. It helps in understanding, modeling, and solving complex problems across various subfields of mechanical engineering.

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A STUDY ON PROPERTIES OF CONCRETE WITH CERAMIC WASTE REPLACED FOR FINE AGGREGATE

Er. Maruwada Srinivasan
Civil Engineering

ABSTRACT

The continuous reduction of natural resources and the environmental hazards posed by the disposal of Construction and Demolition (C&D) waste has reached alarming proportion such that the use of C&D waste in concrete manufacture is a necessity than a desire. Hence the fine aggregate can be replaced fully or partially by materials like M-sand, quarry dust, saw dust, rice husk ash, ceramic waste etc in concrete. Ceramic waste may be used as an alternative for natural sand. The aim of this project is to determine the strength characteristics of recycled aggregates for application in concrete, with ceramic aggregates as an alternative material to fine aggregate in concrete. A total of three batches of concrete mixes of grade M20 were designed using various percentages (0%, 25%, 50% and 75%) of ceramic waste replaced for fine aggregates. From the results it is concluded that utilization of ceramic waste in concrete is more effective in strength as well as economic aspects.

INTRODUCTION

At present the cost of fine aggregate is very high leading to an increase in total cost. Also fine aggregate is a natural resource which should be preserved. C&D wastes contribute the highest percentage of wastes worldwide (75%). Furthermore, ceramic materials contribute the highest percentage of wastes within the C&D wastes (54%). This waste of ceramic industries dumped at nearby places resulting in environmental pollution causing effect to habitant and agricultural lands. The advancement of concrete technology can reduce the consumption of natural resources. To avoid this situation, fine aggregate can be replaced fully or partially by materials like M-sand, quarry dust, saw dust, rice husk ash, ceramic waste etc in Concrete.

In this project it is aimed to use ceramic waste in various percentages to replace fine aggregate in concrete.

CERAMIC WASTES AS AN AGGREGATE

Ceramic is non-metallic solid which is inorganic, produced by the action of heat and subsequent cooling. The structure of ceramic materials may be crystalline or partly crystalline, or amorphous (e.g., a glass). Since most common ceramics are available in crystalline form, the term ceramic is often referred to inorganic crystalline materials.

The earliest ceramics made by humans were pottery objects, including 27,000 year old figurines, made from clay, either by itself or mixed with other materials, hardened in fire. Then glazing and heating of ceramics is done to create a coloured and smooth surface. Ceramics now include domestic, industrial and building products and a wide range of ceramic art. In the 20^{th} century, new ceramic materials were developed for use in advanced ceramic engineering; for example, in semiconductors.

SOURCES OF CERAMIC WASTE

Various products of ceramic wastes include sanitary ware, floor tiles, wall tiles, roof tiles, ceramics from refractory and vitrified clay tiles. Ceramic waste may come from two sources:

The first source is the ceramics industry, and this waste is classified as non-hazardous industrial waste (NHIW). According To Integrated National Plan on Waste 2008- 2015, NHIW is all waste generated by industrial.

The second source of ceramic waste is associated with construction and demolition activity. For this project work, ceramic waste from Construction Demolition Waste is used. Ceramic waste was collected from Scrap yard in KCT Campus as shown in Fig1.

Figure 1 Ceramic waste from C&D waste

Coimbatore city municipal corporation says that population of the city is 10.09 lakhs and the quantity of garbage generated is 601 MT/day. In that about 2% of ceramic waste are included.

OBJECTIVES

To replace fine aggregate in concrete by using ceramic waste in various proportions (0%, 25%, 50% and 75%)

To cast and test the specimens for determining compressive strength, split tensile strength, flexural strength and modulus of elasticity of control mix and ceramic mix.

To compare the test results and to find the optimum percentage of ceramic waste to be used in concrete.

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IMPORTANCE OF CHEMICALS IN EVERYDAY LIFE

Er. Bijay Kumar Maharana
Chemical Engineering

The study of matter's properties and behaviour is known as **chemistry**. It is a natural science that studies the elements that make up matter, as well as the compounds, made up of atoms, molecules, and ions: their composition, structure, qualities, and behaviour, as well as the changes that occur when they mix with other things. A chemical is any substance that has a defined composition.

Importance of Chemical in Food

Chemicals are the fundamental components of everything. Chemical molecules make up all food, including carbs, vitamins, lipids, proteins, and fibre, which are all safe and often desirable.

Chemicals have an important part in the manufacturing and preservation of food. Food preservation chemicals have tremendously aided in the preservation of food for a longer duration. Cans of food additives, flavourings, and nutritional supplements can all contribute to improve the quality and quantity of meals.

Importance of Chemical in Medicines

Medicines or pharmaceuticals are chemical substances that are used to treat diseases and relieve pain. Chemistry has made significant contributions to health care. Chemistry, for example, aids in the manufacture and application of surgical materials (sutures, artificial skin, and sterile materials).

For analysis, clinical laboratory tests employ a wide range of chemical procedures and substances.

Importance of Chemical in Cosmetics

In our daily lives, we use lotions, fragrances, talcum powder, and a variety of other cosmetic goods. All of these items are developed in laboratories using chemicals for our health and skin. All cosmetic items, from babies to adults, are made up of chemical components. As a result, chemistry is important in maintaining the pH of our skin, keeping it healthy, and removing any marks.

Importance of Green Chemistry

Green chemistry contributes to environmental protection by monitoring, protecting, and enhancing the conditions in which we live, such as air, water, and soil..

Importance of Chemical in Soaps and Detergents

Soaps are sodium and potassium salts of fatty acids with greater molecular weights, such as stearic acid, palmitic acid, and oleic acid. Sodium salts of long-chain alkyl hydrogen sulphates or sodium salts of long-chain alkyl benzene sulphonic acids are commonly used as detergents.

Detergents and soaps are used for washing, cleaning, and bathing, among other things. The saponification method is used to make them in chemical companies. As a result, chemistry plays a significant role in the development of molecules, chemicals, and procedures for the production of soaps and detergents.

Importance of Chemical in Textiles

Wool, silk, jute, cotton, flax, glass fibre, polyester, acrylic, nylon, and other raw materials are used in the textile industry to create usable items such as clothing, bags, carpets, furniture, towels, nets, and so on.

Other chemical processes including dyeing, bleaching, scouring, printing, and finishing are also involved. In addition, chemists seek to increase a product's quality.

Importance of Chemical in Building and Constructions

Chemical items such as bricks, cement, pipelines, and other building .materials all play an essential part in the quality of construction. All of the pipes and switches are composed of polymers, which are both heat and stress-resistant.

Importance of Chemical in Fuel

Fuels are the sole thing that allows us to travel by land, sea, and air nowadays. Petrol, diesel, LPG, CNG, kerosene, oils, and other fuels are all obtained through refining procedures from harsh oil found beneath the Earth's crust.

Importance of Chemical in Agriculture

Chemical plays a major role in agriculture, contributing significantly to the field's productivity and sustainability. It enables farmers and researchers to develop innovative solutions that address the challenges of feeding a growing global population while minimizing environmental impact. Pesticides and herbicides, formulated using chemical principles, help protect crops from pests and weeds, reducing crop loss. Chemical is involved in the development of fertilizers that enhance crop yields, ensuring a more abundant and consistent food supply. Furthermore, the study of chemical aids in developing sustainable farming practices and reducing the environmental footprint of agriculture by promoting the responsible use of chemicals.

Importance of Chemical in Wars

TNT, RDX, HMX, gun powders used in bullets, and other explosives used in conflicts are all chemical compounds. It was the chemistry that allowed these chemicals to be used during the war. Nuclear weapons, which have become more well-known in recent years, are also chemical chemicals.

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SOFTWARE DEVELOPMENT LIFE CYCLE

Er. Subrat Prasad Rath
Assistant Professor (ECE)

ABSTRACT

The Software Development Life Cycle (SDLC) is a structured process that guides the development of software applications, ensuring efficiency, quality, and alignment with business objectives. This abstract provides a condensed overview of the SDLC, its key phases, methodologies, best practices, and challenges encountered in modern software development environments.

INTRODUCTION

In the modern digital landscape, software development plays a crucial role in driving innovation and enabling organizations to meet the evolving needs of customers and stakeholders. The Software Development Life Cycle (SDLC) serves as a framework for managing the development process from inception to deployment and maintenance. This abstract delves into the core components of the SDLC, highlighting its significance in contemporary software engineering practices.

OVERVIEW OF THE SDLC

The SDLC consists of several distinct phases, each with specific objectives and deliverables:

1. Planning: The initial phase involves defining project scope, goals, timelines, and resource requirements. Stakeholder engagement and requirements gathering are critical activities during this phase to ensure a clear understanding of project needs.

2. Analysis: Detailed requirements are elicited, analyzed, and documented in this phase. Techniques such as interviews, workshops, and surveys are used to gather user needs and system functionalities effectively.

3. Design: Based on the gathered requirements, system architecture and design specifications are formulated. High-level and low-level design documents outline the software's structure, interfaces, and components.

4. Implementation: Also known as the coding phase, implementation involves the actual development of the software according to the design specifications. Programmers write code using selected programming languages and adhere to coding standards to ensure maintainability and scalability.

5. Testing: Quality assurance is paramount in software development. The testing phase involves verifying and validating the software to ensure it meets functional and non-functional requirements. Testing activities include unit testing, integration testing, system testing, and user acceptance testing (UAT).

6. Deployment: Once the software has been thoroughly tested and approved, it is deployed to the production environment. This phase involves activities such as installation, configuration, data migration, and user training.

7. Maintenance: After deployment, the software enters the maintenance phase, where it is monitored, updated, and enhanced as needed. Bug fixes, performance optimizations, and feature enhancements are common activities during this phase to ensure the software remains viable over its lifecycle.

SDLC METHODOLOGIES

Various methodologies have been developed to streamline and optimize the software development process:

1. Waterfall Model: The Waterfall Model follows a linear sequential flow, with each phase completed before moving on to the next. While it provides clarity and structure, it lacks flexibility and may lead to lengthy development cycles.

2. Agile Methodology: Agile is an iterative and incremental approach that emphasizes collaboration, adaptability, and customer feedback. Agile methodologies, such as Scrum and Kanban, prioritize delivering working software in short iterations, enabling rapid response to changing requirements.

3. Iterative Model: The Iterative Model involves repeating the development process through a series of iterations or cycles. Each iteration produces a working subset of the software, allowing for incremental improvements and frequent feedback from stakeholders.

4. Spiral Model: The Spiral Model combines elements of both waterfall and iterative approaches, emphasizing risk management and iteration planning. It involves multiple cycles of prototyping, evaluation, and refinement, addressing identified risks and uncertainties.

5. DevOps: DevOps promotes collaboration and communication between development and operations teams, aiming to automate the software delivery pipeline. Continuous integration, delivery, and deployment enable faster and more reliable releases.

CONCLUSION

The Software Development Life Cycle (SDLC) is a foundational framework for managing software development projects effectively. By following structured methodologies, best practices, and addressing associated challenges, organizations can streamline their development processes and deliver high-quality software products. In an era of rapid technological advancement and digital transformation, mastering the SDLC is essential for driving innovation and maintaining competitiveness.

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ASPECTS OF BIOTECHNOLOGY

Mrs. Smarita Lenka
Science & Humanities

Biotechnology was, sometime in the distant past, not a very notable field. It is not a well-known profession, and large numbers of individuals have no mindfulness about its job in their lives. With time, mindfulness about biotechnology has expanded as well as has arisen as a promising professional choice, and numerous graduates are checking out this field while learning at **top engineering colleges**. With the COVID-19 frame and the need for new medications and antibodies, there is no question that biotechnology is the best career choice in the not-so-distant future. Assuming you are one of the individuals who are searching for the best positions and professional choices in biotechnology, here we are talking about the fate of biotechnology and the degree it has as a vocation.

What precisely is biotechnology?

As per jargon, this Greek word implies human knowledge and abilities. Everything associated with human information has the potential to develop and shape into desired outcomes. This progressive thought has helped the well-being, clinical, and food areas, and is presently being adjusted and utilized in numerous other areas too.

Biotechnology is one of a handful of courses that offer a wide range of courses; degree, testament, and confirmation. Similarly, biotechnology provides the greatest number of fields in which to dominate and gain expertise. influences a lot of parts of human existence, as well as the other way around.

Bioengineering

Bioengineering is a broad course with many fields, yet in particular, it requires functional information or possibly knowledge of the fundamental semantics. The need for and need for viable information are satisfied by a one-of-a-kind educational program and useful information that makes understudies adept and ready for the interest of their calling.

Biotechnology's ultimate fate

India is an agricultural nation and is headed to be, before long, the major problem area for the biotechnology business on the planet. Why? Since India has a huge medicine industry that has ties with significant nations of the world, a roaring agrarian examination industry to create more effective half-and-half yields and cultivate techniques, clinical bonding, hereditary innovative work, and the medical care industry can't flourish without biotechnology.

In this way, in vocational open doors and work, biotechnology has a crucial and significant job before very long for the understudies dropping from **top biotechnology colleges.**

Biotechnology will be an endurance instrument before very long with the rising number of deadly sicknesses and pandemics. Additionally, with a total population of over 9 million,

we will require new advances in the farming areas. With everything taken into account, biotechnology plays a huge part from here on out.

Scope and Benefits in the Future

The uplifting news for all the biotechnology graduate classes is that there is a platter of chances sitting tight for you. At each stage of graduation, expert, confirmation, or Ph.D., there will be a job choice for you. Biotechnology has spread its wings so far that biotechnologists are now in demand in a wide range of unconventional businesses, for example, material, food, corporate, legal, and so on. Individuals who are not interested in more conventional biotechnology vocation courses, for example, examination labs, clinical foundations, or drugs, can still find a plethora of businesses and a decent standing profession.

- The Outreach group in a biopharma company
- business venture
- Educating
- Government area
- Protected innovation in the research and licensing field.
- A lawful warning for biotechnology
- Phlebotomist documented
- The Prosthetics area of the clinical field

There is a brilliant future for biotechnology and bio-technologists. Simply tracking down the perfect locations and doing the right readiness can cause you to make a fruitful profession for yourself.

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FUTURE OF HUMAN WITH AI
BEYOND YOUR IMAGINATION

Er. Rameswari Patnaik
Computer Science & Engineering

Artificial intelligence (AI) has grown to be a significant force in every sector as the world changes quickly. Every sector utilizing AI to improve productivity and simplify processes. Artificial intelligence (AI) is the modeling of AI functions by computers, particularly computer systems. Expert systems, NLP, voice recognition, and machine vision are some specific uses of AI.

In some way, it should be obvious how technology can fundamentally transform the world. We just have to look at how much the world has already changed. If you could invite a family of hunter-gatherers from 20,000 years ago on your next flight, they would be pretty surprised. Technology has changed our world already, so we should expect that it can happen again.

But while we have seen the world transform before, we have seen these transformations play out over the course of generations. What is different now is how very rapid these technological changes have become. In the past, the technologies that our ancestors used in their childhood were still central to their lives in their old age. This has not been the case anymore for recent generations. Instead, it has become common that technologies unimaginable in one's youth become ordinary in later life. This is the first reason we might not take the prospect seriously. it is easy to underestimate the speed at which technology can change the world.

The second reason why it is difficult to take the possibility of transformative AI – potentially even AI as intelligent as humans – seriously is that it is an idea that we first heard in the cinema. It is not surprising that for many of us, the first reaction to a scenario in which machines have human-like capabilities is the same as if you had asked us to take seriously a future in which vampires, werewolves, or zombies roam the planet. The third reason why it is

difficult to take this prospect seriously is by failing to see that powerful AI could lead to very large changes. This is also understandable. It is difficult to form an idea of a future that is very different from our own time. There are two concepts that I find helpful in imagining a very different future with artificial intelligence. Let's look at both of them.

The two concepts are closely related, but they are not the same. The creation of a human-level AI would certainly have a transformative impact on our world. If the work of most humans could be carried out by an AI, the lives of millions of people would change.

The opposite, however, is not true: we might see transformative AI without developing human-level AI. Since the human mind is in many ways a poor metaphor for the intelligence of machines, we might plausibly develop transformative AI before we develop human-level AI. Depending on how this goes, this might mean that we will never see any machine intelligence for which human intelligence is a helpful comparison.

IS AI A THREAT TO OUR FUTURE

More than a few leading AI figures to a nightmare scenario that involves what's known as "singularity," whereby super intelligent machines take over and permanently alter human existence through enslavement or eradication.

The late theoretical physicist Stephen Hawking famously postulated that if AI itself begins designing better AI than human programmers, the result could be "machines whose intelligence exceeds ours by more than ours exceeds that of snails." Elon Musk believes and has warned that AGI is humanity's biggest existential threat. Efforts to bring it about, he has said, are like "summoning the demon." He has even expressed concern that his pal, Google co-founder Larry Page could accidentally shepherd something "evil" into existence despite his best intentions.

FUTURE GENERATION WITH AI

The convergence of generative AI algorithms with quantum computing, advances in graphics and new user interfaces will rapidly change how and when we interact with computers in a fundamental way. These advances will likely enhance and improve the efficiency of businesses overall, but they also need to be managed and implemented carefully to ensure they exist and coexist with employees and customers in a beneficial manner.

"AI has the potential to improve our lives in countless ways"

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MODERN VS TRADITIONAL APPROACHES IN CIVIL ENGINEERING: NAVIGATING THE EVOLUTION

Er. Ambika Nahak
Civil Engineering

INTRODUCTION:

Civil engineering, the backbone of infrastructure development, has undergone significant transformations over the years. The field constantly adapts to technological advancements, pushing the boundaries of what is achievable. In this article, we'll explore the differences between modern and traditional approaches in civil engineering, examining how innovations have reshaped the industry.

DESIGN AND PLANNING:

Traditional: Traditional civil engineering often involved manual drafting, physical models, and empirical calculations. Designers relied heavily on experience and established methods.

Modern: Today, computer-aided design (CAD) and Building Information Modeling (BIM) revolutionize the design process. These technologies allow for 3D modeling, simulation, and more accurate predictions of structural behavior.

MATERIALS AND CONSTRUCTION:

Traditional: Conventional materials like bricks, concrete, and steel have been staples in construction. Techniques were based on proven methodologies that stood the test of time.

Modern: Advanced materials, such as carbon fiber composites and high-strength alloys, offer improved performance. Additionally, innovations like 3D printing and prefabrication enhance construction efficiency and precision.

PROJECT MANAGEMENT:

Traditional: Linear project management methods were common, with sequential phases and a strict hierarchy. Changes during construction could be time-consuming and costly.

Modern: Agile project management methodologies, inspired by software development practices, allow for more flexibility. Emphasis is on adaptability to changes, iterative processes, and constant communication among stakeholders.

SUSTAINABILITY:

Traditional: Environmental considerations were not always a primary focus, and sustainable practices were often limited.

Modern: Green engineering principles have gained prominence. Engineers now prioritize sustainable materials, energy-efficient designs, and eco-friendly construction practices to minimize the environmental impact.

DATA AND ANALYTICS:

Traditional: Decisions were often based on limited data and experience, with less emphasis on data-driven insights.

Modern: Big data analytics and sensors on construction sites provide real-time information. Predictive modelling helps in decision-making, optimizing construction processes, and improving overall project efficiency.

COMMUNICATION AND COLLABORATION:

Traditional: Communication was primarily face-to-face or through physical documents, which could lead to delays.

Modern: Cloud-based collaboration tools and virtual communication platforms facilitate real-time collaboration among project stakeholders, enhancing efficiency and reducing communication barriers.

REGULATORY COMPLIANCE:

Traditional: Compliance with regulations was a paper-heavy process, involving extensive documentation.

Modern: Technology streamlines compliance through digital documentation, making it easier to track and adhere to evolving regulations.

CONCLUSION: The shift from traditional to modern approaches in civil engineering reflects the industry's commitment to innovation and efficiency. While traditional methods laid the foundation for many successful projects, embracing modern technologies and methodologies is essential for meeting the challenges of the future. Striking a balance between proven practices and cutting-edge innovations will shape the next era of civil engineering, ensuring sustainable, resilient, and technologically advanced infrastructure.

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GENERAL SECTION

HOW FASHION RULES THE WORLD

Mr. Siba Prasad Achary
Asst. Prof., Chemistry.

In the 21st century the style trends of the fashion industry dominate the world more than they ever did, and control not only the way people dress but also trends in home ware design, makeup fashion and people's overall attitudes. In the 60s flower power did not only mean flares and tunics, it summed up the whole attitude of a generation, and this is even more prominent today.

THE EVOLUTION OF FASHION IN THE 21ST CENTURY

Embracing Diversity and Inclusivity

In the ever-evolving landscape of the 21st century, fashion has transcended its traditional boundaries. Today, it's not just about following trends; it's about celebrating diversity and promoting inclusivity. Fashion designers are now acknowledging the beauty in every shape, size, and color, creating collections that resonate with a global audience.

Sustainable Fashion: A Paradigm Shift

One of the most significant shifts in recent years is the growing emphasis on sustainability. Fashion is no longer just about looking good; it's about making ethical choices. From eco-friendly fabrics to ethical manufacturing practices, the industry is witnessing a revolution towards a more sustainable future.

Social Media's Influence on Fashion

The rise of social media platforms has democratized fashion in unprecedented ways. Fashion enthusiasts around the world are no longer mere spectators; they are active participants, influencing and being influenced by the latest trends. Instagram, Pinterest, and TikTok have become virtual runways, allowing individuals to showcase their unique styles and inspiring others in the process.

THE POWER OF FASHION AS A FORM OF EXPRESSION

Beyond Clothing: Fashion as Identity

Fashion has evolved beyond being a mere means of covering our bodies; it's a form of self-expression and identity. People now use fashion to convey their beliefs, affiliations, and even moods. The clothes we wear tell a story, making a profound statement about who we are and what we stand for.

Breaking Gender Norms

The fashion industry is challenging traditional gender norms, breaking down barriers and embracing fluidity. Unisex and gender-neutral fashion lines are gaining popularity, promoting

the idea that clothing knows no gender. This shift reflects a society that values individuality and inclusivity.

The Future of Fashion: Technology and Innovation

Tech-Infused Fashion

In the 21st century, technology and fashion have become inseparable. From smart fabrics that adapt to environmental conditions to wearable technology, the industry is at the forefront of innovation. The intersection of fashion and technology is reshaping not only what we wear but how we experience and interact with clothing.

Virtual Fashion Shows and Augmented Reality

Fashion shows are no longer confined to physical runways. Virtual fashion shows and augmented reality experiences are becoming the norm, allowing audiences worldwide to witness the latest collections from the comfort of their homes. This shift marks a new era in fashion accessibility and engagement.

Nowadays, fashion is bold and daring, and this reflects a noughties generation that is not afraid to say what they think, or wear what they want. Fashion is not just a means of clothing your body, it is the essence of your personality and beliefs, and designers are well aware of the power they hold. Designers' predictions and designs for the coming season are more hotly anticipated than any other revelation in the world.

Trends in fashion unify women and men around the world, yet they still allow people the ability to portray their own individual style at the same time. A period of time portrayed in a picture can be identified immediately just by the style of clothes the people are wearing, and this sums up just how powerful and all-encompassing fashion is. Fashion can change from one second to the next, but what never changes is the hold it has over society, and the role it plays in the modern world. Fashion is so important that whole magazines are dedicated to it, TV programs dedicate hours of transmission time to the subject, and people discus it between their friends continually.

To keep up with the latest fashions, people subscribe to fashion magazines, keep a keen eye on what has appeared in shops and what has been there for a long time, and go to fashion shows to see what the designers are putting on the catwalk this season, and therefore what will make it in to the shops. For the extremely wealthy, they might have their own personal relationship with a designer who will keep them well ahead of the current trends, therefore, many people wanting to know what the new fashion lines are going to be will watch what celebrities are wearing. Being ahead of fashion is for many, the ultimate achievement, although being too ahead of the fashion is just as bad as being behind it! If you are too far ahead people will think what you are wearing is not in fashion, because it isn't, yet.

Designers continue to market the importance they know people put on fashion, and people continue to hang on to designers' every move in the fashion world, therefore as long as this

carries on fashion will continue to maintain its dominant position in society for a very long time to come. It influences not only what we wear, but everything we do, say, and even think. This is why fashion does indeed rule the world.

CONCLUSION: FASHION'S UNYIELDING INFLUENCE

As we navigate the complexities of the 21st century, one thing remains constant — the unyielding influence of fashion. It's not just about keeping up with trends; it's about embracing change, celebrating diversity, and making conscious choices. Fashion continues to shape our world, and its influence shows no signs of waning. In a society that values expression and individuality, fashion remains a powerful force, truly ruling the world.

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CODE OF ETHICS FOR ENGINEERS

Mr. Himansu Sekhar Nahak
Science & Humanities

A code of ethics for engineers is a set of guiding principles that establish standards of behavior and moral guidelines for engineers in their line of duty. Every state engineering board requires professional engineers to follow their code of ethics to protect the public and ensure engineers perform their services in an ethical and honest manner. All national engineering societies, such as NSPE, IEEE, ASCE, ASME, AAES, ABET, and AICTE, have their own code of ethics that members are obligated to follow.

The principles included in the code of ethics serve as a protection for those who rely on the work engineers do. The code is essentially a social contract that provides a guarantee that the design was prepared by a professional who put the public's interests first. This commitment is the foundation that public trust and confidence in the engineering profession are built on.

Engineers are required to protect the public safety by following national standards and only performing work in areas where they are competent. This ensures all work is done properly and safely. Historically, this focus on safety has produced a remarkable track record – given the thousands of engineering projects completed over the years, there are very few engineering disasters and accidents.

The primary purpose of codes of ethics in engineering professions is to protect the public and uphold professional standards. The NSPE (National Society of Professional Engineers) has created a document called "Ethics" which outlines conduct expected from any person taking up the profession of engineering.

WHY DO ENGINEERS FOLLOW CODES OF ETHICS?

There are several reasons why engineers follow a code of ethics. Some of these reasons include; maintaining safety, integrity and honesty, upholding proper decision making in issues of dilemma and maintaining discretion in their jobs.

1. Maintaining Safety

The work of engineers entails working on projects that impact the lives of members of society. Many times, their work involves building structures that people use daily. Therefore, engineers need to have a code of ethics that guide them in their daily work to ensure that they uphold the best interest of society.

Engineering code of ethics ensures that engineers put the safety of the members of the society first when doing their work. It means that an engineer will work with standard and approved material and that they will follow the set engineering procedures during their career.

2. Integrity and Honest

Engineers, like all other professions, require integrity and honesty in their jobs. Codes of ethics enable them to be accountable for their actions. They act as guiding principles for determining what is right or wrong.

A code of ethics for engineers ensures that they remain honest in all their transactions. Even when faced with a dilemma or other pressures in their duty, when they adhere to the code of ethics, they will remain honest. By following the code of ethics, engineers can be frank with their clients, and at all times ensure that they keep the interests of the clients in mind.

3. Builds Public Trust and Confidence in the Profession

Engineering codes of ethics should be considered a crucial part of the engineering profession because it helps create faith among the population that engineers are ethical people who will do what is right even when no one else is looking. It also provides assurance to others in different fields like construction, manufacturing, software development, etc., that they have someone on their side with respect to safety or quality standards.

Without these guidelines in place, every engineer would need to develop his or her own set of rules which could lead to problems such as not knowing what constitutes appropriate behavior and how important decisions should be made about design specifications without first consulting relevant stakeholders.

4. Protects Clients and Employers

The code of ethics also ensures that engineers maintain discretion when dealing with their clients' information. Generally, the principle of ethics places client's personal information privileged, and engineers must ensure that that information remains so.

They should not disclose any details regarding the client such as their name, age, gender, location or even the project at hand. The engineers must preserve such information unless the client states otherwise. Likewise, the engineer should not disclose any information regarding their employer unless otherwise stated.

5. Ensures Ethical Decision Making in Areas of Uncertainty

A dilemma or a predicament refers to a situation where there is a difficult choice to make between two or more alternatives. Dilemmas are relatively common occurrences in everyone's lives. Occasionally, people have to make difficult decisions in life where the other options present as equally destructive.

Like all people, engineers face dilemmas in their line of duty. A code of ethics guides engineers in making these difficult decisions by ensuring that they choose what is moral. They give a clear guideline into what decision is ethical and serves the interests of the society rather than individual gain.

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PROCRASTINATION
"THE REAL VILLAIN IN TIME MANAGEMENT"

Mrs. Sumithra Sahu
Science & Humanities

Are you always short of time? Do you wish you had more than 24 hours in a day? Well, if you make a list of things which leads to your poor time management, you will find a monster in it - **Procrastination!**

Procrastination has become one of the biggest challenges for professionals and individuals alike in managing time. The word procrastination comes from the Latin word, 'Pro' meaning "in favour of" and 'Cras' meaning "tomorrow". It is defined therefore as "The act or the habit of delaying or putting things off'. No doubt it is a one way ticket to stress, guilt and overwhelm.

The question is **how can we stop procrastination?** If procrastination is a problem for us, it is important that we learn tools to handle our procrastination. Procrastination occurs when we are faced with too many decisions and are unable to complete matters of importance. There are many reasons why we avoid doing things, sometimes it seems strange that, we know what we have to do to be successful but we don't do it.

Brian Tracy says this is a learnable skill and we can acquire it through practice. According to him here are the great ways to stop procrastinating and get more things done faster :

1. Set the Table: Decide exactly what we want. Write out our goals and objectives before we begin.
2. Plan every day in advance: Think on paper. Every minute we spend in planning can save our five or ten minutes in execution.
3. Apply the 80/20 rule to everything: 20% of our activities will account for 80% of our results. Always concentrate our efforts on that top 20%.
4. Practice creative procrastination: Since we can't do everything, we must learn to deliberately put off those tasks that are of low value so that we have enough time to do the few things that really count.
5. Focus on key result areas: Identify and determine those results that we absolutely, positively have to get to do our job well, and work on all day long.
6. The law of three: Identify the three things we do in our work that account for 90% of our contribution, and focus on getting them done before anything else.
7. Prepare thoroughly before we begin: Have everything we need at hand before we start. Assemble all papers, information, tools, work materials etc. we might require so we can get started and keep going.
8. Take it one oil barrel at a time: We can accomplish the biggest and most complicated job if we just complete it one step at a time.

9. Leverage our key skills: The more knowledgeable and skilled we become at our key tasks, the faster we start them and the sooner we get them done.
10. Identify our key constraints: Determine the bottlenecks or choke points, internal or external, which set the speed at which we achieve our most important goals, and focus on alleviating them.
11. Put the pressure on ourselves: Imagine that we have to leave town for a month, and work as if we had to get all our major tasks completed before we leave.
12. Motivate ourselves into action: Be our own cheer leader. Look for the good in every situation. Focus on solution than problem.
13. Get out of the technological time sinks: Use technology to improve the quality of our communications, but do not allow ourselves to become a slave to it.
14. Slice and dice the task: Break large, complex tasks down into bite-sized pieces, and then do just one small part of the task to get started.
15. Develop a sense of urgency: Make a habit of moving fast on our key tasks. Become known as a person who does things quickly and well.

I am sure you must have come across several articles teaching us how to stop procrastination. Sometimes, we follow it, and some other times we loose track after a certain time. It's all about being disciplined and strong willed regarding managing this crucial aspect of our life in an efficient way. The best way to do it is just start the new regime with immediate effect. Once we are successful in overcoming procrastination - “the villain in time management ", we will find more time at our disposal and we will emerge as a winner in every phase of our life.

In the epic " **Mahabharatha** ", addressing King Yudhishthira, Bhishma said, " the one that provides for the future, and the one who possesses the presence of mind, always enjoys happiness. The man of procrastination, however, is the looser ".

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THE IMPACT OF CHATGPT ON HIGHER EDUCATION

Er. Amod Kumar Bagh
Computer Science Engineering

As one of the **best AI chatbots** available, **ChatGPT** is a fantastic tool that can help you with nearly everything, from crafting engaging video scripts to designing stunning websites. With its ability to generate unique output quickly, it's an excellent tool for creating exceptional work, regardless of your skill level. In this post, we'll explore ten creative ways to use it, some of its limitations, and tips on how to get the most out of it.

On November 30, 2022, the AI based chatbot called ChatGPT (Chat Generative Pre-trained Transformer) was launched as a prototype by OpenAI and rapidly gathered media attention for its comprehensive and articulate responses to questions spanning many domains of technical and professional knowledge (GPT, 2022). ChatGPT is an AI-based natural language processing (NLP) system proficient in mimicking human-like communication with the end user. This virtual assistant enables responding to inquiries and supporting activities like crafting emails, writing essays, generating software code, and so on (Ortiz, 2022). This AI-based tool was initially offered open to the public free of charge because the launched demo and research version GPT-3.5 was intended to allow widespread general experimentation to get reinforcement learning from human feedback to be incorporated in the next version of GPT-4 (Goldman, 2022).

ChatGPT is a conversational AI chatbot engineered by OpenAI, a collective of researchers and technologists focused on constructing AI securely and responsibly. OpenAI was founded in 2015 by a team of tech innovators, and it has received substantial funding from tech giants such as Microsoft, Amazon, and Alphabet. The development of ChatGPT builds upon the tremendous advancements in the field of NLP. The GPT architecture has seen several iterations, with each new version achieving superior language generation, accuracy, and speed performance. The chatbot has been acclaimed as a breakthrough in NLP and used in various contexts, including customer service, education, and healthcare. In the field of learning, ChatGPT has been employed as an educational aid, replying to pupils' questions, giving feedback, and helping virtual conversations. ChatGPT can also be a writing helper, aiding people create grammatically accurate and logical text.

ChatGPT is a product of the GPT architecture, a leading-edge NLP model conditioned on copious amounts of text information to generate language similar to humans (GPT, 2022). A transformer is a deep learning model proposed by Vaswani et al. (2017), which introduced a self-attention approach that allows for a differential weighting of each input data component.

The revolutionary approach of transformers has been considered the most recent breakthrough in AI. Indeed, Chance (2022) describes transformers as deep learning models that allow expressing inputs in natural language to generate outputs like translations, text summaries, grammar and writing style correction, etc. Bellapu (2021) highlights the singularity of transformers as the amalgamation of convolutional neural networks and

recurrent neural networks, with advantages such as better accuracy, faster processing, working with any sequential data, and forecasting.

ChatGPT4 was launched on March 14, 2023, and provides makers, developers, and creators with a powerful tool to generate labels, classify visible features, and analyze images. Compared to GPT-3.5, ChatGPT4 is more dependable, imaginative, and interactive and can tackle longer passages in one request because of the expanded setting length. Moreover, GPT-4 can handle textual and visual prompts and give both back, although the capacity to employ picture input is yet to be made available to the public. Furthermore, GPT-4 is more than 85% accurate in 25 languages, including Mandarin, Polish, and Swahili, and can write code in all major programming languages. Microsoft has brought out its Bing AI chatbot equipped with GPT-4 (Elecrow, 2023).

Recent news already provides information about the subsequent versions of ChatGPT. Indeed, Smith (2023) informs that OpenAI is working on the next major software upgrade for ChatGPT, GPT-5, which is expected to launch in winter 2023. If a report about the GPT-5 abilities is correct, it could bring ChatGPT to the point of AGI, making it indistinguishable from a human. OpenAI expects the intermediate ChatGPT version of GPT-4.5 to be launched in September or October 2023 if GPT-5 cannot be ready at that time (Chen, 2023).

BENEFITS OF CHATGPT

ChatGPT is an incredibly versatile tool with limitless possibilities, making it an excellent choice for various tasks. Whether you need to research topics, extract and paraphrase information, translate text, grade tests, or want to have a conversation, ChatGPT can help.

As AI is still a relatively new technology, there’s still much to learn, and there may be some hiccups. Some say that technology is evolving too quickly and could lead to the loss of jobs. However, it’s undeniable that AI is here to stay. You can achieve more in less time by embracing it and learning how to use it ethically.

ChatGPT can answer frequently asked questions, freeing up teachers' time to focus on more complex tasks. It can also assist students who require additional help outside of regular class hours. ChatGPT can function as a virtual tutor, providing students with 24/7 access to personalised learning resources.

Chat GPT is very helpful in assisting students in academics and managing time and hectic schedules of studies. It is good for students only when used in a limited and assistive manner for generating ideas and organising academics rather than as a replacement for the academic inputs they are expected to put in studies.

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IMPORTANCE OF EDUCATION IN OUR LIFE

INTRODUCTION

To begin with the importance of education, Education teaches the ability to read and write. Most information is communicated through writing. Therefore, a lack of writing skills means missing out on much information. Therefore, Education makes people literate. Education is essential for employment. A good education is a great way to make a decent living. This is because it gives you the skills to land a high paying job. Uneducated people have a considerable disadvantage when it comes to finding a job. Many poor people are able to improve their lives through education.

THE POWER OF BEING EDUCATED

If you didn't know how to use a mobile phone, a laptop, a match stick or a bulb, what good would it be? Owning something you need to learn how to use makes no sense. At the beginning of time, scientists discovered that hitting two rocks together can produce sparks that start a fire. You can learn something from everything you come across. This is the importance of education. Knowing how to drive a car would be helpful when you have to go somewhere with more people travelling with you. When you learn how to fix a pipe, you can help someone when a pipe breaks off and water keeps flowing. This is the power and importance of education.

"Education is not the acquisition of facts, but the training of the mind to think", according to Albert Einstein. With the internet and technology, it is easy to gather a lot of information. However, the ability to answer every question does not prepare you for a life that considers experience and knowledge.

LIFE WITHOUT EDUCATION

Education is the heart and soul of every child. The child is incomplete without education in his life education. Education is a process by which we learn, acquire knowledge, skills, and habits. It can take formally and informally with any experience that has value to it to make it an educational purpose. There are different stages of education from preschool to university. A child has to move through tough times in his life but eventually, he/she will achieve his/her target one day.

But, have you imagined your life ever without education? The phrase might sound cool but the reality behind this coolness of not studying is very harsh. No human being can and will survive without education. Education is like food which when not taken on time can harm your body and mind. Life out of education is very miserable some of the consequences can be you won't be able to earn (primary source) and hence without any money you can't survive plus not even your family can. Secondly, if you aren't educated you won't be able to educate your children as well. Third, the world without education will be a barren land of civilization that is just up from the underground. The monuments, trees, beautiful plants, and different landscapes will be missing because for building them you again need to have an education of inches, quantity to be used, etc.

There will be illogical beliefs of superstitions that we can develop our knowledge by black magic and be educated. There won't be any humanity left among the people because they will not be knowing what to speak and when to speak. The level of technology as compared to the current arena will be zero. Instead of repairing laptops, people will be playing, breaking, and fighting with parts. Without education, the tremendous growth of technology that we see today will be a mirage at that time.

CONCLUSION

To conclude, education has played a major role in the life to all individuals in the society, because it provides us with knowledge for future, it paves the way for a good career and it leads to enlightenment. It promotes equality, social mobility, economic growth, and civic engagement. By making education accessible to all, we invest in a brighter and more prosperous future for individuals and society as a whole. Education serves as a catalyst for personal, societal, and global development.

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BACHPAAN

Er. Rameswari Patnaik
Computer Science & Engineering

Bachpan bas yeh naam hi kafi hai puri zindagi bitane ke liye
Yaad hai mujhe aaj bhi wo din…
Maa ki wo thandi si anchal
Baba ka pyar
Choti ke saath
wo bina baat ke takrar.
Doston ke sang masti bhari baate
Bhai beheno ke sath bitaya hua wo har rate.

Yaad hai mujhe aaj bhi wo din…
Chachu ka wo ghumane le jana
Bua ka khusi se sher
per haat phelana.
Chachi ka wo khhati mithi
wali poha khilana
Phufa ji ka wo bin mange
thofa dilana.

Yaad hai mujhe aaj bhi wo din…
Dadi ka yun chup chup ke paise dena
Nani ka dher sare khilone le ke anna.
Wo waqt bhi kya khus nasib tha
Jab maa ki godi mai nind ati thi
Aur maa ki godi mai ankh khulti thi,
Chot mujhe lage toh uski ankhe nam ho jati thi.

Yaad hai mujhe aaj bhi wo din…
Sab ki thi mai ladli gudiya
Jo mai ruthu sab dete they mujhe
jaddu ki jhappiyaan.
Na kuch pa ne ka junoon tha
Na hi kuch khone ka gum
Tha toh bas ankho mai khusi
Aur hathon pe khilkhilati hui hasi.

Yaad hai mujhe aaj bhi wo din…
Phir waqt ne liya asi karwat
Chin gaya mujhse mera bachpaan
Jimmedari ki bojh ke tale
Kab mai beti se beta ban gayi pata hi na chala
Sare riste nate chut ta chala.
Dost kahete hai mai badal gayi
Na jane kahi khosa gayi.
Kyun ki maa ko diya hua wo ek wada
Nibhate nibhate mai khud kai hisso mai bat gayi.

Yaad hai mujhe aaj bhi wo din
Mehenat karna toh baba ne sikhaya tha
Par zindagi se ladna koi na sikhaya.
Asman ko chuna chahati thi
Pankh laga kar udna chahati thi
Phir zindagi ne liya asa mod
Jimmedari ke samne sapne gaye tod

Aaj bhi ekali hun par kafi hun
naye sapne bunne ke liye
Phir se udan bhar ne ke liye,
Ab kisi ke sahare ki jarurat nahi hai mujhe
Appne mazil ko hasil kar ne ke liye.
Zindagi ki safar mai roz gir ke uthti hun
Bas iss umeed ke saath
Kuch kar dikhana mujhe
kuch kar ke dikhana hai mujhe.

"Kyun ki ek umeed hi kafi hai manzil tak pahuchne ke liye"

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MATHS –FIGURES OR FUN

Dr. Bhumika Panigrahi
Science & Humanities

In the world of geometry
Surrounded by the depth of oceans
The algebra and its stories
Weaves logic even in emotions
Where pie denotes the world we live in
And the total area keeps on revolving
The sin cos theta along with tan and cot
And the perfect mother's sticks shot
For procrastinating the work of division
Which seemed to a kid the reason of frustration
The percentage divides the whole by 100
And in the life's race becomes a reason of your being ahead
The ratios which compares the variable
Or the circle needs to be hence proved that it is circle
The ship that goes downstream
Takes how much time if it increase its speed
The deck of cards -a game and fun
Is all about probability
And the world of numbers brings to our existence the depth reality
The zero maybe of no value in itself
But adds pride to the figure behind which it placed itself
Quantifying the plans or budgeting the trips
Down the life's journey provides accuracy
The world is surrounded by the logic and
Logic by mathematics

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SKILL DEVELOPMENT IN INDIA

Mr. Mohit Kumar Aruk
Science & Humanities

INTRODUCTION:

Skill generally refers to one's ability, competence, proficiency and talent to execute a given job/task successfully. One may either possess it naturally or develops gradually over time. It may be soft skills that signify one's personal traits & attributes like people skill, communicating skill, leadership skills etc or hard skills that are honed with education/ training and experience. An employer wants both hard skills and soft skills in his workforce so that the required work can be done effectively and efficiently in his organization. Hence, the employer tests these skills during the recruitment process to find out the right candidates and later tries to enhance their skills through training & development. In recent years it is being witnessed that the students passing out of their academia are ill-equipped with required skills to match the expectation of the industry. The need of the hour is skill development to bridge the skill gap and prepare the prospective workforce to be industry fit.

The world of work is dynamic and ever evolving impacted by technological advancements and disruptions. To match the pace of change, the workforce needs to be constantly updated, upskilled and upgraded failing which they would be soon be obscure, obsolete and ultimately omitted out from their work place. This endeavour in eradicating elimination and extinction emanates the emphasis on skill development so as to prepare workforce to face the future.

Adapting skills and attitudes has always been and will always be inevitable & critical for any success. One need to know his/her natural strengths over that the initial impetus is provided by academic qualification. Subsequently, he/she need to understand the impact of technology and accordingly upgrade himself/herself. Simultaneously, he/she also need to invest on behavioural readiness & development so as to achieve behavioural excellence alongside honing technical expertise.

HISTORY OF SKILL DEVELOPMENT IN INDIA:

In India, the concept of Skill Development was introduced post-independence in 1956 with the first Industrial Policy which had an initial focus on formal Technical and Vocational Training Education and Training (TVET) sector with dedicated institutions for technical and vocational education. In 1961, the Apprenticeship Act was framed for providing practical training to technically qualified persons in various trades and promoting new skilled manpower. The Indian Education Commission (Kothari Commission) was appointed in 1964 to overhaul the Indian Education Sector by providing policies & guidelines for the development of education in India. The National Labour Policy was framed in 1966. In 1968, the first National Policy on Education was framed. The first Industrial Training Institute (ITI) was set up in 1969 by the Ministry of Labour & Employment (MoLE), Government of India. New National Policy of Education was framed in 1986. The All-India Council of Technical Education (AICTE) was formed in 1987, as the official regulator and funder for polytechnics

and technical colleges. The National Policy of Education was modified in 1992. 1990s witnessed the opening up of the economy with substantial growth in IT industry and service sector and relative slowdown in manufacturing and engineering sector. It was felt that a considerable amount of employment for skilled and semi-skilled category workers was to explored outside the traditional trades. With this objective, the National Development Corporation (NSDC) was established in 2008. These paradigm shift resulted in framing of the first National Policy on Skill Development in 2009 and effort was made to enhance the private partnership to expand the capacity of skills training sector. The National Skills Development Agency (NSDA) was established in 2013 and a vision was casted for a National Qualification Framework (NQF). In 2014, the Apprenticeship Act was amended to include non-engineering as optional trades and Ministry of Skill Development and Entrepreneurship (MSDE) was established. In 2015, the Skill India Mission was launched, the National Policy on Skill Development and Entrepreneurship was framed and the Training and Apprenticeship Division was moved from MoLE to MSDE.

SKILL DEVELOPMENT - THE NEED OF THE HOUR OF INDIA

Skill Development is the need of the hour of India, as it has a large un-employed / under employed population and even the Indian students are considered being unemployable by most companies especially MNCs and many are migrating abroad in search of better opportunities. If, their potential is not harnessed they may fall prey to drug addiction and other anti-social activities, which the nation cannot afford.

The skilled workforce is crucial for the success of recently launched national missions viz Make in India, Digital India, and Smart Cities etc. To convert this vision into reality, India needs to create a skilled and productive workforce matching international standards of quality and productivity through integration of skills and training along with education.

Giving due importance to Skill Development, Ministry for Skill Development and Entrepreneurship have been established in 2014 to coordinate with other Ministries and Departments to achieve the goals of Skill India Mission. Various Sector Skill Councils have been formed to identify the required skills in various sectors, design Skill Development Training Programmes for respective Sectors and monitors such skill development trainings conducted through various agencies and corporates in that sector so that both the industry in that sector as well as population looking for jobs in that sector are both mutually benefited

CONCLUSION:

The present era has witnessed rapid technological advancement, the covid19 pandemic has also intensified the disruption in the world of work. At the same time the skill gap between the industry expectation and the availability of skill has also widened which calls for skill development of the present and prospective workforce. To match the pace of change, many new and different skills are required to remain competent and future ready. Skill gaps are a pressing and critical issue. The need to resolve the skill gaps is evident across industries and is more relevant than ever before.

Skill building is the best way to close those gaps compared to hiring, contracting, or redeploying employees. In this post pandemic scenario industries require to scale up their efforts to reskill or upskill employees. The most important skills to develop is social and emotional in nature: for example, empathy, leadership, and adaptability. For success with skill transformations, programmatic efforts are needed to support skill building so that the workforce can adapt to change in their current role or upgrade to newer ones.
The strength of India is its youth population. These demographic advantages can be capitalised only when the existing workforce is re-skilled and upskilled through lifelong learning initiatives and new entrants in the workforce are prepared with twenty-first-century skill-sets. As India marches towards becoming a 'knowledge economy' it is extremely important to focus on advancement of skills that are relevant to the emerging economic development. There is also a need for increasing capacity and capability of skill development programs. The skill development programs must also be framed innovatively and needs to evolve to match the need of the industry and global market.

The success of skill development can be ensured if industries follow skill transformation practices like skill assessment, future skill need identification, designing initiatives to bridge skill gaps, and launching learning based organizational structure.

Skill transformations can bring positive impact on company in terms of ability to realize company strategy, employees' performance & satisfaction, and goodwill as an employer. Moreover, Skilling the workforce can also results in increased productivity and improved employee morale.

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ଗ୍ଲୋବାଲ ୱାର୍ମିଂ ଏବଂ ଜଳବାୟୁ ପରିବର୍ତ୍ତନ

ପ୍ରଶାନ୍ତ କୁମାର ପଟ୍ଟନାୟକ
ଗ୍ରନ୍ଥାଗାରୀକ

ସମ୍ପ୍ରତି ବିଶ୍ୱ ବ୍ରହ୍ମାଣ୍ଡ ଆଜି ସତେ ଯେପରି ଆମକୁ ସେହି ଅତୀତର ସ୍ମୃତି କୁ ଠାରେ ଦୋହଲାଇ କହୁଛି 'ହେ ଦେବଦାସୀ !! "ହେ ବିଶ୍ୱବାସୀ ଠାରେ ତୁମେ ଫେରି ମୋରି ଆଡକୁ ଚାହିଁଦେଖ। କାରଣ ତୁମେ ଫେରନ୍ତ । l ଚାହାଁଣୀରେ ମୋର ହୁତୁହୁତୁ ହୋଇ ଜଳୁଥିବା ହୃତପିଣ୍ଡଟି ନିଶ୍ଚିତ ରୂପେ ଶାନ୍ତି ଓ ମୁକ୍ତି ପାଇବ" । ଏଠାରେ ମୁ ଆପଣମାନଙ୍କୁ ସୂଚିତ କରିଦେବାକୁ ଚାହେଁଯେ, ମୁ ଭାଷଣ ମାଧ୍ୟମରେ ବିଶ୍ୱକୁ ପରିବର୍ତ୍ତନ ନାହିଁ । କାରଣ, "କହିବା" ଏବଂ "କରିବା" ମଧ୍ୟରେ ବହୁତ ପାର୍ଥକ୍ୟ ରହିଛି ।

"ଗ୍ଲୋବାଲ ୱାର୍ମିଂ ଏବଂ ଜଳବାୟୁ ପରିବର୍ତ୍ତନ" ସମ୍ପର୍କିତ ଏହି ଆଲୋଚନା ଚକ୍ରରେ ଆସନ୍ତୁ ଜାଣିବା ଏହାର ମୁଖ୍ୟ କାରଣ ତଥା ନିରାକରଣ । ଗ୍ଲୋବାଲ ୱାର୍ମିଂ ସମ୍ପର୍କରେ ଆଜକୁ ପ୍ରାୟ ୫ /୬ ଦଶନ୍ଧି ତଳେ ପୃଥିବୀରେ ବହୁ ମାନ୍ୟଗଣ୍ୟ ଜ୍ଞାନୀ ମହାପୁରୁଷମାନେ ବହୁବାର ଆଲୋଚନା କରିଯାଇଛନ୍ତି । ଏପରିକି ୧୯୫୧ ମସିହାର କଥା : ଆମ ଦେଶରେ ମଟର ଗାଡି ସଂଖ୍ୟା ୩। ଲକ୍ଷ ୬୦ ହଜାର ଥିବାବେଳେ ବର୍ତମାନ ୬ କୋଟିରୁ ଅଧିକ ସଂଖ୍ୟାରେ ପହଞ୍ଚିଲାଣି । ୨୦୨୯ ମସିହା ମଧ୍ୟରେ ଗଚ୍ଛିତ ଥିବା ପ୍ରାକୃତିକ ତୈଳର ବହୁଭାଗ ଶେଷ ହୋଇଯିବ । ଏହା ବ୍ୟତୀତ ମଟରଗାଡ଼ିରୁ ନିର୍ଗତ ଅଙ୍ଗାରକାମ୍ଳ , କାର୍ବନ ମନୋକ୍ସାଇଡ଼, ମିଥେନ ଓ ଫ୍ରିଜ, ଏଅରେକଣ୍ଡିସନରରୁ ତଥା ଅନ୍ୟ କେତେକ କଳକାରଖାନାରୁ ନିର୍ଗତ କ୍ଲୋରୋଫୋରୋ କାର୍ବନ ଗ୍ୟାସ ଏବଂ ଗ୍ଲୋବାଲ ୱାର୍ମିଂ ବା ବାୟୁ ମଣ୍ଡଳର ତାପମାତ୍ରା ବୃଦ୍ଧି କରି ସାରା ପୃଥିବୀରେ ଆତଙ୍କର ବାତାବରଣ ଖେଳାଇ ଦେଇଛି । ବୈଜ୍ଞାନିକ ମାନେ ବର୍ତମାନର ଅବସ୍ଥାକୁ ଅନୁଧାନ କରି ସତର୍କ କରାଇ ଦେଲେଣି ଯେ ଯଦି ଏହି ଅବସ୍ଥା ଚାଲୁରହେ ୨୦୩୫ ମସିହା ବେଳକୁ ଉତ୍ତର ମେରୁ ଅଞ୍ଚଳର ସବୁତକ ବରଫ ତରଳିଯିବ । ସେତେବେଳକୁ ଆମର ଅବସ୍ଥା ଅସମ୍ଭାଳ ହୋଇ ପଡ଼ିଥିବ । ହୁଏତ ମୁମ୍ବାଇ ସହର, କୋଲକାତା ସହର ତଥା ପୃଥିବୀର ନିୟୁୟର୍କ, ଲଣ୍ଡନ ଓ ବାଂଲାଦେଶର ଅଧିକାଂଶ ସ୍ଥାନ ସମୁଦ୍ର ଗର୍ଭରେ ବୁଡି ଯାଇ ସାରିଥିବ । କାରଣ ଆଫ୍ରିକା ମହାଦେଶ ଇତି ମଧ୍ୟରେ ଏକ ମରୁଭୁଖଣ୍ଡରେ ପରିଣତ ହୋଇଯାଇଛି । ଏସବୁକୁ ଦୃଷ୍ଟିରେ ରଖିବା ସହ ବିଶ୍ୱ ତାପମାତ୍ରାର ବୃଦ୍ଧି ଯୋଗୁଁ ପୃଥିବୀ ପୃଷ୍ଠରେ ତାଣ୍ଡବ ସୃଷ୍ଟି ହୋଇ ସାରିଥିବା ୨୦ଟି ସ୍ଥାନକୁ ବୈଜ୍ଞାନିକ ମାନେ "ହଟସ୍ପଟ" ର ଆଖ୍ୟା ଦେଇଛନ୍ତି ।

ବିଶ୍ୱ ବ୍ରହ୍ମାଣ୍ଡ ଭିତରେ ଥିବା ୧୭୬ ଗ୍ରହମାନଙ୍କ ମଧ୍ୟରୁ ପୃଥିବୀ ଭଳି ଏକ ସୁନ୍ଦର ଓ ସଜୀବ ଗ୍ରହ ବର୍ତମାନ ଯାହାସବୁ ବିପତ୍ତି ପ୍ରତ୍ୟକ୍ଷ ଓ ପରୋକ୍ଷ ଭାବେ ଦେଖି ଆସୁଛି ତାକୁ ଯଦି ସ୍ଥିର ମନରେ ଚିନ୍ତା କରାଯାଏ ତେବେ ପୃଥିବୀ ଆଉ କେତେକାଳ ଧର୍ଯ୍ୟ ଧରି ରହିବ ସହଜରେ ଅନୁମାନ କରିହେବ । ବିଭିନ୍ନ ଅସ୍ତ୍ରଶସ୍ତ୍ର ଦ୍ୱାରା ପୃଥିବୀ ପୃଷ୍ଠକୁ ୨୨ ଥର ଧ୍ୱଂସ କରିଦେଇ ପାରିଛୁ । ନିକଟରେ ଅଲମ୍ପିକ କାର୍ଯ୍ୟକ୍ରମ ଆରମ୍ଭ ହେବାର କେଇ ଘଣ୍ଟା ପୂର୍ବରୁ ଚୀନର ବେଜିଂ ସହରରେ ବର୍ଷା ହେବାର ପ୍ରାକ ସୂଚନାର ଆଭାସ ମିଳିବ ପରେ ସେଠାରେ ଯେଉଁ ରାସାୟନିକ ବିଷାକ୍ତ ବାଷ୍ପ କୁ ଭାସମାନ ଅବସ୍ଥାରେ ଛଡା ଯାଇଥିଲା, ତାହା କେବଳ ମଣିଷର ବିଲାସବସନ ତଥା ମନୋରଞ୍ଜନ ବ୍ୟତୀତ, ଆଉ କିଛି କୁହାଯାଇ ପାରେନା । କାରଣ ପରବର୍ତୀ ସମୟରେ ପରିବେଶ ପ୍ରତି ତାହା ସତର୍କ ଘଣ୍ଟି (ଅତ୍ୟାଧୁନିକ ଲେଜର ଲାଇଟ ସହ ୨୯ ହଜାର ପ୍ରକାରର ଆତସବାଦୀ ପ୍ରୟୋଗ ହୋଇଥିଲା) । ଆମେ ପ୍ରାୟ ଭୁଲିଯାଉଛେ ଯେ, ପୃଥିବୀ ରହିଲେ ହିଁ ଆମର ଆମ୍ ବଡ଼ିମା ପ୍ରଦର୍ଶନ କରିବା ସବୁ ସାକାର ହେବ । ମଣିଷ ଯେତେ ବିଜ୍ଞ, ବୁଦ୍ଧିମାନ ହେଲେ ମଧ ପ୍ରକୃତି ଆଗରେ ମୁଣ୍ଡ ନୁଆଁଇବାକୁ ବାଧ ।

ଅପରପକ୍ଷେ ଚିନ୍ତା କରିଲେ ଜାଣିହେବ ଯେ, ନିକଟରେ ସଦ୍ୟ ପ୍ରକାଶିତ (ସମାଜ) ଖବର କାଗଜରେ ବିପନ୍ନ ପୁରୁଷାକାର : ସମଗ୍ର ଜୀବଜଗତ ପାଇଁ ନୂଆ ବିପଦ । ଶୀର୍ଷକଟି ଆମକୁ ହୁଏତ ସଚେତନତା

ଆଣିବାରେ ସହାୟକ ହେବ । ଏହି ବିପଦ ବଳୟରେ କେବଳ ମଣିଷ ନୁହେଁ ମେରୁ ଅଞ୍ଚଳର ଭାଲୁଠାରୁ ଗଭୀର ସମୁଦ୍ରରେ ରହୁଥିବା ତିମି, ଆକାଶରେ ବିଚରଣ କରୁଥିବା ବାଜ - ଛଞ୍ଚାଣ ମଧ୍ୟ ଅନ୍ତର୍ଭୁକ୍ତ । ଏହାର ଅର୍ଥ ହେଲା ପ୍ରଦୂଷଣ ଏବେ ଜଳ, ସ୍ଥଳ ଓ ଆକାଶ ସର୍ବବ୍ୟାପି ହୋଇଛି ।

ନିତ୍ୟ ବ୍ୟବହାର୍ଯ୍ୟ ଇଲେକ୍ଟ୍ରୋନିକସ ଜିନିଷର ଯେପରି ଭାବେ ଚାହିଦା ବୃଦ୍ଧି ପାଉଛି ତାହା ଆମ ବିଶ୍ୱବାସୀ ତଥା ପୃଥିବୀ ପୃଷ୍ଠାକୁ ଦିନେ ନିଶ୍ଚିତ ରୂପେ ଧ୍ୱଂସ ମୁଖକୁ ଟାଣିନେବ ଏଥିରେ ସନ୍ଦେହ ନାହିଁ । ମୋବାଇଲ ଫୋନ, କମ୍ପୁଟର, ଫ୍ରିଜ, କୁଲର ଇତ୍ୟାଦି ଯାହା ଆମ୍ଭମାନଙ୍କର ଅତ୍ୟାବଶ୍ୟକ ମନେ କରୁଛୁ ବାସ୍ତବରେ ତାକୁ ଠିକ ରୂପେ ସମ୍ପାଦନା କରି ପାରୁନାହୁଁ । ସୁସ୍ଥ ବାତାବରଣ ନିମନ୍ତେ କେନ୍ଦ୍ର ସରକାରଙ୍କର ପରିବେଶ ଓ ଜଙ୍ଗଲ ମନ୍ତ୍ରାଳୟ ଅନୁକୂଲ୍ୟ ରେ ପ୍ରତିବର୍ଷ ସବୁ ସମୟରେ ମାନେ କହିବାକୁ ଗଲେ ଦେଶର ସଚେତନତା କାର୍ଯ୍ୟକ୍ରମ, ସଭା ସମିତି, କର୍ମଶାଳା, ବୃକ୍ଷରୋପଣ, ସଫେଇ, ପଙ୍କୋଦ୍ଧାର, ବର୍ଜ୍ୟବସ୍ତୁର ସୁପରିଚାଳନା, ଜଳ ସଂରକ୍ଷଣ ଓ ଜୈବ ବିଭିଧତାର ସଂରକ୍ଷଣ ଇତ୍ୟାଦି କାର୍ଯ୍ୟକ୍ରମ ଅନୁଷ୍ଠିତ ହୁଏ, ତେଣୁ ବେଳ ଥାଉ ଆମେ ବଳ ବାନ୍ଧିବାକୁ ହବ ।

ଜନ ସଚେତନତା ନିମନ୍ତେ ଏଠାରେ ପ୍ରକାଶ କରେକି, କୃଷି ବୈଜ୍ଞାନିକ ବିଶ୍ୱବିଦ୍ୟାଳୟ (ଓ.ୟୁ.ଏ.ଟି) ରେ ଆୟୋଜିତ ଏକ ଉତ୍ସବରେ ମୁଖ୍ୟବକ୍ତା ଭାବେ ଯୋଗଦେଇ ଜାମୁ-କାଶ୍ମୀର ରାଜ୍ୟର ପୂର୍ବତନ ମୁଖ୍ୟ ବନସଂରକ୍ଷକ ପି.ପଟ୍ଟନାୟକ କହିଲେ ଯେ,ଜଳବାୟୁରେ ଅଙ୍ଗାରକାମ୍ଳର ମାତ୍ରା ଅସମ୍ଭବ ଭାବେ ବୃଦ୍ଧି ପାଇଥିବାରୁ ତାହାର ପରିଣାମ ସ୍ୱରୂପ ୨୧୦୦ ମସିହା ସୁଦ୍ଧା ତାପମାତ୍ରା ୧.୭ ରୁ ବୃଦ୍ଧି ହୋଇ ୬ ଡ଼ିଗ୍ରୀରୁ ଅଧିକ ହେବାକୁ ନେଇ ନୋବେଲ ବିଜେତା ଡ଼କ୍ଟର ଆର.କେ.ପଚଉରିଙ୍କ ଜଳବାୟୁ ପରିବର୍ତ୍ତନ ଉପରେ ଦେଉଥିବା ପ୍ରୋଜେକ୍ଟ ରିପୋର୍ଟ ସମ୍ପର୍କରେ ସୂଚନା ଦେଇ କହିଥିଲେ ଯେ, ଉପକୂଳ ଅଞ୍ଚଳରେ ବୃଷ୍ଟିପାତ ବୃଦ୍ଧି ପାଇବ ଏବଂ ସମୁଦ୍ର ପତନ ୮୮ ସେଣ୍ଟିମେଟର ଉପରକୁ ଉଠିବ । ଏହାଦ୍ୱାରା ବାତ୍ୟା, ମରୁଡି ପରିସ୍ଥିତି ସୃଷ୍ଟି ହେବ l

ସେ ଯାହା ହେଉନା କାହିଁକି, ଏହି ପୃଥିବୀ ପୃଷ୍ଠରେ କେହି ସବୁଦିନ ପାଇଁ ରହିନାହାନ୍ତି ଏବଂ ରହିବେ ନାହିଁ । ବର୍ତମାନ ବିଶ୍ୱକୁ ସୁରକ୍ଷିତ ଅବସ୍ଥାକୁ ଫେରି ଆଣିବାକୁ ହେଲେ ଜଣ ସଚେତନତା ନିହାତି ଆବଶ୍ୟକ । ପ୍ରତି ବିଦ୍ୟାଳୟ, ମହାବିଦ୍ୟାଳୟ, ବିଶ୍ୱବିଦ୍ୟାଳୟ ଇତ୍ୟାଦିରେ "ଗ୍ଲୋବାଲ ୱାର୍ମିଂ ଆଣ୍ଡ କ୍ଲାଇମେଟ ଚେଞ୍ଜ" ବିଷୟରେ ପାଠ୍ୟଖସଡା ପ୍ରସ୍ତୁତ କରିବା ସହ ପାଠ୍ୟକ୍ରମରେ ଉକ୍ତ ବିଷୟକୁ ପ୍ରାକଟିକାଲ ଓରିଏଣ୍ଟେଡ କରାଇ ପାରିଲେ ଆବାଳ ବୃଦ୍ଧ ବନିତା ସମସ୍ତେ ଉପକୃତ ହେବେ ଏଥିରେ ସନ୍ଦେହ ନାହିଁ । ବିଶେଷକରି ପ୍ରତ୍ୟକ ବ୍ୟକ୍ତି ଅନ୍ତତଃ ଗୋଟିଏ କରି ଚାରା ରୋପଣ କରିବା ସହ ଏହାର ସୁରକ୍ଷା ଦିଗରେ ଯଦି ଯତ୍ନବାନ ହେବେ, ତାହେଲେ ଭୂତଳ ଜଳସ୍ତର ବଜାୟ ରଖିବା ସହ ପରିବେଶ ସନ୍ତୁଳନ ରକ୍ଷା, ବନ୍ୟା, ବାତ୍ୟା, ମରୁଡି ଆଦି ପ୍ରାକୃତିକ ଦୁର୍ବିପାକକୁ ଏଡାଇ ଯିବାପାଇଁ ସୁବିଧା ହେବ । ତେଣୁ ସରକାରଙ୍କ ସକାରାତ୍ମକ ଚିନ୍ତାଧାରାକୁ ଗଠନମୂଳକ ରୂପେ କାର୍ଯ୍ୟ କରିବାକୁ ହେଲେ ପ୍ରତ୍ୟକ ନାଗରିକ ଏ ଦିଗରେ ସଚେତନ ରହିବା ଏକାନ୍ତ କାମ୍ୟ । ତେବେ ଆସନ୍ତୁ ସମସ୍ତେ ସବୁକିଛି ଗଠନମୂଳକ ଚିନ୍ତାଧାରାକୁ ଆଖିରେ ରଖି ବିଶ୍ୱର ସମୃଦ୍ଧି ପାଇଁ ମିଳିମିଶି କାର୍ଯ୍ୟ କରିବାର ସଂକଳ୍ପ ନେବା ।

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ବସୁଧୈବ କୁଟୁମ୍ବକମ୍

ଇଂ.ସୁବ୍ରତ ପ୍ରସାଦ ରଥ
ଇଲେକ୍ଟ୍ରୋନିକସ ଆଣ୍ଡ କମ୍ୟୁନିକେସନ୍ସ

ଭାରତୀୟ ସଂସ୍କୃତିର ଆଧାରଭୁତ ବିଶ୍ୱାସ ଏହି ଯେ ସୃଷ୍ଟି ର ପ୍ରତି କଣରେ ମାନବ ଜାତିର ପ୍ରତ୍ୟକ ବ୍ୟକ୍ତିଠାରେ (ଯେକୌଣସି ଜାତି, ପନ୍ଥ, ଦେଶ, ସମାଜ ବା ଶ୍ରେଣୀର ବ୍ୟକ୍ତି ହୋଇଥାଉ ପଛକେ) ସର୍ବଶକ୍ତିମାନ ପରମେଶ୍ୱର ବିଦ୍ୟମାନ । ସେଠାରେ ଦୁଇଟି କଥା ସ୍ପଷ୍ଟ ବାରିହୁଏ । (୧) ସର୍ବଶକ୍ତିମାନ ପରମେଶ୍ୱର ଆମ ସମସ୍ତଙ୍କର ପରମପିତା ଅଟନ୍ତି ତଥା (୨) ଯେଉଁ ଧରଣୀରେ ଆମେ ଜନ୍ମ ନେଇଛୁ ସେ ହେଉଛି ଜଗତ୍ଜନନୀ । ଏହି ବିଚାରକୁ ସ୍ୱୀକାର କରିନେଲେ ସମଗ୍ର ମାନବ ଜାତି ଏକ ପରିବାରର ରୂପ ଗ୍ରହଣ କରିନିଏ, ଯେଉଁଠି ଲୋକ ଲୋକ ମଧ୍ୟରେ ଏକାତ୍ମଭାବ ସୃଷ୍ଟି ଆବଶ୍ୟକ । ଏହାକୁ ଭାରତୀୟ ସଂସ୍କୃତିର 'ବସୁଧୈବ କୁଟୁମ୍ବକମ୍' କୁହାଯାଇଥାଏ । ଏହା ମଧ୍ୟ ଭାରତୀୟ ସଂସ୍କୃତିର ମୌଳିକ ଚିନ୍ତା ।
ଯଥାର୍ଥରେ କୁହାଯାଇଛି – 'Man is a man when he accepts the entire mankind as his family. This is possible only with the realisation of Fatherhood of God through Satguru which spontaneously marks human unity through divine virtues like love, mercy and compassion – the bedrock of humanism.'

ନୀତି ଶ୍ଲୋକାକାରଙ୍କ ମତରେ -

"ଅୟଂ ନିଜ ପରବେତି ଗଣନା ଲାଗୁଚେତସାମ୍
ଉଦାରଚରିତାଣାଂ ତୁ ବସୁଧୈବ କୁଟୁମ୍ବକମ୍ ।"

ପୁନଶ୍ଚ କବିଙ୍କ ଭାଷାରେ -

"ଯା ମନ ଯେପରି ତା ପାଇଁ ସେପରି ଫଳ ରଖିଥାଏ ବିଶ୍ୱ,
ଉଚ୍ଚ ମନା ସଦା ଅମୃତ ଲଭଇ ନୀଚ ମନା ଲଭେ ବିଷ ।"

ଏଣୁ ଆମେ ସଂକୀର୍ଣ୍ଣମନା ନ ହୋଇ ସର୍ବଦା ଉଚ୍ଚମନା ହେବ ଉଚିତ । ବ୍ୟକ୍ତିଗତ ସ୍ୱାର୍ଥ କଥା ଚିନ୍ତା ନ କରି ଆମକୁ ସମୂହ ସ୍ୱାର୍ଥ ପାଇଁ ଜୀବନ ଉତ୍ସର୍ଗ କରିବାକୁ ହେବ ।

ଗୋଟିଏ ଆକାଶ ତଳେ ଗୋଟିଏ ଛାତତଳେ ଆମେ ସମଗ୍ର ପୃଥିବୀବାସୀ ବାସ କରିଥାଉ । ତେଣୁ ଆମେ ସମସ୍ତେ ଗୋଟିଏ ଘରର, ଏକ ପରିବାରର ଲୋକ । ଆମେ ସମସ୍ତେ ଏକ ବିଶ୍ୱପିତାଙ୍କର ସନ୍ତାନ, ତେଣୁ ଭାଇ ଭାଇ । ଆତ୍ମୀୟଙ୍କ ମଧ୍ୟରେ ସ୍ନେହ, ସୌହାର୍ଦ୍ଦ୍ୟ, ମୈତ୍ରୀ ଓ ଏକତା ଯଦି ବଜାୟ ରହେ ତେବେ କବିଙ୍କର ସେହି ଅମୃତବାଣୀ "ବୈକୁଣ୍ଠ ସମାନ ଆହା ଅଟେ ସେହି ଘର, ପରସ୍ପର ସ୍ନେହ ଯହିଁ ଥାଏ ନିରନ୍ତର" ନିଶ୍ଚିତ ଭାବରେ ସଫଳ ରୂପ ନେଇପାରିବ । ବିଶ୍ୱକୁ ଏକ ପରିବାର ବୋଲି କଳ୍ପନା କରିବାର ଶ୍ରେଷ୍ଠ ମାର୍ଗ ହେଇଛି ପ୍ରେମ ।

ତେଣୁ ହେ ମୋର ବିଶ୍ୱବାସୀ ଭାଇ ଓ ଭଉଣୀ ! ଆସ ତେବେ ଆମେ ଭେଦଭାବ ଭୁଲି, ବିଶ୍ୱ ମାନବତାର ବାଣୀରେ ଉଦ୍‌ବୁଦ୍ଧି ହୋଇ, ସ୍ନେହ-ପ୍ରେମ-ମୈତ୍ରୀ ମନ୍ତ୍ରରେ ମୁଗ୍ଧ ହୋଇ 'ବସୁଧୈବ କୁଟୁମ୍ବକମ୍' ନୀତିକୁ ଆଚରି ସମସ୍ୱରରେ ଜଗତର ମଙ୍ଗଳ କାମନା କରି ଉଠିବା -

"ସର୍ବେ ଭବନ୍ତୁ ସୁଖିନଃ
ସର୍ବେ ସନ୍ତୁ ନିରାମୟା
ସର୍ବେ ଭଦ୍ରାଣୀ ପସ୍ୟନ୍ତୁ
ମା କସ୍ଚିତ ଦୁଖଭାଗ ଭବେତ ।"

ଓଁ ଶାନ୍ତି, ଶାନ୍ତି, ଶାନ୍ତି ।
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ଆଦର୍ଶ ଜୀବନ

ହରି ଗୌଡ଼
ଷ୍ଟୋର୍ସ ଇନଚାର୍ଜ ଓ ହଷ୍ଟେଲ ୱାରଡେନ

ଦେଶ ପାଇଁ ଯିଏ ଜୀବନ ଦିଏ
ମଣିଷ ନୁହେଁ ସେ ଦେବତା ହୁଏ ।

ଅନ୍ଧକୁ ଯିଏ ଚକ୍ଷୁଦାନ କରେ
ଦିବ୍ୟ ଚକ୍ଷୁ ତାକୁ ପ୍ରାପ୍ତ ହୁଏ ।

ଗରିବ କୁ ଯିଏ ସାହାଯ୍ୟ କରେ
ସାତ ଜନ୍ମ ର ଫଳ କମାଏ ।

ଅସହାୟଙ୍କୁ ଯେ ସାହାଯ୍ୟ କରେ
ଅମର ଲୋକକୁ ବାଟ ସେ ପାଏ ।

ନିଜ ଜ୍ଞାନ ନିଜେ ଅନ୍ତରେ ରଖି
ସେବା କରୁଥିବ ମାତାଙ୍କୁ ଦେଖି ।

ପଢ଼ାରେ ତତ୍ପର ଆଗୁଆ ସାଜି
ଅଲୁଣୁଆପଣ ନୋହିବ ସାଜି ।

ସତ୍କର୍ମରେ ଆଗୁଆ ଥିବ
ପିତାମାତାଙ୍କର ଯଶ ରଖିବ ।

ଭାରତ ମାତାର ସନ୍ତାନ ହୋଇ
ଯଶ ରଖିଥିବ ସଫଳ ହୋଇ ।

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TRAINING

&

PLACEMENT ACTIVITIES

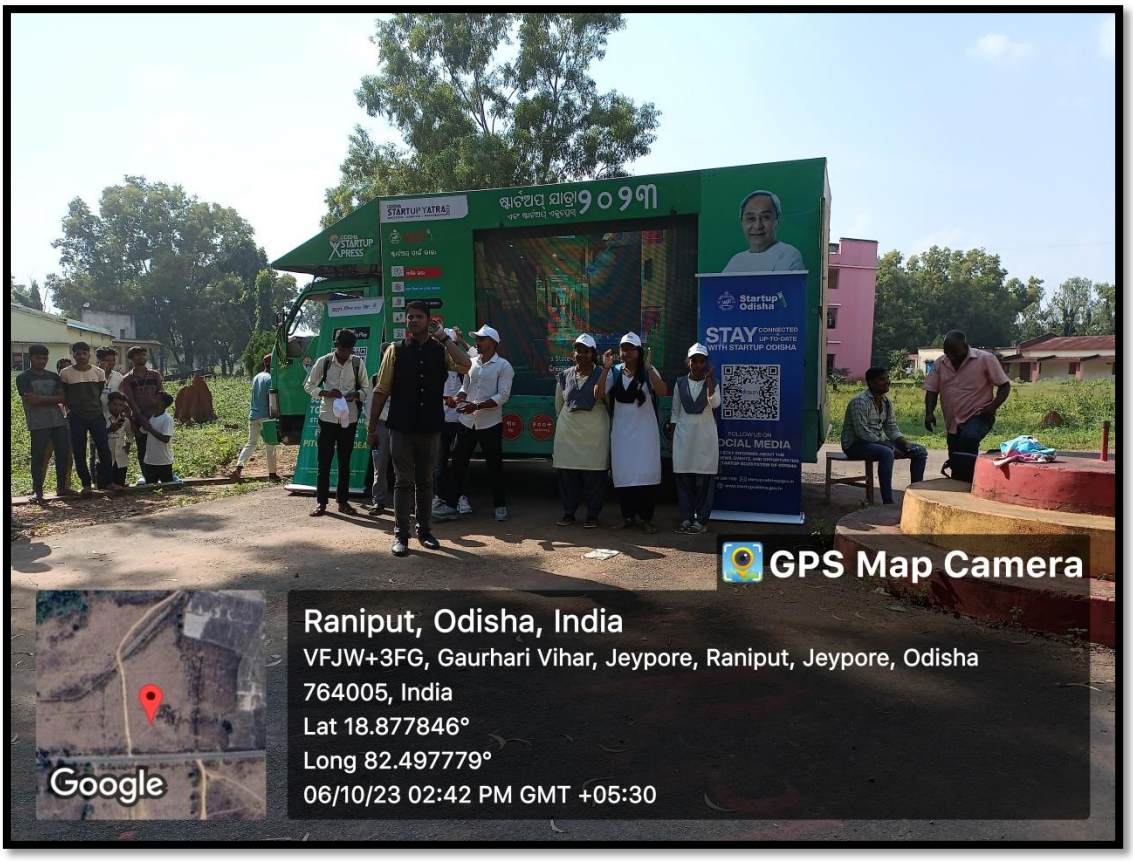
Placement Drive was conducted at the institute premises on 10th November 2023.

Companies in the drive were:

1. **Rane NSK Steering Systems, Gujarat,**
2. **Mando Anand India Pvt. Ltd., Tamil Nadu**
3. **Schwing Stettar India Pvt. Ltd.**
4. **Lumax Industries Ltd.**

Students Induction Programme was conducted for the 1st Year Students of the batch 2023-2024 for 15 Days, where all rules & regulations of academics, departments, examination, accounts, hostel, campus etc were showcased to the students. Various extra-curricular activities were conducted, and career prospects of the engineering departments were communicated to the students.

One Week NBA Accreditation FDP was conducted by NITTTR Chandigarh through virtual mode from 7th August to 11th August 2023. All staffs participated in the FDP programme to get information about the NBA Accreditation process.



STARTUP YATRA – ODISHA conducted a mobile van idea pitching event on 6th October 2023. Many students pitched their ideas for startup. Selected students got chance to pitch their idea at the BOOT CAMP organized at Vikram Dev University on 11th October 2023 and received as the 3rd Best Idea.

SPORTS & CULTURAL EVENTS

Various competitions like song, dance, rangoli etc were conducted on the eve of Independence Day 2023.

Students performing dance on Independence Day 2023

PRARAMBH 2023

Freshers & Orientation Programme was conducted on 27th September 2023 at the institute premises. Many students performed song, dance, acts etc.

Teachers Day Celebration by students on 5th September 2023

SOCIAL WORK

'ONE STUDENT ONE TREE' programme conducted where 50 Nos. of trees were planted by students and staffs on different locations around the campus.

your life
does not get better
by CHANCE
it gets *better* by
CHANGE

INSTITUTE OF ENGINEERING AND MANAGEMENT
(Approved by AICTE, Affiliated to SCTE&VT, Govt. of Odisha)
GAURAHARI VIHAR, RANIPUT,
JEYPORE, DIST:KORAPUT, ODISHA - 764001
EMail - iemadmn@gmail.com, Web: www.iemjeypore.co.in